

# AGS Vic-Ring® Systems

## Style W77/W77B – Flexible Coupling



16.12



### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- AGS Coupling: 14 – 50"/DN350 – DN1250, Style W77 (nominal pipe size – 12" thru 48")
- AGS Coupling: 52 – 100"/DN1350 – DN2500, Style W77B (nominal pipe size – 50" thru 96")
- AGS Rings: 14 – 100"/DN350 – DN2500

#### Coupling Maximum Allowable Working Pressure (For Carbon Steel Pipe)

- 14 – 24"/DN350 – DN600: 350 psi/2413 kPa
- 26 – 42"/DN650 – DN1050: 300 psi/2068 kPa
- 44 – 50"/DN1100 – DN1250: 232 psi/1599 kPa
- 52 – 100"/DN1300 – DN2500: 250 psi/1724 kPa

#### Application

- Provide limited linear and angular pipe movement at the pipe joint that can be used to compensate for thermal growth of piping systems, vibration attenuation, seismic, differential settlement and other applications requiring flexibility.

#### Function

- Unique wedge-shaped key profile increases allowable pipe end separation, resulting in easier assembly.
- Sizes 26" and above feature lifting lugs integrated onto the housings to promote ease handling during installation of the coupling housing.

#### NOTES

- Style W77 AGS couplings are provided with FlushSeal® gaskets for a variety of services. Please specify gasket grade when ordering. Please refer to [publication 05.01](#) for gasket service ratings.
- Style W77 AGS Flexible Couplings can also be used on direct roll groove pipe. See [publication 20.03](#).
- Optional ring configurations available. Contact Victaulic for additional information.

### 2.0 CERTIFICATION/LISTINGS



#### NOTES

- See [publication 02.06](#): Victaulic Potable Water Approvals ANSI/NSF for potable water approvals if applicable.
- Refer to [publication 10.01](#) for Fire Protection Certifications/Listings Reference Guide

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.



---

### 3.0 SPECIFICATIONS – MATERIAL

---

#### Vic-Rings: Victaulic Type "D" Vic-Rings.

##### Material:

Standard: Carbon Steel to ASTM A 105 or equivalent.

Optional: ASTM A105N (Specify at time of order).

Optional: Other materials available upon request contact Victaulic for details.

##### Housing: (specify choice)

Standard: Ductile iron conforming to ASTM A536, Grade 65-45-12.

Optional: Ductile iron conforming to ASTM A395, Grade 65-45-15.

##### Housing Coating: (specify choice)

Standard: Orange enamel.

Optional: Hot dipped galvanized.

Optional: Liquid Epoxy conforming with AWWA C210.

##### NOTE

- For additional coating options contact Victaulic.

##### Coupling Gasket: (specify choice<sup>1</sup>)

###### **Victaulic Grade "E" FlushSeal™ EPDM**

EPDM (Green stripe color code). Temperature range –30°F to +230°F/–34°C to +110°C. May be specified for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL Classified in accordance with ANSI/NSF 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and ANSI/NSF 372. NOT COMPATIBLE FOR USE WITH PETROLEUM SERVICES OR STEAM SERVICES.

###### **Victaulic Grade "T" FlushSeal™ Nitrile**

Nitrile (Orange color code). Temperature range –20°F to +180°F/–29°C to +82°C. May be specified for oil related services, including air with oil vapor, this gasket may be specified for temperatures rated up to +180°F/+82°C. For water related services, this gasket may be specified for temperatures rated up to +150°F/+66°C. For oil free, dry air services, this gasket may be specified for temperatures rated up to +140°F/+60°C. NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.

###### **Victaulic Grade "L" FlushSeal™ Silicone**

Silicone (Red color code). Temperature range –30°F to +350°F/–34° C to +177° C. May be specified for dry heat, air without hydrocarbons to +350°F/+177°C and certain chemical services.

##### Others

For alternate gasket selection, reference [publication 05.01](#): Victaulic Seal Selection Guide – Elastomeric Seal Construction.

<sup>1</sup> Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets are not compatible. Reference should always be made to the latest [Victaulic Seal Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

### 3.0 SPECIFICATIONS – MATERIAL (CONTINUED)

---

#### Bolts/Nuts: (specify choice<sup>2</sup>)

Standard: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). Sizes 52 – 100" use A193 Grade B7 studs. Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563 Grade B (imperial - heavy hex nuts) and ASTM A563M Class 9 (metric – hex nuts). Track bolts and hex nuts are zinc electroplated per ASTM B633 FE/ZN5, finish Type III (imperial) or Type II (metric).

Optional (14 – 50"): Stainless steel oval neck track bolts or studs meeting the mechanical property requirements of ASTM A193 Grade B8M, Class 2 (316 stainless steel). Stainless steel heavy hex nuts meeting the mechanical property requirements of ASTM A194 Grade 8M (316 stainless steel) with galling reducing coating.

Optional (all sizes): Super duplex stainless steel studs per ASTM A1082 UNS 32750. Super duplex stainless steel heavy hex nuts per ASTM A1082 UNS 32750.

