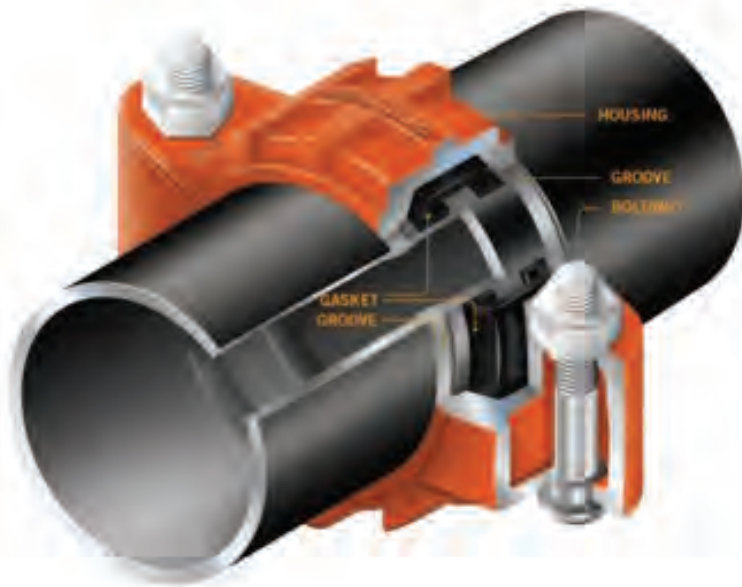


# VICTAULIC COUPLINGS



**EMCO**  
WATERWORKS



## **The worldwide standard in mechanical piping systems**

**More than 80 years of piping systems solutions**

Since 1925, Victaulic has been at the forefront of mechanical piping systems innovation, providing numerous patented piping related products that are in use today in multiple markets around the world. And they all stem from one basic concept; the original grooved end mechanical pipe joining system and a steady stem of innovation from Victaulic. The Victaulic grooved end piping system is the most versatile, economical and reliable mechanical pipe joining system available.



# Victaulic Aquamine Products

SERIES 2900



SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS

The Victaulic Aquamine line of reusable PVC products is the fastest, easiest and most economical method for joining PVC pipe for water services.

Ranging in size from 2 to 12"/50 – 300mm for pressures up to 350psi/2400kPa Victaulic Aquamine products are joined by inserting a spline into the groove provided with each product. Ideal for water supply, water bypass, dewatering lines and other water services these products can easily be reused and redeployed as needed.

The complete Victaulic Aquamine line consists of pipe, couplings, fittings, and valves available with a variety of end connections.



PATENTED

## MATERIAL SPECIFICATIONS

**Pipe:** PVC 1120 type 1, grade 1 (class 12454) conforming to ASTM D-1784 and ASTM D-2241.

**Couplings:** PVC 1120 type 1, grade 1 (class 12454) conforming to ASTM D-1784 and ASTM D-3139

**Fittings:** PVC 1120 type 1, grade 1 (class 12454) conforming to ASTM D-1784 and ASTM D-2241

**Valves:**

**Housing:** Ductile iron conforming to ASTM A-536, grade 65-45-12

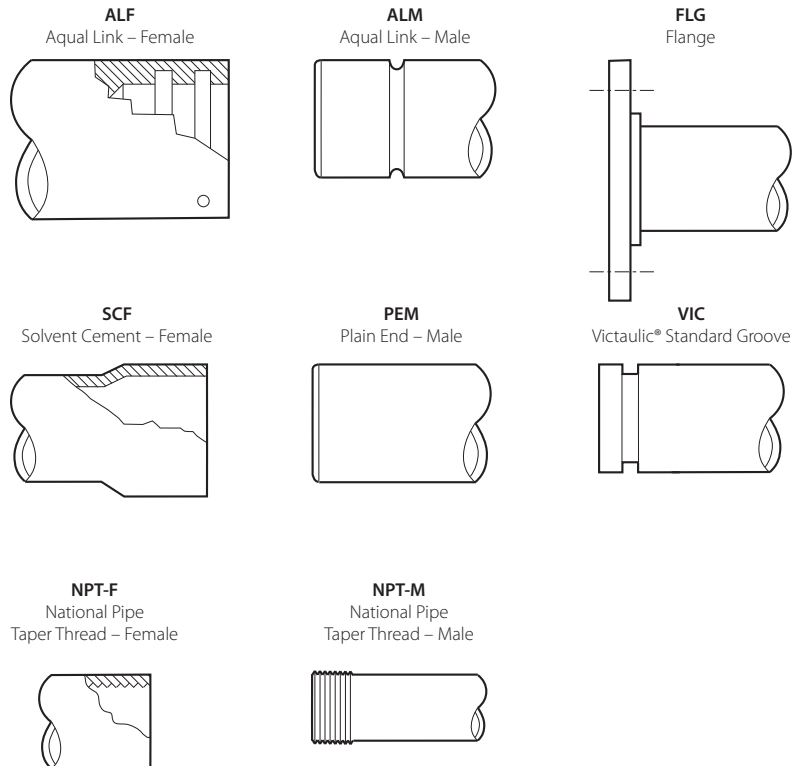
**Body:** PVC 1120

**Disc:** Ductile iron conforming to ASTM A-536, grade 65-45-12. Grade "T" Nitrile rubber encapsulated disc conforms to ASTM D-2000.

