

## **GRINNELL** **Stainless Steel, Full-Flow Grooved Fittings** **(Europe, Middle East, and Africa Only)**

### **General Description**

GRINNELL Stainless Steel, Full-Flow Grooved fittings are made of light-weight, corrosion-resistant Type 304 and 316 stainless steel. The assortment of available fittings provides economical and efficient methods to change direction in, add outlets to, reduce, or cap piping systems.

#### **NOTICE**

*The GRINNELL Grooved Fittings described herein must be installed and maintained in compliance with this document, in addition to the standards of any authorities having jurisdiction. Failure to do so may result in serious personal injury or impair the performance of these devices.*

*Never remove any piping component or correct or modify any piping deficiencies without first de-pressurizing and draining the system. Failure to do so may result in serious personal injury, property damage, and/or impaired device performance.*

*It is the designer's responsibility to select products suitable for the intended service and to ensure that pressure ratings and performance data are not exceeded. Material and gasket selection should be verified for compatibility with the specific application. Always read and understand the installation instructions.*

*The owner is responsible for maintaining their mechanical system and devices in proper operating condition. Contact the installing contractor or product manufacturer with any questions.*

### **Technical Data**

#### **⚠ CAUTION**

*Pressure performance values shown for GRINNELL couplings on light-wall (Sch. 5 and Sch. 10) stainless steel pipe are dependent on the use of the required special roll for roll grooving light-wall stainless steel pipe. Failure to utilize the required special roll for roll grooving light-wall stainless steel pipe may result in equipment failure.*

#### **Maximum Working Pressure**

See specific data sheet for rating of coupling in use.

#### **Material**

Type 316Ti (1.4571) Stainless Steel conforming to EN 10253 or EN 10217-7.

#### **Wall Thickness**

Fitting wall thickness sizes are:

- 2 mm for sizes up to 4 in. (DN100)
- 2.6 mm for 5 in. (DN125)
- 3 mm for 6 in. (DN150) and 8 in. (DN200)
- 4 mm for 10 in. (DN250) and 12 in. (DN300)

### **Ordering Procedure**

GRINNELL Products are available globally through a network of distribution centers. Visit [www.grinnell.com](http://www.grinnell.com) for the nearest distributor.

When placing an order, indicate the full product name. Specify quantity, figure number, material, and nominal size.

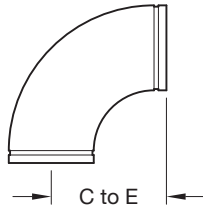


**10  
YEAR  
LIMITED  
WARRANTY**

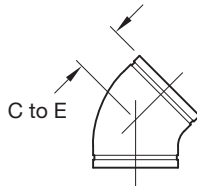
For warranty terms and conditions, visit [www.grinnell.com](http://www.grinnell.com)

#### **IMPORTANT**

Refer to Technical Data Sheet G1100 for warnings pertaining to regulatory and health information.



**FIGURE 410**  
**90° ELBOW**



**FIGURE 401**  
**45° ELBOW**

Nominal Size <sup>a</sup> DN ANSI Inches	Pipe O.D. mm Inches	Figure 410		Figure 401	
		Nominal C to E mm Inches	Approx. Weight kg Lbs.	Nominal C to E mm Inches	Approx. Weight kg Lbs.
25 1	33,4 1.315	73,0 2.87	0,5 1.1	50,0 1.97	0,5 1.1
32 1-1/4	42,4 1.660	82,0 3.23	0,5 1.1	54,0 2.13	0,5 1.1
40 1-1/2	48,3 1.900	92,0 3.62	0,5 1.1	58,0 2.28	0,5 1.1
50 2	60,3 2.375	111,0 4.37	0,9 2.0	65,0 2.56	0,9 2.0
65 76,1 mm	76,1 3.000	130,0 5.12	1,41 3.1	73,0 2.87	1,41 3.1
80 3	88,9 3.500	149,0 5.87	2,0 4.4	80,0 3.15	2,0 4.4
100 4	114,3 4.500	187,0 7.36	3,9 8.6	95,0 3.74	3,9 8.6
125 139,7 mm	139,7 5.500	225,0 8.86	6,1 13.4	110,0 4.33	6,1 13.4
150 6	168,3 6.625	263,0 10.35	8,4 18.5	125,0 4.92	8,4 18.5
200 8	219,1 8.625	345,0 13.58	16,6 36.6	166,0 6.54	16,6 36.6
250 10	273,0 10.750	440,0 17.32	27,2 60.0	210,0 8.27	27,2 60.0
300 12	323,9 12.750	517,0 20.35	30,4 67.0	349,0 13.74	30,4 67.0