<sup>2</sup> Optional bolts/nuts are available in imperial sizes only

#### Washers For 26 – 100"/DN650 – DN2500 sizes:

Standard: Plated carbon steel, flat. SAE high strength conforming to ASTM F436 or high strength stainless steel.

Optional(14 – 50"): High strength 316 stainless steel

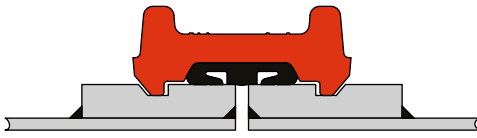
Optional (all sizes): Super duplex stainless steel

#### NOTES

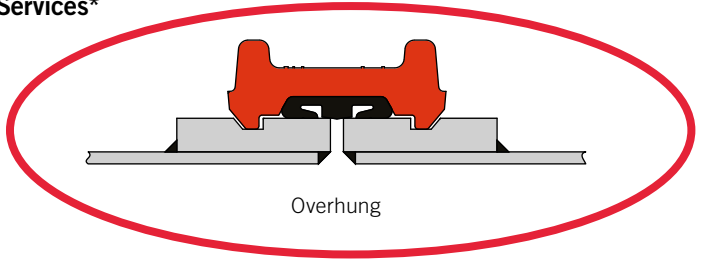
- For alternate hardware specifications not listed, contact Victaulic
- For sizes 52" and larger, couplings are supplied with studs. For couplings supplied with studs double the quantity shown for required number of nuts and washers.

### 3.1 SPECIFICATIONS – LINING OPTIONS

#### Unlined Services\*



Flush



Overhung

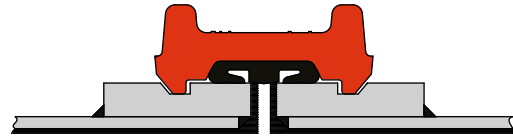
**NOTE**

- Type D Vic-Ring Configuration Shown

#### Abrasion Services



Rubber-Lined Flush



Rubber-Lined Overhung



Rubber Lined with Protective Bumper- Flush



Rubber Lined with Protective Bumper- Overhung

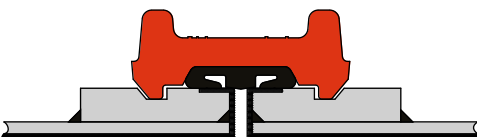


Chromium Carbide Overlay (CCO)- Overhung

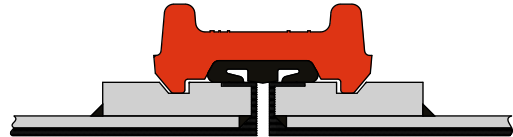
**NOTE**

- Type D Vic-Ring Configuration Shown

#### Abbrasion and Corrosion Services



Rubber-Lined Flush



Rubber lined- Overhung

**NOTE**

- Type D Vic-Ring Configuration Shown

\* Suitable for use on abrasive and non-abrasive services.