**O-Rings:** Polyisoprene (IR) conforming to ASTM F-477

**Spline:** Nylon. For higher pressure services Nylon 66 is used.

## PRODUCT END CONNECTION DESIGNATIONS



**JOB/OWNER**

System No. \_\_\_\_\_  
Location \_\_\_\_\_

**CONTRACTOR**

Submitted By \_\_\_\_\_  
Date \_\_\_\_\_

**ENGINEER**

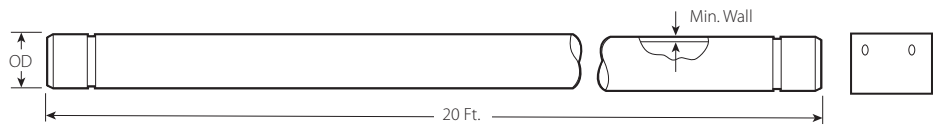
Spec Sect \_\_\_\_\_ Para \_\_\_\_\_  
Approved \_\_\_\_\_  
Date \_\_\_\_\_

# Victaulic Aquamine Products

## SERIES 2900

### SERIES 2900 AQUAMINE PIPE WITH COUPLING

NOTE: Aquamine pipe is sold in 20 ft. lengths with one coupling included, but packed separately



Size	SDR	Pressure Rating	Pipe O.D.	Minimum Wall	Weight Per Ft.
Nominal Size Inches mm		PSI kPa	Inches mm	Inches mm	Lbs. kg
2 50	17	250 1724	2.375 60.3	0.140 3.56	0.69 0.3
	21	200 1379	2.375 60.3	0.113 2.88	0.57 0.3
3 80	17	250 1724	3.500 88.9	0.206 5.21	1.45 0.7
	21	200 1379	3.500 88.9	0.167 4.24	1.19 0.5
4 100	12.4	350 2413	4.500 114.3	0.363 9.22	2.96 1.3
	17	250 1724	4.500 114.3	0.265 6.73	2.40 1.1
	21	200 1379	4.500 114.3	0.214 5.44	1.96 0.9
	26	160 1103	4.500 114.3	0.173 4.39	1.60 0.7
6 150	12.4	350 2413	6.625 168.3	0.534 13.56	6.42 2.9
	17	250 1724	6.625 168.3	0.390 9.91	5.20 2.4
	21	200 1379	6.625 168.3	0.316 8.03	4.26 1.9
	26	160 1103	6.625 168.3	0.255 6.48	3.46 1.6
8 200	12.4	350 2413	8.625 219.1	0.696 17.68	11.03 5.0
	17	250 1724	8.625 219.1	0.508 12.90	8.81 4.0
	21	200 1379	8.625 219.1	0.410 10.41	7.21 3.3
	26	160 1103	8.625 219.1	0.332 8.43	5.91 2.7
10 250	26	160 1103	10.750 273.1	0.413 10.49	9.20 4.2
12 300	26	160 1103	12.750 323.9	0.490 12.45	12.98 5.9

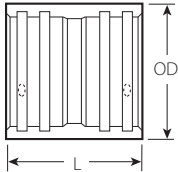
### AQUAMINE PIPE PALLET PACK AND TRUCKLOAD QUANTITIES

Pipe Size	Feet Per Pallet Pack	Packs Per Truck	Feet Per Truck
2"	2,100	24	50,400
3"	920	24	22,080
4"	520	24	12,480
4" 350 psi	520	24	12,480
6"	400	20	8,000
6" 350 psi	400	16	6,400
8"	280	16	4,480
8" 350 psi	280	14	3,920
10"	160	16	2,560
12"	160	12	1,920

# Victaulic Aquamine Products

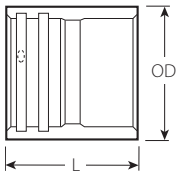
## SERIES 2900

### SERIES 2904 FEMALE X FEMALE COUPLING (ALF X ALF)



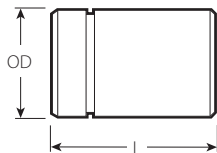
Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2	250	5.25	3.20	0.9
50	1724	133.35	81.28	0.4
3	250	7.25	4.38	1.9
80	1724	184.15	111.25	0.9
4	250	8.25	5.47	3.1
100	1724	209.55	138.94	1.4
4 HP	350	8.25	6.00	5.0
100	2413	209.55	152.40	2.3
6	250	8.25	7.84	5.6
150	1724	209.55	199.14	2.5
6 HP	350	8.25	8.72	10.5
150	2413	209.55	221.49	4.8
8	200	9.50	10.19	11.1
200	1379	241.30	258.83	5.0
8	250	9.50	10.19	11.1
200	1724	241.30	258.83	5.0
8 HP	350	9.50	10.75	15.2
200	2413	241.30	273.05	6.9
10	160	12.00	12.44	18.0
250	1103	304.80	315.98	8.2
12	160	12.00	14.65	24.2
300	1103	304.80	372.11	11.0

### SERIES 2905 FEMALE X SOLVENT CEMENT (FEMALE) COUPLING (ALF X SCF)



Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2	250	5.50	3.20	1.0
50	1724	139.7	81.28	0.5
3	250	8.00	4.38	2.2
80	1724	203.2	111.25	1.0
4	250	9.00	5.47	3.4
100	1724	228.6	138.94	1.5
6	250	9.00	7.84	6.3
150	1724	228.6	199.14	2.9
8	200	10.00	10.19	12.2
200	1379	254.0	258.83	5.5
10	160	12.00	12.44	18.7
250	1103	304.8	315.98	8.5
12	160	12.00	14.65	24.7
300	1103	304.8	372.11	11.2

### SERIES 2906 AQUAMINE GROOVE X SOLVENT CEMENT (ALM X PEM)

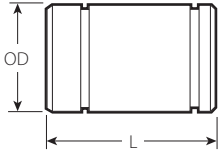


Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2	250	7.00	2.375	0.5
50	1724	177.8	60.33	0.2
3	250	9.00	3.50	1.4
80	1724	228.6	88.90	0.6
4	250	10.00	4.50	2.4
100	1724	254.0	114.30	1.1
6	250	12.00	6.625	5.5
150	1724	304.8	168.28	2.5
8	200	13.00	8.625	9.3
200	1379	330.2	219.08	4.2
10	160	16.00	10.750	14.2
250	1103	406.4	273.05	6.4
12	160	16.00	12.750	20.0
300	1103	406.4	323.85	9.1