**NOTES**

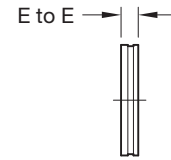
a. Dimensions for U.S. and Non-U.S. sourced products are identical unless indicated otherwise.

**FIGURE 1**  
**FIGURE 410 90° ELBOW AND FIGURE 401 45° ELBOW**  
**NOMINAL DIMENSIONS**

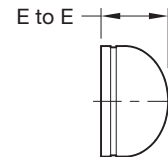
Nominal Size <sup>a</sup> DN ANSI Inches	Pipe O.D. mm Inches	Nominal E to E mm Inches	Approx. Weight kg Lbs.
25 1	33,7 1.315	50,0 1.97	0,5 1.1
32 1-1/4	42,4 1.660	51,0 2.01	0,5 1.1
40 1-1/2	48,3 1.900	54,0 2.13	0,5 1.1
50 2	60,3 2.375	57,0 2.24	0,9 2.0
65 76,1 mm	76,1 3.000	62,0 2.44	1,4 3.1
80 3	88,9 3.500	62,0 2.44	2,0 4.4
100 4	114,3 4.500	64,0 2.52	3,9 8.6
125 139,7 mm	139,7 5.500 <sup>b</sup>	74,0 2.91	6,1 13.4
150 6	168,3 6.625 <sup>b</sup>	86,0 3.39	8,4 18.5
200 8	219,1 8.625 <sup>b</sup>	98,0 3.86	16,6 36.6
250 10	273,0 10.750 <sup>b</sup>	114,9 4.49	27,2 60.0
300 12	323,9 12.750 <sup>b</sup>	150,0 5.91	30,4 67.0

**NOTES**

- a. Dimensions for U.S. and Non-U.S. sourced products are identical unless indicated otherwise.  
b. Dished Cap.

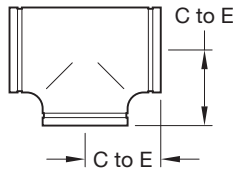


**FIGURE 460**  
1 - 4 INCH END CAP



**FIGURE 460**  
5 - 12 INCH END CAP

**FIGURE 2**  
**FIGURE 460 END CAP**  
**NOMINAL DIMENSIONS**



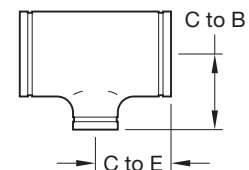
Nominal Size <sup>a</sup> DN ANSI Inches	Pipe O.D. mm Inches	Nominal C to E mm Inches	Approx. Weight kg Lbs.
25 1	33,4 1.315	73,0 2.87	0,5 1.1
32 1-1/4	42,4 1.660	60,0 2.36	0,5 1.1
40 1-1/2	48,3 1.900	62,0 2.44	0,5 1.1
50 2	60,3 2.375	68,0 2.68	0,9 2.0
65 76,1 mm	76,1 3.000	76,0 2.99	1,4 3.1
80 3	88,9 3.500	86,0 3.39	2,0 4.4
100 4	114,3 4.500	105,0 4.13	3,9 8.6
125 139,7 mm	139,7 5.500	160,0 6.30	6,1 13.4
150 6	168,3 6.625	178,0 7.01	8,4 18.5
200 8	219,1 8.625	178,0 7.01	16,6 36.6
250 10	273,0 10.750	250,0 9.84	27,2 60.0
300 12	323,9 12.750	255,0 10.04	30,4 67.0

**NOTES**

a. Dimensions for U.S. and Non-U.S. sourced products are identical unless indicated otherwise.