#### Alternate Configurations Available Upon Request



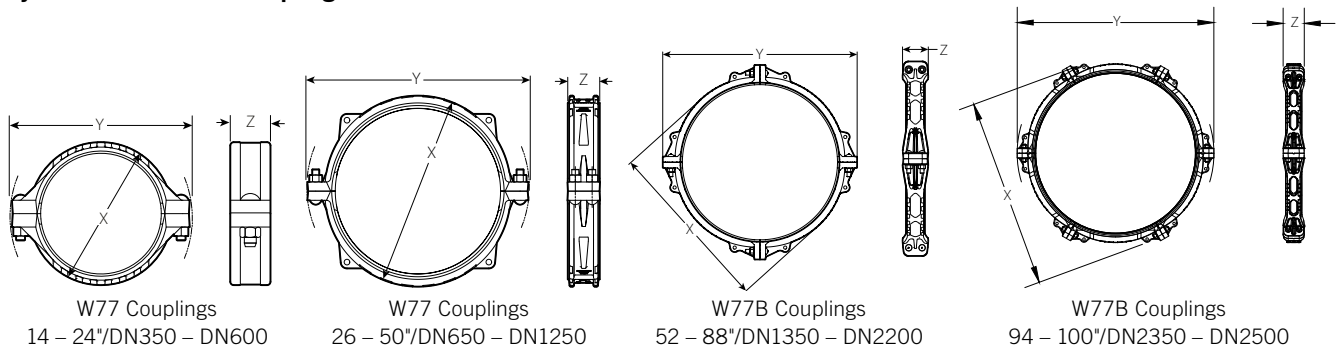
Unlined Type B

**NOTE**

- Type B Vic-Ring Configuration Shown

## 4.0 DIMENSIONS

### Style W77 – Flexible Coupling



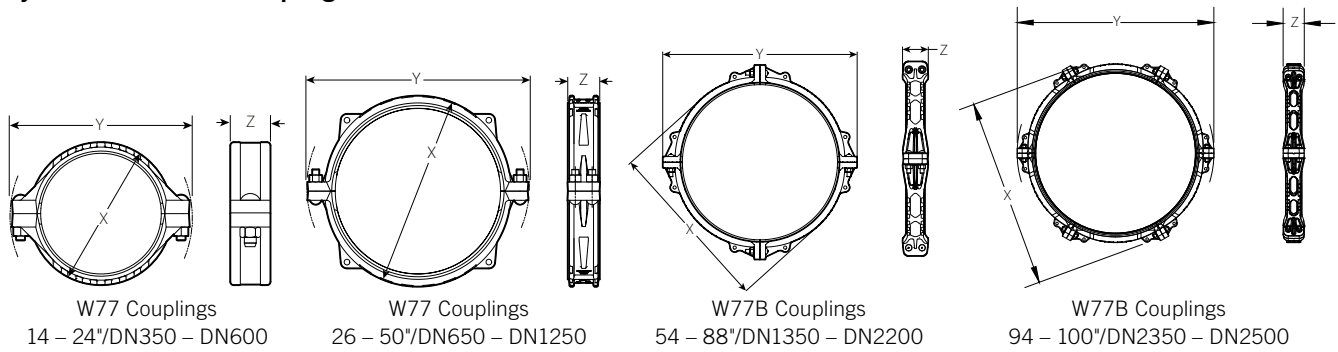
Size		Pipe End Separation	Deflection from Centerline		Bolt/Nut		Dimensions			Coupling Weight
Nominal Pipe Size	Vic-Ring/Coupling Size	Nominal	Per Coupling	Pipe	Required	Size	X	Y	Z	Approx. (Each)
inches DN	inches mm	inches mm	Degrees	in/ft mm/m	Qty.	inches mm	inches mm	inches mm	inches mm	lb kg
12 DN300	14.000 355.6	0.13 – 0.31 3.3 – 7.9	0.73	0.154 12.86	2	1 x 5 1/2	16.25 412	20.88 530	4.75 120	52.0 23.5
14 DN350	16.000 406.4	0.13 – 0.31 3.3 – 7.9	0.64	0.135 11.25	2	1 x 5 1/2	18.50 470	22.88 582	4.88 124	62.0 28.0
16 DN400	18.000 457.2	0.13 – 0.31 3.3 – 7.9	0.57	0.120 10.00	2	1 x 5 1/2	20.63 524	24.88 632	4.88 124	67.0 30.5
18 DN450	20.000 508.0	0.13 – 0.31 3.3 – 7.9	0.51	0.108 9.00	2	1 1/8 x 5 1/2	22.88 582	28.00 712	4.88 124	88.0 40.0
20 DN500	22.000 558.8	0.13 – 0.31 3.3 – 7.9	0.46	0.098 8.18	2	1 1/8 x 6	25.00 636	30.50 774	4.88 124	102.0 46.5
22 DN550	24.000 609.6	0.13 – 0.31 3.3 – 7.9	0.42	0.090 7.50	2	1 1/8 x 5 1/2	27.50 698	32.25 820	4.88 124	115.0 52.0
24 DN600	26.000 660.4	0.15 – 0.53 3.8 – 13.5	0.83	0.175 14.62	4	1 1/8 x 6	30.75 782	35.75 908	6.00 152	215.0 97.5
26 DN650	28.000 711.2	0.15 – 0.53 3.8 – 13.5	0.77	0.163 13.57	4	1 1/8 x 6	32.75 832	37.75 958	6.00 152	230.0 104.5
28 DN700	30.000 762.0	0.15 – 0.53 3.8 – 13.5	0.72	0.152 12.67	4	1 1/4 x 7	34.50 876	40.25 1022	6.00 152	240.0 109.0
30 DN750	32.000 812.8	0.15 – 0.53 3.8 – 13.5	0.68	0.143 11.87	4	1 1/4 x 7	36.75 934	42.25 1074	6.00 152	255.0 115.5
32 DN800	34.000 863.6	0.15 – 0.53 3.8 – 13.5	0.64	0.134 11.18	4	1 1/4 x 7	38.75 984	44.25 1124	6.00 152	275.0 124.5
34 DN850	36.000 914.4	0.15 – 0.53 3.8 – 13.5	0.60	0.127 10.56	4	1 1/4 x 7	40.75 1036	46.25 1174	6.00 152	300.0 136.0
36 DN900	38.000 965.2	0.15 – 0.53 3.8 – 13.5	0.57	0.120 10.00	4	1 1/4 x 7	42.75 1086	48.25 1226	6.00 152	325.0 147.5
38 DN950	40.000 1016.0	0.21 – 0.59 5.3 – 15.0	0.54	0.114 9.50	4	1 1/2 x 8	44.50 1130	51.50 1308	6.75 172	375.0 170.0
40 DN1000	42.000 1066.8	0.21 – 0.59 5.3 – 15.0	0.51	0.109 9.05	4	1 1/2 x 8	46.50 1182	53.00 1346	6.75 172	375.0 170.0
42 DN1050	44.000 1117.6	0.21 – 0.59 5.3 – 15.0	0.49	0.104 8.64	4	1 1/2 x 8	49.00 1244	55.00 1398	6.75 172	425.0 193.0
44 DN1100	46.000 1168.4	0.21 – 0.59 5.3 – 15.0	0.47	0.099 8.26	4	1 1/2 x 8	51.00 1296	57.00 1448	6.75 172	450.0 204.0

#### NOTES

- The Style W77 AGS Vic-Ring system is available for pipe sizes ranging from 12 – 72"/DN300 – DN1800. The coupling used to join these pipes will always be the next largest size (ex: 12"/DN300 pipe requires the use of 14"/DN350 coupling). For pipe sizes ranging from 74 – 96"/DN1850 – DN2500, the coupling used to join these pipe sizes will always be 4" larger than the nominal pipe diameter. (ex: 84"/DN2100 requires the use of 88"/DN2200 coupling.) The larger size is needed to allow for the extra outside pipe diameter the AGS ring adds to the pipe.
- For pipe sizes larger than 96"/DN2400, contact Victaulic.