# Victaulic Aquamine Products

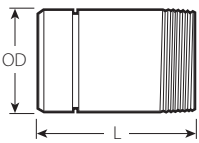
## SERIES 2900

### SERIES 2907 AQUAMINE GROOVE X ORIGINAL VICTAULIC GROOVE (ALM X VIC)



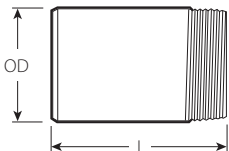
Size	Pressure Rating	Material	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa		Inches mm	Inches mm	Lbs. kg
2 50	250 1724	PVC	7.00 177.8	2.375 60.33	0.5 0.2
3 80	250 1724	PVC	9.00 228.6	3.500 88.90	1.4 0.6
4 100	240 1655	PVC	10.00 254.0	4.500 114.30	2.4 1.1
4 HP 100	350 2413	Steel	9.00 228.6	4.500 114.30	5.5 2.5
6 150	160 1103	PVC	12.00 304.8	6.625 168.28	5.5 2.5
6 HP 150	350 2413	Steel	10.00 254.0	6.625 168.28	10.0 4.5
8 200	120 827	PVC	13.00 330.2	8.625 219.08	9.3 4.2
8 HP 200	350 2413	Steel	10.00 254.0	8.625 219.08	14.5 6.6
10 250	100 689	PVC	16.00 406.4	10.750 273.05	14.2 6.4
12 300	80 552	PVC	16.00 406.4	12.750 323.85	20.0 9.1

### SERIES 2908 AQUAMINE GROOVE X MALE THREAD NIPPLE (ALM X NPT-M)



Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2 50	200 1379	7.00 177.8	2.375 60.33	0.5 0.2
3 80	190 1310	9.00 228.6	3.500 88.90	1.4 0.6
4 100	160 1103	10.00 254.0	4.500 114.30	2.4 1.1
6 150	140 965	12.00 304.8	6.625 168.28	5.5 2.5
8 200	120 827	13.00 330.2	8.625 219.08	9.3 4.2
10 250	120 827	16.00 406.4	10.750 273.05	14.2 6.4
12 300	110 758	16.00 406.4	12.750 323.85	20.0 9.1

### SERIES 2909 SOLVENT-CEMENT X MALE THREAD NIPPLE (PEM X NPT-M)

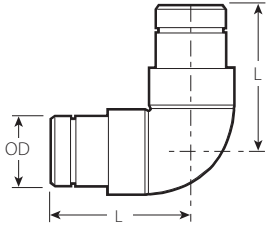


Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2 50	200 1379	5.25 133.35	2.375 60.33	0.5 0.2
3 80	190 1310	6.50 165.10	3.500 88.90	1.4 0.6
4 100	160 1103	7.00 177.80	4.500 114.30	2.4 1.1
6 150	140 965	9.00 228.6	6.625 168.28	5.5 2.5
8 200	120 827	10.40 264.16	8.625 219.08	9.3 4.2
10 250	120 827	16.00 406.40	10.750 273.05	14.2 6.4
12 300	110 758	16.00 406.40	12.750 323.85	20.0 9.1

# Victaulic Aquamine Products

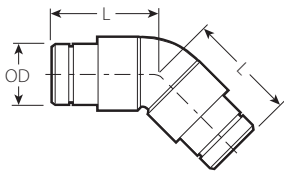
## SERIES 2900

### SERIES 2910 AQUAMINE GROOVE X AQUAMINE GROOVE 90° ELBOW (ALM X ALM)



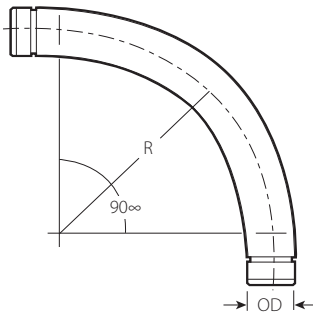
Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2	250	8.00	2.375	1.8
50	1724	203.20	60.33	0.8
3	250	10.88	3.500	4.6
80	1724	276.35	88.90	2.1
4	250	12.38	4.500	8.0
100	1724	314.45	114.30	3.6
6	250	15.63	6.625	19.6
150	1724	397.00	168.28	8.9
8	200	18.00	8.625	34.4
200	1379	457.20	219.08	15.6
10	160	25.10	10.750	57.2
250	1103	637.54	273.05	25.9
12	160	25.70	12.750	83.9
300	1103	652.78	323.85	38.1

### SERIES 2912 AQUAMINE GROOVE X AQUAMINE GROOVE 45° ELBOW (ALM X ALM)



Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2	250	7.75	2.375	1.7
50	1724	196.85	60.33	0.8
3	250	9.75	3.500	3.9
80	1724	247.65	88.90	1.8
4	250	11.75	4.500	7.0
100	1724	298.45	114.30	3.2
6	250	13.00	6.625	16.4
150	1724	330.20	168.28	7.4
8	200	15.00	8.625	28.7
200	1379	381.00	219.08	13.0
10	160	18.30	10.750	47.4
250	1103	464.82	273.05	21.5
12	160	18.75	12.750	72.7
300	1103	476.25	323.85	33.0