**FIGURE 3**  
**FIGURE 419 TEE**  
**NOMINAL DIMENSIONS**

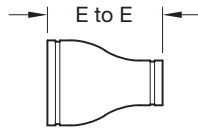
Nominal Size <sup>a</sup> DN ANSI Inches	Pipe O.D. mm Inches	Nominal C to E mm Inches	Nominal C to B mm Inches	Approx. Weight kg Lbs.
50 x 50 x 25 2 x 2 x 1	60,3 x 60,3 x 33,7 2.375 x 2.375 x 1.315	68,0 2.68	68,0 2.68	1,00 2.2
50 x 50 x 32 2 x 2 x 1-1/4	60,3 x 60,3 x 42,4 2.375 x 2.375 x 1.660	100,0 3.94	83,0 3.27	1,1 2.4
50 x 50 x 40 2 x 2 x 1-1/2	60,3 x 60,3 x 48,3 2.375 x 2.375 x 1.900	68,0 2.68	68,0 2.68	1,1 2.4
50 x 50 x 40 76,1 mm x 76,1 mm x 1-1/2	76,1 x 76,1 x 48,3 3.000 x 3.000 x 1.900	76,0 2.99	76,0 2.99	1,2 2.6
50 x 50 x 50 76,1 mm x 76,1 mm x 2	76,1 x 76,1 x 60,3 3.000 x 3.000 x 2.375	76,0 2.99	76,0 2.99	2,0 4.4
80 x 80 x 50 3 x 3 x 2	88,9 x 88,9 x 60,3 3.500 x 3.500 x 2.375	86,0 3.39	83,0 3.27	2,5 5.5
80 x 80 x 65 3 x 3 x 76,1 mm	88,9 x 88,9 x 76,1 3.500 x 3.500 x 3.000	86,0 3.39	83,0 3.27	2,6 5.7
100 x 100 x 50 4 x 4 x 2	114,3 x 114,3 x 60,3 4.500 x 4.500 x 2.375	105,0 4.13	95,0 3.74	4,6 10.1
100 x 100 x 65 4 x 4 x 76,1 mm	114,3 x 114,3 x 76,1 4.500 x 4.500 x 3.000	105,0 4.13	95,0 3.74	5,1 11.2
100 x 100 x 80 4 x 4 x 3	114,3 x 114,3 x 88,9 4.500 x 4.500 x 3.500	105,0 4.13	95,0 3.74	5,2 11.5
125 x 125 x 80 139,7 mm x 139,7 mm x 3	139,7 x 139,7 x 88,9 5.000 x 5.000 x 3.500	160,0 6.30	160,0 6.30	6,7 14.8
125 x 125 x 100 139,7 mm x 139,7 mm x 4	139,7 x 139,7 x 114,3 5.000 x 5.000 x 4.500	160,0 6.30	160,0 6.30	6,7 14.8
150 x 150 x 50 6 x 6 x 2	168,3 x 168,3 x 60,3 6.625 x 6.625 x 2.375	143,0 5.63	122,0 4.80	11,8 26.0
150 x 150 x 65 6 x 6 x 76,1 mm	168,3 x 168,3 x 76,1 6.625 x 6.625 x 3.000	143,0 5.63	122,0 4.8	12,0 26.5
150 x 150 x 80 6 x 6 x 3	168,3 x 168,3 x 88,9 6.625 x 6.625 x 3.500	143,0 5.63	122,0 4.80	12,1 26.7
150 x 150 x 100 6 x 6 x 4	168,3 x 168,3 x 114,3 6.625 x 6.625 x 4.500	143,0 5.63	122,0 4.80	12,2 26.9
150 x 150 x 125 6 x 6 x 139,7 mm	168,3 x 168,3 x 139,7 6.625 x 6.625 x 5.000	178,0 7.01	178,0 7.01	17,5 38.6
200 x 200 x 100 8 x 8 x 4	219,1 x 219,1 x 114,1 8.625 x 8.625 x 4.500	178,0 7.01	148,0 5.83	18,0 39.7
200 x 200 x 125 8 x 8 x 139,7 mm	219,1 x 219,1 x 139,7 8.625 x 8.625 x 5.000	178,0 7.01	178,0 7.01	23,5 51.8
200 x 200 x 150 8 x 8 x 6	219,1 x 219,1 x 168,3 8.625 x 8.625 x 6.625	218,0 8.58	203,0 7.99	24,2 53.4
250 x 250 x 150 10 x 10 x 6	273,0 x 273,0 x 168,3 10.750 x 10.750 x 6.625	250,0 9.84	216,0 8.5	25,0 55.1
250 x 250 x 200 10 x 10 x 8	273,0 x 273,0 x 219,1 10.750 x 10.750 x 8.625	250,0 9.84	216,0 8.5	30,0 66.1
300 x 300 x 200 12 x 12 x 8	323,9 x 323,9 x 219,1 12.750 x 12.750 x 8.625	255,0 10.04	230,0 9.06	34,0 75.0
300 x 300 x 250 12 x 12 x 10	323,9 x 323,9 x 273,0 12.750 x 12.750 x 10.750	255,0 10.04	230,0 9.06	35,0 77.2