## 4.0 DIMENSIONS (CONTINUED)

### Style W77 – Flexible Coupling



Size		Pipe End Separation	Deflection from Centerline		Bolt/Nut		Dimensions			Coupling Weight
Nominal Pipe Size inches DN	Vic-Ring/ Coupling Size inches mm	Nominal inches mm	Per Coupling Degrees	Pipe in/ft mm/m	Required Qty.	Size inches mm	X inches mm	Y inches mm	Z inches mm	Approx. (Each) lb kg
46 DN1150	48.000 1219.2	0.21 – 0.59 5.3 – 5.0	0.45	0.095 7.92	4	1 ½ x 8	53.00 1346	59.00 1498	6.75 172	450.0 204.0
48 DN1200	50.000 1270.0	0.21 – .59 5.3 – 15.0	0.43	0.091 7.60	4	1 ½ x 8	55.50 1410	61.50 1562	10.25 260	575.0 261.0
50 DN1250	52.000 1320.8	0.28 – 0.66 7.1 – 16.8	0.41	0.088 7.31	8	1 ½ x 9 ½	58.50 1486	67.50 1714	10.25 260	975.0 442.5
52 DN1300	54.000 1371.6	0.28 – 0.66 7.1 – 16.8	0.40	0.084 7.04	8	1 ½ x 9 ½	60.50 1536	69.50 1766	10.25 260	1000.0 453.5
54 DN1350	56.000 1422.4	0.28 – 0.66 7.1 – 16.8	0.38	0.081 6.79	8	1 ½ x 9 ½	62.50 1588	71.50 1816	10.25 260	1025.0 465.0
56 DN1400	58.000 1473.2	0.28 – 0.66 7.1 – 16.8	0.37	0.079 6.55	8	1 ½ x 9 ½	64.50 1638	73.50 1866	10.25 260	1050.0 476.5
58 DN1450	60.000 1524.0	0.28 – 0.66 7.1 – 16.8	0.36	0.076 6.33	8	1 ½ x 9 ½	66.50 1690	75.50 1918	10.25 260	1075.0 487.5
60 DN1500	62.000 1574.8	0.28 – 0.66 7.1 – 16.8	0.35	0.074 6.13	8	1 ½ x 9 ½	69.00 1752	78.50 1994	10.50 266	1150.0 521.5
62 DN1550	64.000 1625.6	0.28 – 0.66 7.1 – 16.8	0.34	0.071 5.94	8	1 ½ x 9 ½	71.00 1804	80.50 2044	10.50 266	1175.0 533.0
64 DN1600	66.000 1676.4	0.28 – 0.66 7.1 – 16.8	0.33	0.069 5.76	8	1 ½ x 9 ½	73.00 1854	82.50 2096	10.50 266	1200.0 544.5
66 DN1650	68.000 1727.2	0.28 – 0.66 7.1 – 16.8	0.32	0.067 5.59	8	1 ½ x 9 ½	75.50 1918	84.50 2146	10.50 266	1275.0 578.5
68 DN1700	70.000 1778.0	0.28 – 0.66 7.1 – 16.8	0.31	0.065 5.43	8	1 ½ x 9 ½	78.00 1982	87.50 2222	10.50 266	1350.0 612.5
70 DN1750	72.000 1828.8	0.28 – 0.66 7.1 – 16.8	0.30	0.063 5.28	8	1 ½ x 9 ½	80.00 2032	89.50 2274	10.50 266	1425.0 646.5
72 DN1800	74.000 1879.6	0.28 – 0.66 7.1 – 16.8	0.29	0.062 5.14	8	1 ½ x 9 ½	83.50 2120	92.00 2336	10.38 264	1750.0 794.0
74 DN1850	78.000 1981.2	0.28 – 0.66 7.1 – 16.8	0.27	0.058 4.87	8	1 ¾ x 12	86.00 2184	97.50 2476	12.00 304	1900.0 862.0
80 DN2000	84.000 2133.6	0.28 – 0.66 7.1 – 16.8	0.25	0.054 4.52	8	1 ¾ x 12	92.50 2350	103.50 2628	12.50 318	2400.0 1088.5
84 DN2100	88.000 2235.2	0.28 – 0.66 7.1 – 16.8	0.24	0.052 4.32	8	1 ¾ x 12	96.50 2452	107.50 2730	12.25 312	2175.0 986.5
90 DN2250	94.000 2387.6	0.00 – 0.90 0.0 – 22.9	0.54	0.115 9.57	12	1 ¾ x 12	104.50 2654	115.50 2934	13.25 336	3775.0 1712.5
96 DN2400	100.000 2540.0	0.00 – 0.90 0.0 – 22.9	0.51	0.108 9.00	12	1 ¾ x 12	110.50 2806	121.50 3086	13.25 336	3925.0 1780.5