### SERIES 2913 AQUAMINE GROOVE X AQUAMINE GROOVE 90° SWEEP (ALM X ALM)



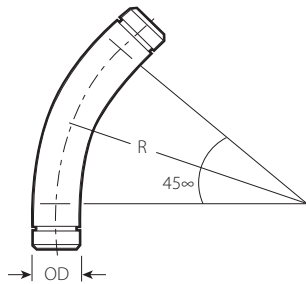
Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2	250	12.0	2.375	2.1
50	1724	304.8	60.33	1.0
3	250	18.0	3.500	6.4
80	1724	457.2	88.90	2.9
4	250	21.5	4.500	10.9
100	1724	546.1	114.30	4.9
4 HP	350	21.5	4.500	14.8
100	2413	546.1	114.30	6.7
6	250	29.0	6.625	28.4
150	1724	736.6	168.28	12.9
6 HP	350	29.0	6.625	43.2
150	2413	736.6	168.28	19.6
8	200	30.0	8.625	44.0
200	1379	762.0	219.08	20.0
8 HP	350	30.0	8.625	67.4
200	2413	762.0	219.08	30.6
10*	160	65.0	10.750	121.5
250	1103	1651.0	273.05	55.1
12*	160	66.0	12.750	170.7
300	1103	1676.4	323.85	77.4

\*Fabricated fittings

# Victaulic Aquamine Products

## SERIES 2900

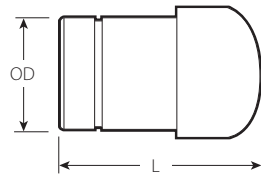
### SERIES 2914 AQUAMINE GROOVE 45° SWEEP (ALM X ALM)



Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2 50	250 1724	12.0 304.8	2.375 60.33	1.3 0.6
3 80	250 1724	18.0 457.2	3.500 88.90	4.1 1.9
4 100	250 1724	21.5 546.1	4.500 114.30	6.9 3.1
4 HP 100	350 2413	21.5 546.1	4.500 114.30	9.4 4.3
6 150	250 1724	29.0 736.6	6.625 168.28	17.9 8.1
6 HP 150	350 2413	29.0 736.6	6.625 168.28	27.3 12.4
8 200	200 1379	30.0 762.0	8.625 219.08	29.9 13.6
8 HP 200	350 2413	30.0 762.0	8.625 219.08	45.8 20.8
10* 250	160 1103	65.0 1651.0	10.750 273.05	75.0 34.0
12* 300	160 1103	66.0 1676.4	12.750 323.85	105.4 47.8

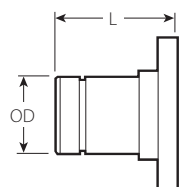
\*Fabricated fittings

### SERIES 2915 AQUAMINE GROOVE END CAP (ALM)



Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2 50	250 1724	7.50 190.5	2.375 60.33	1.0 0.5
3 80	250 1724	10.00 254.0	3.500 88.90	2.2 1.0
4 100	250 1724	11.00 279.4	4.500 114.30	3.7 1.7
6 150	250 1724	14.00 355.6	6.625 168.28	8.5 3.9
8 200	200 1379	17.50 444.5	8.625 219.08	15.5 7.0
10 250	160 1103	18.50 469.9	10.750 273.05	22.4 10.2
12 300	160 1103	19.50 495.3	12.750 323.85	32.0 14.5

### SERIES 2916 AQUAMINE GROOVE X FLANGE TRANSITION (ALM X FLG)



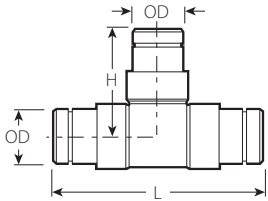
Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2 50	150 1034	7.25 184.15	2.375 60.33	1.5 0.7
3 80	150 1034	9.25 234.95	3.500 88.90	3.2 1.5
4 100	150 1034	10.25 260.35	4.500 114.30	5.2 2.4
6 150	150 1034	12.25 311.15	6.625 168.28	10.0 4.5
8 200	150 1034	13.88 352.55	8.625 219.08	16.0 7.3
10 250	150 1034	16.50 419.10	10.750 273.05	25.5 11.6
12 300	150 1034	16.50 419.10	12.750 323.85	37.9 17.2



# Victaulic Aquamine Products

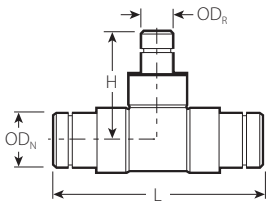
## SERIES 2900

### SERIES 2917 AQUAMINE GROOVE TEE (ALM X ALM X ALM)



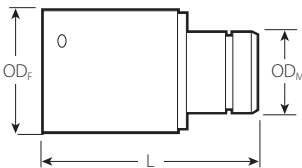
Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2	250	16.50	2.375	2.6
50	1724	419.10	60.33	1.2
3	250	21.50	3.500	6.5
80	1724	546.10	88.90	2.9
4	250	24.75	4.500	10.5
100	1724	628.65	114.30	4.8
6	250	31.00	6.625	27.1
150	1724	787.40	168.28	12.3
8	200	36.25	8.625	27.8
200	1379	920.75	219.08	12.6
10	160	45.38	10.750	42.6
250	1103	1152.65	273.05	19.3
12	160	45.00	12.750	60.0
300	1103	1143.00	323.85	27.2