**NOTES**

a. Dimensions for U.S. and Non-U.S. sourced products are identical unless indicated otherwise.

**FIGURE 4**  
**FIGURE 421 REDUCING TEE**  
**NOMINAL DIMENSIONS**



Nominal Size <sup>a</sup> DN ANSI Inches	Pipe O.D. mm Inches	Nominal E to E mm Inches	Approx. Weight kg Lbs.
32 x 25 1-1/4 x 1	42,4 x 33,7 1.660 x 1.315	85,0 3.35	0,7 1.5
40 x 25 1-1/2 x 1	48,3 x 33,7 1.900 x 1.315	134,0 5.28	0,5 1.1
40 x 32 1-1/2 x 1-1/4	48,3 x 42,4 1.900 x 1.660	135,0 5.31	0,9 2.0
50 x 40 2 x 1-1/2	60,3 x 48,3 2.375 x 1.900	111,0 4.37	1,0 2.2
65 x 40 76,1 mm x 1-1/2	76,1 x 48,3 3.000 x 1.900	125,0 4.92	1,0 2.2
65 x 50 76,1 mm x 2	76,1 x 60,3 2.875 x 2.375	125,0 4.92	1,1 2.4
80 x 40 3 x 1-1/2	88,9 x 48,3 3.500 x 1.900	125,0 4.92	1,1 2.4
80 x 50 3 x 2	88,9 x 60,3 3.500 x 2.375	125,0 4.92	1,1 2.4
80 x 65 3 x 76,1 mm	88,9 x 76,1 3.500 x 3.000	125,0 4.92	1,1 2.4
100 x 50 4 x 2	114,3 x 60,3 4.500 x 2.375	135,0 5.31	1,1 2.4
100 x 65 4 x 76,1 mm	114,3 x 76,1 4.500 x 3.000	135,0 5.31	1,3 2.9
100 x 80 4 x 3	114,3 x 88,9 4.500 x 3.500	135,0 5.31	1,3 2.9
125 x 80 139,7 mm x 3	139,7 x 88,9 5.500 x 3.500	162,0 6.38	1,3 2.9
125 x 100 139,7 mm x 4	139,7 x 114,3 5.500 x 4.500	162,0 6.38	1,6 3.5
150 x 100 6 x 4	168,3 x 114,3 6.625 x 4.500	175,0 6.89	1,6 3.5
150 x 125 6 x 139,7 mm	168,3 x 139,7 6.625 x 5.500	210,0 8.27	1,7 3.7
200 x 100 8 x 4	219,1 x 114,3 8.625 x 4.500	227,0 8.94	1,7 3.7
200 x 150 8 x 6	219,1 x 168,3 8.625 x 6.625	227,0 8.94	2,5 5.5
250 x 150 10 x 6	273,0 x 168,3 10.750 x 6.625	278,0 10.94	2,5 5.5
250 x 200 10 x 8	273,0 x 219,1 10.750 x 8.625	278,0 10.94	3,4 7.5
300 x 200 12 x 8	323,9 x 219,1 12.750 x 8.625	300,0 11.81	4,7 10.4
300 x 250 12 x 10	323,9 x 273,0 12.750 x 10.750	300,0 11.81	5,2 11.5

**NOTES**  
a. Dimensions for U.S. and Non-U.S. sourced products are identical unless otherwise indicated.

**FIGURE 5**  
**FIGURE 450 CONCENTRIC REDUCER**  
**NOMINAL DIMENSIONS**