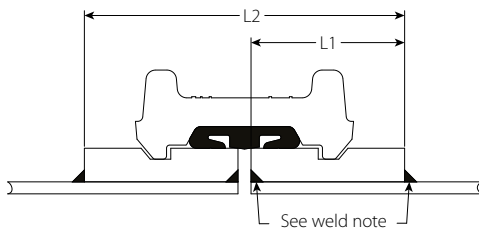
For coupling sizes larger than 100"/DN2500, contact Victaulic.

#### NOTES

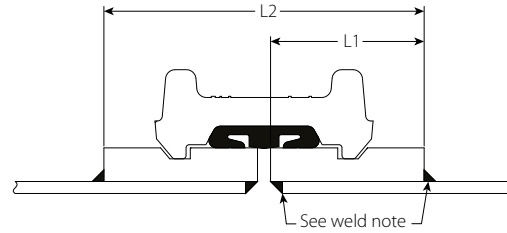
- The Style W77 AGS Vic-Ring system is available for pipe sizes ranging from 12 – 72"/DN300 – DN1800. The coupling used to join these pipes will always be the next largest size (ex: 12"/DN300 pipe requires the use of 14"/DN350 coupling). For pipe sizes ranging from 74 – 96"/DN1850 – DN2500, the coupling used to join these pipe sizes will always be 4" larger than the nominal pipe diameter. (ex: 84"/DN2100 requires the use of 88"/DN2200 coupling.) The larger size is needed to allow for the extra outside pipe diameter the AGS ring adds to the pipe.
- For pipe sizes larger than 96"/DN2400, contact Victaulic.

## 4.1 DIMENSIONS

### All Service Options



Flush



Overhung

Size			AGS Vic-Ring		
Nominal Pipe Size	Coupling Size	O.D. Ring	L1	L2 Nominal Range	Ring Weight Approx. (Each)
inches DN	inches mm	inches mm	inches mm	inches mm	lb kg
12 DN300	14.000 355.6	14.000 355.6	3.00 77	6.13 – 6.31 155.8 – 160.2	20.0 9.0
14 DN350	16.000 406.4	16.000 406.4	3.00 77	6.13 – 6.31 155.8 – 160.2	39.0 17.5
16 DN400	18.000 457.2	18.000 457.2	3.00 77	6.13 – 6.31 155.8 – 160.2	43.0 19.5
18 DN450	20.000 508.0	20.000 508.0	3.00 77	6.13 – 6.31 155.8 – 160.2	48.0 22.0
20 DN500	22.000 558.8	22.000 558.8	3.00 77	6.13 – 6.31 155.8 – 160.2	53.0 24.0
22 DN550	24.000 609.6	24.000 609.6	3.00 77	6.13 – 6.31 155.8 – 160.2	58.0 26.5
24 DN600	26.000 660.4	26.000 660.4	4.00 102	8.15 – 8.53 207.1 – 216.6	84.0 38.0
26 DN650	28.000 711.2	28.000 711.2	4.00 102	8.15 – 8.53 207.1 – 216.6	90.0 41.0
28 DN700	30.000 762.0	30.000 762.0	4.00 102	8.15 – 8.53 207.1 – 216.6	97.0 44.0
30 DN750	32.000 812.8	32.000 812.8	4.00 102	8.15 – 8.53 207.1 – 216.6	105.0 47.5
32 DN800	34.000 863.6	34.000 863.6	4.00 102	8.15 – 8.53 207.1 – 216.6	115.0 52.0
34 DN850	36.000 914.4	36.000 914.4	4.00 102	8.15 – 8.53 207.1 – 216.6	120.0 54.5
36 DN900	38.000 965.2	38.000 965.2	4.00 102	8.15 – 8.53 207.1 – 216.6	125.0 56.5
38 DN950	40.000 1016.0	40.000 1016.0	4.25 108	8.71 – 9.09 221.3 – 230.8	140.0 63.5
40 DN1000	42.000 1066.8	42.000 1066.8	4.25 108	8.71 – 9.09 221.3 – 230.8	145.0 66.0
42 DN1050	44.000 1117.6	44.000 1117.6	4.25 108	8.71 – 9.09 221.3 – 230.8	155.0 70.5
44 DN1100	46.000 1168.4	46.000 1168.4	4.25 108	8.71 – 9.09 221.3 – 230.8	160.0 72.5
46 DN1150	48.000 1219.2	48.000 1219.2	4.25 108	8.71 – 9.09 221.3 – 230.8	165.0 75.0
48 DN1200	50.000 1270.0	50.000 1270.0	4.25 108	8.71 – 9.09 221.3 – 230.8	195.0 88.5
50 DN1250	52.000 1320.8	52.000 1320.8	5.00 127	10.28 – 10.66 261.2 – 270.7	210.0 95.5
52 DN1300	54.000 1371.6	54.000 1371.6	5.00 127	10.28 – 10.66 261.2 – 270.7	225.0 102.0

<sup>3</sup> For allowable pipe end separation see dimensional table on page 4.