### SERIES 2918 AQUAMINE GROOVE REDUCING TEE (ALM X ALM X ALM)



Size	Pressure Rating	L	O.D. <sub>M</sub>	O.D. <sub>R</sub>	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Inches mm	Lbs. kg
3 X 3 X 2	250	21.50	3.500	2.375	3.3
80 X 80 X 50	1724	546.10	88.90	60.33	1.5
4 X 4 X 2	250	22.50	4.500	2.375	5.4
100 X 100 X 50	1724	571.50	114.30	60.33	2.4
X 3	250	24.50	4.500	3.500	6.3
X 80	1724	622.30	114.30	88.90	2.9
6 X 6 X 2	250	31.00	6.625	2.375	11.5
150 X 150 X 50	1724	787.40	168.28	60.33	5.2
X 3	250	31.00	6.625	3.500	12.3
X 80	1724	787.40	168.28	88.9	5.6
X 4	250	31.00	6.625	4.500	13.4
X 100	1724	787.40	168.28	114.3	6.1
8 X 8 X 4	200	36.25	8.625	4.500	21.0
200 X 200 X 100	1379	920.75	219.08	114.30	9.5
X 6	200	36.25	8.625	6.625	24.0
X 150	1379	920.75	219.08	168.28	10.9

### SERIES 2919 AQUAMINE GROOVE X AQUAMINE GROOVE REDUCER (ALF X ALM)

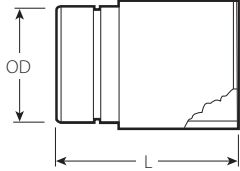


Size	Pressure Rating	L	O.D. <sub>M</sub>	O.D. <sub>R</sub>	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Inches mm	Lbs. kg
4 X 2	250	15.25	5.470	2.375	5.2
100 X 50	1724	387.35	138.94	60.33	2.4
X 3	250	15.56	5.470	3.500	5.6
X 80	1724	395.22	138.94	88.90	2.5
6 X 2	250	15.75	7.840	2.375	9.9
150 X 50	1724	400.05	199.14	60.33	4.5
X 3	250	16.50	7.840	3.500	10.6
X 80	1724	419.10	199.14	88.90	4.8
X 4	250	17.38	7.840	4.500	11.5
X 100	1724	441.45	199.14	114.30	5.2
8 X 2	200	17.00	10.190	2.375	23.4
200 X 50	1379	431.80	258.83	60.33	10.6
X 4	200	15.63	10.190	4.500	30.0
X 100	1379	397.00	258.83	114.30	13.6
X 6	200	18.50	10.190	6.625	23.5
X 150	1379	469.90	258.83	168.28	10.7
10 X 8	160	19.75	12.440	8.625	34.1
250 X 150	1103	501.65	315.98	219.08	15.5
12 X 8	160	22.25	14.650	8.625	43.9
300 X 150	1103	565.15	372.11	219.08	19.9

# Victaulic Aquamine Products

SERIES 2900

**SERIES 2920  
AQUAMINE GROOVE X SOLVENT-CEMENT  
TRANSITION  
(ALM X SCF)**

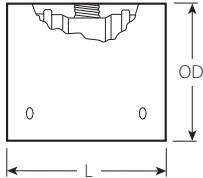


Size	Pressure Rating	L	O.D.	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Lbs. kg
2 50	250 1724	6.625 168.28	2.375 60.33	1.2 0.5
3 80	250 1724	8.625 219.08	3.500 88.90	2.4 1.1
4 100	250 1724	9.625 244.48	4.500 114.30	3.5 1.6
6 150	250 1724	11.375 288.93	6.625 168.28	8.4 3.8
8 200	200 1379	12.875 327.03	8.625 219.08	16.2 7.3
10 250	160 1103	15.250 387.35	10.750 273.05	28.7 13.0
12 300	160 1103	15.250 387.35	12.750 323.85	37.6 17.1

# Victaulic Aquamine Products

SERIES 2900

**SERIES 2930  
AQUAMINE GROOVE OUTLET COUPLING  
(ALF X ALF X NPT-F)**

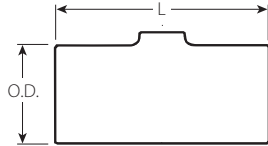


Size		Pressure Rating		L		O.D.		Weight	
Nominal Size Inches mm		PSI kPa		Inches mm		Inches mm		Lbs. kg	
2 X 2 50 X 50	X ¾	200	700	3.20	1.2				
	X 20	1379	177.80	81.28	0.5				
	X 1	200	700	3.20	1.2				
	X 25	1379	177.80	81.28	0.5				
	X ¾	200	9.50	4.38	2.6				
	X 20	1379	241.30	111.25	1.2				
3 X 3 80 X 80	X 1	200	9.50	4.38	2.6				
	X 25	1379	241.30	111.25	1.2				
	X 1½	160	9.50	4.38	2.6				
	X 40	1103	241.30	111.25	1.2				
4 X 4 100 X 100	X ¾	200	10.50	5.47	4.0				
	X 20	1379	266.70	138.94	1.8				
	X 1	200	10.50	5.47	4.0				
	X 25	1379	266.70	138.94	1.8				
	X 1½	160	10.50	5.47	4.0				
	X 40	1103	266.70	138.94	1.8				
6 X 6 150 X 150	X ¾	200	11.25	7.84	7.3				
	X 20	1379	285.75	199.14	3.3				
	X 1	200	11.25	7.84	7.3				
	X 25	1379	285.75	199.14	3.3				
	X 1½	200	11.25	7.84	7.3				
	X 40	1379	285.75	199.14	3.3				
	X 2	160	11.25	7.84	7.3				
	X 50	1103	285.75	199.14	3.3				
8 X 8 200 X 200	X ¾	200	12.50	10.19	13.6				
	X 20	1379	317.50	258.83	6.2				
	X 1	200	12.50	10.19	13.6				
	X 25	1379	317.50	258.83	6.2				
	X 1½	200	12.50	10.19	13.6				
	X 40	1379	317.50	258.83	6.2				
	X 2	200	12.50	10.19	13.6				
	X 50	1379	317.50	258.83	6.2				
10 X 10 250 X 250	X ¾	160	15.00	12.44	22.0				
	X 20	1103	381.00	315.98	10.0				
	X 1	160	15.00	12.44	22.0				
	X 25	1103	381.00	315.98	10.0				
	X 1½	160	15.00	12.44	22.0				
	X 40	1103	381.00	315.98	10.0				
	X 2	160	15.00	12.44	22.0				
	X 50	1103	381.00	315.98	10.0				
12 X 12 300 X 300	X ¾	160	15.00	14.65	29.1				
	X 20	1103	381.00	372.11	13.2				
	X 1	160	15.00	14.65	29.1				
	X 25	1103	381.00	372.11	13.2				
	X 1½	160	15.00	14.65	29.1				
	X 40	1103	381.00	372.11	13.2				
	X 2	160	15.00	14.65	29.1				
	X 50	1103	381.00	372.11	13.2				