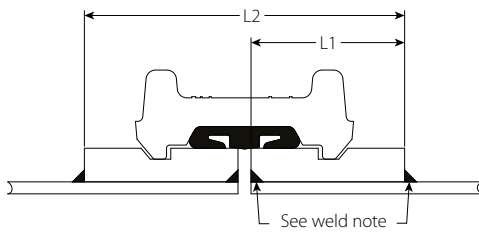
<sup>4</sup> "L1" dimension is from inside face to end of ring for all lined and un-lined configurations.

#### WELD NOTES

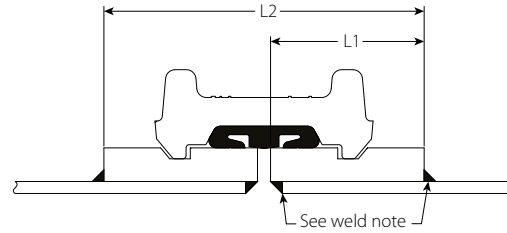
- 12"/300 mm pipe the minimum recommended weld size is ¼"/6.4 mm. Minimum recommended weld size is ⅜"/9.7 mm for 14" – 48"/350mm – 1200mm standard and extra heavy pipe. Minimum recommended weld size is ½"/12.7 mm for 52" – 84"/1300 mm – 2150mm standard and extra heavy pipe. Minimum recommended weld size is ⅝"/15.9 mm for 90"/2300 mm and larger standard and extra heavy pipe.
- Victaulic Type B Vic-Rings utilize a standard full penetration V groove weld.

## 4.1 DIMENSIONS (CONTINUED)

### All Service Options



Flush



Overhung

Size			AGS Vic-Ring		
Nominal Pipe Size	Coupling Size	O.D. Ring	L1	L2 Nominal Range	Ring Weight Approx. (Each)
inches DN	inches mm	inches mm	inches mm	inches mm	lb kg
54 DN1350	56.000 1422.4	56.000 1422.4	5.00 127	10.28 – 10.66 261.2 – 270.7	230.0 104.5
56 DN1400	58.000 1473.2	58.000 1473.2	5.00 127	10.28 – 10.66 261.2 – 270.7	240.0 109.0
58 DN1450	60.000 1524.0	60.000 1524.0	5.00 127	10.28 – 10.66 261.2 – 270.7	250.0 113.5
60 DN1500	62.000 1574.8	62.000 1574.8	5.00 127	10.28 – 10.66 261.2 – 270.7	300.0 136.0
62 DN1550	64.000 1625.6	64.000 1625.6	6.00 153	12.28 – 12.66 312.0 – 321.5	350.0 159.0
64 DN1600	66.000 1676.4	66.000 1676.4	6.00 153	12.28 – 12.66 312.0 – 321.5	350.0 159.0
66 DN1650	68.000 1727.2	68.000 1727.2	6.00 153	12.28 – 12.66 312.0 – 321.5	375.0 170.0
68 DN1700	70.000 1778.8	70.000 1778.8	6.00 153	12.28 – 12.66 312.0 – 321.5	375.0 170.0
70 DN1750	72.000 1828.8	72.000 1828.8	6.00 153	12.28 – 12.66 312.0 – 321.5	375.0 170.0
72 DN1800	74.000 1879.6	74.000 1879.6	6.00 153	12.28 – 12.66 312.0 – 321.5	400.0 181.5
74 DN1850	78.000 1981.2	78.000 1981.2	7.00 178	14.28 – 14.66 362.8 – 372.3	875.0 397.0
80 DN2000	84.000 2133.6	84.000 2133.6	7.00 178	14.28 – 14.66 362.8 – 372.3	950.0 431.0
84 DN2100	88.000 2235.2	88.000 2235.2	7.00 178	14.28 – 14.66 362.8 – 372.3	1000.0 453.5
90 DN2250	94.000 2387.6	94.000 2387.6	8.00 204	16.00 – 16.90 406.4 – 429.2	1075.0 487.5
96 DN2400	100.000 2540.0	100.000 2540.0	8.00 204	16.00 – 16.90 406.4 – 429.2	1150.0 521.5

For coupling sizes larger than 100"/DN2500, contact Victaulic.

<sup>3</sup> For allowable pipe end separation see dimensional table on page 4.

<sup>4</sup> "L1" dimension is from inside face to end of ring for all lined and un-lined configurations.

#### WELD NOTES

- 12"/300 mm pipe the minimum recommended weld size is ¼"/6.4 mm. Minimum recommended weld size is ⅜"/9.7 mm for 14" – 48"/350mm – 1200mm standard and extra heavy pipe. Minimum recommended weld size is ½"/12.7 mm for 52" – 84"/1300 mm – 2150mm standard and extra heavy pipe. Minimum recommended weld size is ⅝"/15.9 mm for 90"/2300 mm and larger standard and extra heavy pipe.
- Victaulic Type B Vic-Rings utilize a standard full penetration V groove weld.



## 4.2 DIMENSIONS

### Ring Requirements

Size		Pipe Size
Nominal Pipe Size	Vic-Ring/Coupling Size	Ring ID (Reference)
inches DN	inches mm	inches mm
12 DN300	14.000 355.6	12.88 327.2
14 DN350	16.000 406.4	14.14 359.2
16 DN400	18.000 457.2	16.16 410.5
18 DN450	20.000 508.0	18.18 461.8
20 DN500	22.000 558.8	20.20 513.1
22 DN550	24.000 609.6	22.22 564.4
24 DN600	26.000 660.4	Nominal Pipe Size + 0.250"/6.4mm
26 DN650	28.000 711.2	
28 DN700	30.000 762.0	
30 DN750	32.000 812.8	
32 DN800	34.000 863.6	
34 DN850	36.000 914.4	
36 DN900	38.000 965.2	
38 DN950	40.000 1016.0	
40 DN1000	42.000 1066.8	
42 DN1050	44.000 1117.6	
44 DN1100	46.000 1168.4	
46 DN1150	48.000 1219.2	

Size		Pipe Size
Nominal Pipe Size	Vic-Ring/Coupling Size	Ring ID (Reference)
inches DN	inches mm	inches mm
48 DN1200	50.000 1270.0	Nominal Pipe Size + 0.250"/6.4mm
50 DN1250	52.000 1320.8	
52 DN1300	54.000 1371.6	
54 DN1350	56.000 1422.4	
56 DN1400	58.000 1473.2	
58 DN1450	60.000 1524.0	
60 DN1500	62.000 1574.8	
62 DN1550	64.000 1625.6	
64 DN1600	66.000 1676.4	
66 DN1650	68.000 1727.2	
68 DN1700	70.000 1778.0	
70 DN1750	72.000 1828.8	
72 DN1800	74.000 1879.6	
74 DN1850	78.000 1981.2	
80 DN2000	84.000 2133.6	
84 DN2100	88.000 2235.2	
90 DN2250	94.000 2387.6	
96 DN2400	100.000 2540.0	

**NOTE**

- For pipe exceeding these values contact Victaulic

## 5.0 PERFORMANCE

Size		Maximum Allowable Working Pressure <sup>7</sup>	Maximum End Load <sup>5</sup>	Activation Moment <sup>6</sup>
Nominal Pipe Size inches DN	Vic-Ring/Coupling Size inches mm			
12	14.000	350	53,000	31,500
DN300	355.6	2413	235,756	42,710
14	16.000	350	70,000	47,000
DN350	406.4	2413	311,376	63,720
16	18.000	350	89,000	67,000
DN400	457.2	2413	395,892	90,840
18	20.000	350	105,000	92,000
DN450	508.0	2413	467,064	124,740
20	22.000	350	130,000	125,000
DN500	558.8	2413	578,268	169,480
22	24.000	350	155,000	160,000
DN550	609.6	2413	689,474	216,930
24	26.000	300	155,000	175,000
DN600	660.4	2068	689,474	237,270
26	28.000	300	180,000	220,000
DN650	711.2	2068	800,680	298,280
28	30.000	300	210,000	270,000
DN700	762.0	2068	934,126	366,070
30	32.000	300	240,000	325,000
DN750	812.8	2068	1,067,574	440,640
32	34.000	300	270,000	390,000
DN800	863.6	2068	1,201,020	528,770
34	36.000	300	305,000	460,000
DN850	914.4	2068	1,356,708	623,680
36	38.000	300	340,000	540,000
DN900	965.2	2068	1,512,396	732,140
38	40.000	300	375,000	630,000
DN950	1016.0	2068	1,668,084	854,170
40	42.000	300	415,000	730,000
DN1000	1066.8	2068	1,846,012	989,750
42	44.000	232	350,000	650,000
DN1050	1117.6	1600	1,556,878	881,280
44	46.000	232	385,000	740,000
DN1100	1168.4	1600	1,712,566	1,003,310
46	48.000	232	415,000	840,000
DN1150	1219.2	1600	1,846,012	1,138,890

For coupling sizes larger than 100"/DN2500, contact Victaulic.

<sup>5</sup> Working Pressure and End Load are total, from all internal and external loads, based on carbon steel, AGS rings installed in accordance with Victaulic specifications. Contact Victaulic for performance on other ring materials.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

<sup>6</sup> Victaulic Style W77/W77B require an activation moment resulting in reaction forces and moments in the system. This moment is linearly proportional to the system MAWP and can be determined for system design pressure through this linear relationship. The design activation moment shall be used for piping system and structural design purposes.

<sup>7</sup> Pipe wall thickness for use with Victaulic Vic-Rings shall be specified by the system designer for the intended service.