# Victaulic Aquamine Products

## SERIES 2900

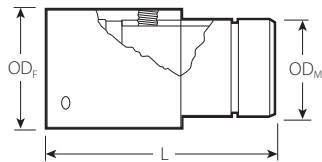
### STYLES 2937, 2938 & 2939 AQUAMINE GROOVE FORMED OUTLET FITTING



Size	Length	O.D.	Maximum Working Pressure – psi/kPa		
			Style 2937 1" NPT Tap	Style 2938 1 1/2" NPT Tap	Style 2939 2" NPT Tap
2 60.3	7.50 191	3.20 81	250 1725	–	–
3 88.9	11.00 279	4.38 111	250 1725	250 1725	–
4 114.3	12.00 305	5.47 139	250 1725	250 1725	250 1725
6 168.3	12.00 305	7.84 199	250 1725	250 1725	250 1725

NOTE: The pressure ratings noted above are based upon the capability of the female threaded socket. If a plastic threaded pipe nipple is used, the rating will be based upon values cited in ASTM-D1785 for Schedule 80 threaded pipe nipples.

### SERIES 2940 AQUAMINE GROOVE OUTLET FITTING (ALF X ALM X NPT-F)



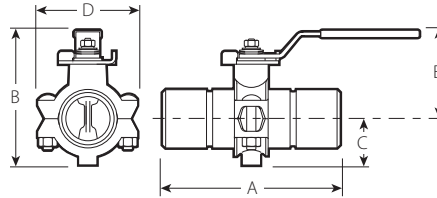
Size	Pressure Rating	L	O.D. <sub>N</sub>	O.D. <sub>R</sub>	Weight
Nominal Size Inches mm	PSI kPa	Inches mm	Inches mm	Inches mm	Lbs. kg
2 X 2 50 X 50	X 3/4	250	10.13	3.20	1.5
	X 20	1724	257.3	81.28	0.7
	X 1	250	10.13	3.20	1.5
	X 25	1724	257.3	81.28	0.7
	X 1 1/2	240	13.50	4.35	3.6
	X 40	1655	342.9	110.49	1.6
3 X 3 80 X 80	X 3/4	250	13.50	4.35	3.6
	X 20	1724	342.9	110.49	1.6
	X 1	250	13.50	4.35	3.6
	X 25	1724	342.9	110.49	1.6
	X 1 1/2	240	13.50	4.35	3.6
	X 40	1655	342.9	110.49	1.6
4 X 4 100 X 100	X 3/4	250	15.00	5.47	5.9
	X 20	1724	381.0	138.94	2.7
	X 1	250	15.00	5.47	5.9
	X 25	1724	381.0	138.94	2.7
	X 1 1/2	240	15.00	5.47	5.9
	X 40	1655	381.0	138.94	2.7
6 X 6 150 X 150	X 3/4	250	17.00	7.84	11.8
	X 20	1724	431.8	199.14	5.4
	X 1	250	17.00	7.84	11.8
	X 25	1724	431.8	199.14	5.4
	X 1 1/2	240	17.00	7.84	11.8
	X 40	1655	431.8	199.14	5.4
8 X 8 200 X 200	X 3/4	200	19.00	10.19	21.5
	X 20	1379	482.6	258.83	9.8
	X 1	200	19.00	10.19	21.5
	X 25	1379	482.6	258.83	9.8
	X 1 1/2	200	19.00	10.19	21.5
	X 40	1379	482.6	258.83	9.8
10 X 10 250 X 250	X 3/4	160	22.25	12.44	32.9
	X 20	1103	571.5	315.98	14.9
	X 1	160	22.25	12.44	32.9
	X 25	1103	571.5	315.98	14.9
	X 1 1/2	160	22.25	12.44	32.9
	X 40	1103	571.5	315.98	14.9
12 X 12 300 X 300	X 3/4	160	22.25	14.65	44.7
	X 20	1103	571.5	372.11	20.3
	X 1	160	22.25	14.65	44.7
	X 25	1103	571.5	372.11	20.3
	X 1 1/2	160	22.25	14.65	44.7
	X 40	1103	571.5	372.11	20.3
	X 2	160	22.25	14.65	44.7
	X 50	1103	571.5	372.11	20.3

# Victaulic Aquamine Products

## SERIES 2900

### AQUAMINE® BUTTERFLY VALVE

The Aquamine® butterfly valve is designed for use with Aquamine system components for pipe sizes ranging from 2 – 6”/50 – 150mm. Series AQV valves are rated for 250psi/1725kPa at 73°F/23°C to provide reliable, leak-free, dead-end service.