5.0 PERFORMANCE (CONTINUED)

Size		Maximum Allowable Working Pressure <sup>7</sup>	Maximum End Load <sup>5</sup>	Activation Moment <sup>6</sup>
Nominal Pipe Size inches DN	Vic-Ring/Coupling Size inches mm			
48	50.000	232	455,000	950,000
DN1200	1270.0	1600	2,023,942	1,288,030
50	52.000	250	530,000	1,160,000
DN1250	1320.8	1724	2,357,558	1,572,750
52	54.000	250	570,000	1,290,000
DN1300	1371.6	1724	2,535,486	1,749,010
54	56.000	250	610,000	1,440,000
DN1350	1422.4	1724	2,713,416	1,952,380
56	58.000	250	660,000	1,600,000
DN1400	1473.2	1724	2,935,826	2,169,310
58	60.000	250	700,000	1,770,000
DN1450	1524.0	1724	3,113,756	2,399,800
60	62.000	250	750,000	1,950,000
DN1500	1574.8	1724	3,336,166	2,643,840
62	64.000	250	800,000	2,150,000
DN1550	1625.6	1724	3,558,578	2,915,010
64	66.000	250	850,000	2,360,000
DN1600	1676.4	1724	3,780,988	3,199,730
66	68.000	250	900,000	2,580,000
DN1650	1727.2	1724	4,003,400	3,498,010
68	70.000	250	960,000	2,810,000
DN1700	1778.0	1724	4,270,294	3,809,850
70	72.000	250	1,010,000	3,060,000
DN1750	1828.8	1724	4,492,704	4,148,800
72	74.000	250	1,070,000	3,320,000
DN1800	1879.6	1724	4,759,598	4,501,320
74	78.000	250	1,190,000	3,890,000
DN1850	1981.2	1724	5,293,384	5,274,130
80	84.000	250	1,380,000	4,850,000
DN2000	2133.6	1724	6,138,546	6,575,720
84	88.000	250	1,520,000	5,580,000
DN2100	2235.2	1724	6,761,298	7,565,460
90	94.000	250	1,730,000	6,800,000
DN2250	2387.6	1724	7,695,424	9,219,560
96	100.000	250	1,960,000	8,190,000
DN2400	2540.0	1724	8,718,516	11,104,150

For coupling sizes larger than 100"/DN2500, contact Victaulic.

<sup>5</sup> Working Pressure and End Load are total, from all internal and external loads, based on carbon steel, AGS rings installed in accordance with Victaulic specifications. Contact Victaulic for performance on other ring materials.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

<sup>6</sup> Victaulic Style W77/W77B require an activation moment resulting in reaction forces and moments in the system. This moment is linearly proportional to the system MAWP and can be determined for system design pressure through this linear relationship. The design activation moment shall be used for piping system and structural design purposes.

<sup>7</sup> Pipe wall thickness for use with Victaulic Vic-Rings shall be specified by the system designer for the intended service.

## 5.1 PERFORMANCE

Coupling Size inches DN	Required Torque ft. lbs. N•m
14, 16, 18 DN350, DN400, DN450	250 338
20, 22, 24, 26, 28 DN500, DN550, DN600, DN650, DN700	375 508
30, 32, 34, 36, 38 DN750, DN800, DN850, DN900, DN950	500 678
40, 42, 44, 46, 48, 50 DN1000, DN1050, DN1100, DN1150, DN1200, DN1250	600 814
52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74 DN1300, DN1350, DN1400, DN1450, DN1500, DN1550, DN1600, DN1650, DN1700, DN1750, DN1800, DN1850	1225 1660
78, 84, 88, 94, 100 DN1950, DN2100, DN2200, DN2350, DN2500	2000 2712
For coupling sizes larger than 100"/DN2500, contact Victaulic.	

## 6.0 NOTIFICATIONS

### WARNING

- Victaulic AGS couplings **MUST ONLY** be installed on AGS Vic-ring systems provided by Victaulic. Failure to follow these instructions will cause grooves that are not within Victaulic AGS specifications, resulting in joint failure, serious personal injury, and property damage.

## 7.0 REFERENCE MATERIALS

- [02.06: Victaulic® Potable Water Approvals ANSI/NSF](#)
- [05.01: Victaulic® Seal Selection Guide](#)
- [20.03: Victaulic® AGS Flexible Coupling](#)
- [20.05: Victaulic® AGS Grooved End Fittings](#)
- [20.12 Victaulic W155 Expansion Joints](#)
- [20.16 Style W257 Dynamic Movement Joint](#)
- [23.19 Series W719 Butterfly Valve](#)
- [24.01: Victaulic® Pipe Preparation Tool Specifications](#)
- [25.09: Victaulic® AGS Roll Groove Specifications](#)
- [26.01: Victaulic® Design Data](#)
- [29.01: Victaulic® Terms and Conditions/Warranty](#)
- [I-ENDCAP: Victaulic® End Caps Installation Instructions](#)
- [I-W100 Field Installation Handbook Advanced Groove System Products](#)

### User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

### Intellectual Property Rights

No statement contained herein concerning a possible or suggested use of any material, product, service, or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Victaulic or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product, service, or design in the infringement of any patent or other intellectual property right. The terms "Patented" or "Patent Pending" refer to design or utility patents or patent applications for articles and/or methods of use in the United States and/or other countries.

### Note

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

### Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at [www.victaulic.com](http://www.victaulic.com).

### Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

### Trademarks

*Victaulic* and all other Victaulic marks are the trademarks or registered trademarks of Victaulic Company, and/or its affiliated entities, in the U.S. and/or other countries.