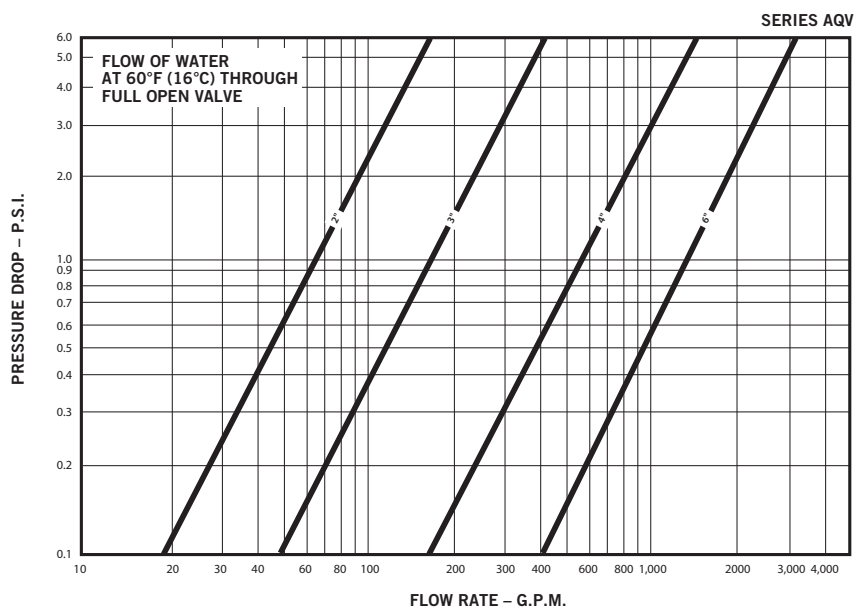
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Pipe Inches mm		Dimensions Inches mm					Approx. Weight Each
Nominal Size	Actual Size	End to End A	Overall Height B	C	D	E	Lbs kg
2	2.375	7.20	5.47	1.88	4.06	3.59	3.3
50	60.3	183	139	48	103	91	1.5
3	3.500	10.61	7.12	2.76	5.63	4.37	6.0
80	88.9	269	181	70	143	111	2.7
4	4.500	12.00	10.15	3.50	7.00	6.65	14.0
100	114.3	305	258	89	178	169	6.4
6	6.625	12.50	12.65	4.50	9.50	8.65	28.0
150	168.3	318	321	114	241	220	12.7

### SERVICE RATING

Pressure De-Rating at Sustained Elevated Service Temperature			
Temperature °F °C	Working Pressure psi kPa	Temperature °F °C	Working Pressure psi kPa
80 27	220 1517	120 49	100 689
90 32	187 1289	130 54	75 517
100 38	155 1069	140 60	55 379
110 43	125 862		

### PERFORMANCE



# Victaulic Aquamine Products

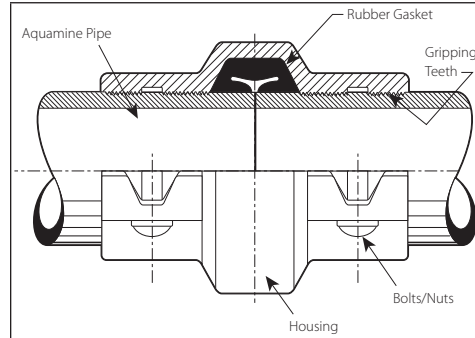
## SERIES 2900

### SERIES 2970 AQUAMINE® PLAIN END PIPE COUPLING



The Aquamine® plain end pipe repair and access coupling provides the convenience of bolted mechanical assembly of Aquamine PVC pipe. There is no pipe preparation; no solvent cement mess or cure time.

The rugged ductile iron housing has patented, specially formed integral gripping teeth which engage into the pipe to secure it as the bolts are tightened metal-to-metal. Couplings are rated to 350 psi working pressure, or the working pressure of the Aquamine pipe, whichever is lower.

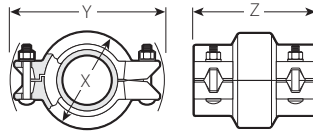


EXAGGERATED FOR CLARITY

**Housing** – Durable ductile iron body for rugged service conditions. Integral gripping teeth provide connection to the pipe. Rust-resistant blue enamel finish is standard. The ductile iron body conforms to ASTM A-536.

**Pre-lubricated Gasket** – Elastomer gasket with triple seal design provides a leak free seal for a wide variety of services. The gasket is pre-lubricated to speed and ease assembly. The Grade "T" nitrile gasket is suited for ambient water and petroleum services. (Always refer to pipe manufacturer's data for temperature and pressure ratings.)

**Bolts/Nuts/Washers** – Zinc plated carbon steel bolts and nuts are supplied standard with Aquamine plain end couplings. The four bolt assembly speeds installation versus solvent cement assembly or the multiple bolts required for flanged connections. Bolts have a minimum tensile strength of 110,000 psi. All sizes are supplied with hardened steel washers meeting ASTM F-436 Type 3 (weathering steel).



(2"/50 mm size has one bolt per side.)

Pipe Inches mm		Coupling Dimensions Inches mm			Bolt/Nut No. – Size	Approximate Weight Each
Nominal Size	Actual Size	X	Y	Z	Inches	Lbs kg
2 50	2.375 60.3	3.64 92	5.94 151	3.62 92	2 – ½ X 2 ½	3.5 1.6
3 80	3.500 88.9	4.58 116	6.95 177	4.56 116	4 – ½ X 2 ¾	7.7 3.5
4 100	4.500 114.3	5.88 149	8.09 205	5.78 147	4 – ½ X 2 ¾	11.6 5.3
6 150	6.625 168.3	8.00 203	10.84 275	5.88 149	4 – 5/8 X 3 ¼	16.4 7.4
8 200	8.625 219.1	10.19 259	13.22 336	6.00 152	4 – 5/8 X 3 ¼	24.9 11.3

\* Working pressure and End Load are total, from all internal and external loads, based on proper coupling assembly with bolts pads metal-to-metal, on Aquamine PVC pipe. Couplings are designed to be used with plain end pipe.

Metric thread size bolts (plated) are available (color coded) for all coupling sizes upon request. Contact Aquamine for details.

WARNING: Piping systems must always be depressurized and drained before attempting disassembly and removal of any Aquamine piping products.

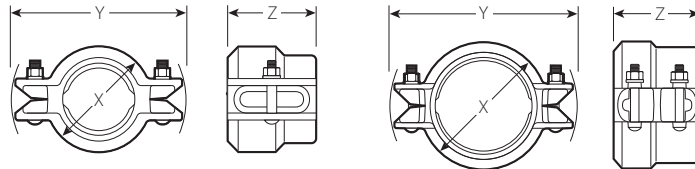
# Victaulic Aquamine Products

## SERIES 2900

### SERIES 2972 AQUAMINE® PLAIN-END PVC TO GROOVE TRANSITION COUPLING



The new Aquamine® Style 2972 transition coupling provides the convenience of bolted, mechanical assembly for plain-end PVC pipe to grooved-end steel pipes, valves, and fittings. This coupling allows you to join shorter sections of PVC pipe, or insert fittings and valves into a pipe section without having to use special adapters.



2" Size

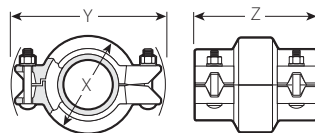
3 – 8" Sizes

Pipe Size		Dimensions Inches mm			Bolt Data	
Nominal Diameter Inches mm	Actual Outside Diameter Inches mm	X	Y	Z	Quantity	Size Inches
2 50	2.375 60.3	3.31 84	5.22 133	2.78 71	2	3/8 X 2
3 80	3.500 88.9	4.38 111	6.99 178	3.20 81	4	1/2 X 2 3/4
4 100	4.500 114.3	5.68 144	8.25 210	3.90 99	4	1/2 X 2 3/4
6 150	6.625 168.3	7.84 199	11.25 286	4.00 102	4	5/8 X 3 3/4
8 200	8.625 219.1	10.18 259	13.96 355	4.16 106	4	5/8 X 3 1/2

### SERIES 2971 AQUAMINE® PLAIN-END PVC TO HDPE TRANSITION COUPLING



The Aquamine® Style 2971 transition coupling provides the convenience of bolted, mechanical assembly of plain-end PVC pipe, such as Aquamine, to plain-end high-density polyethylene (HDPE)/polybutylene pipe without special adapters. There is no solvent cement mess or lengthy cure times, and no butt fusion equipment is necessary.



(2"/50mm size has one bolt per side.)

Pipe Size		Coupling Dimensions Inches mm			Bolt/Nut No. – Size	Approx. Weight Each
Nominal Diameter Inches mm	Actual Outside Diameter Inches mm	X	Y	Z	Inches	Lbs kg
2 50	2.375 60.3	3.64 92	5.94 151	3.62 92	2 – 1/2 X 2 1/2	3.5 1.6
3 80	3.500 88.9	4.58 116	6.95 177	4.56 116	4 – 1/2 X 2 3/4	7.7 3.5
4 100	4.500 114.3	5.88 149	8.09 205	5.78 147	4 – 1/2 X 2 3/4	11.6 5.3
6 150	6.625 168.3	8.00 203	10.84 275	5.88 149	4 – 5/8 X 3 1/4	16.4 7.4
8 200	8.625 219.1	10.19 259	13.22 336	6.00 152	4 – 5/8 X 3 1/4	24.9 11.3

## Victaulic Aquamine Products

### SERIES 2900

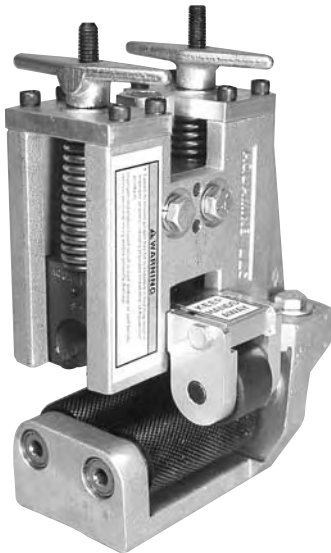
#### AE1800 AIR RELEASE VALVE

Series AE1800 Air release valve safely bleeds air from the piping system.



#### APG – AQUAMINE GROOVING TOOL

The APG is a manually operated tool used for producing a cut spline groove and beveled end on 4 - 12"/ 100 - 300mm Aquamine pipe to prepare the pipe to receive an Aquamine coupling. It is an orbital tool which is rotated around a stationary, secured pipe. The tool may be operated on pipe held in a pipe vise or on supported in-place piping that is depressurized and drained.





## Victaulic Aquamine Products

### SERIES 2900

#### TYPICAL SPECIFICATION FOR AQUAMINE PIPING SYSTEM

##### 1.0 SCOPE

This specification covers the requirements for a reusable, spline-connected, high impact polyvinyl chloride (PVC) piping system as manufactured by Aquamine, LLC (a Victaulic Company).

The pipe and couplings used in this system shall be listed in NSF Certified Product Listing under Standard 61, for potable water (health effects) and designated as NSF-61.

NOTE: The Aquamine PVC piping system is not to be used in compressed air and gas service.

##### 2.0 PIPE

Pipe shall be Aquamine high impact type manufactured from a special formulation of PVC 1120 defined as type 1, grade 1 (class 12454) according to ASTM D-1784 and shall contain impact modifiers and ultraviolet inhibitors to enhance long-term performance.

Pipe shall be designed to meet all PVC pipe requirements as specified in ASTM D-2241. Each pipe end shall be grooved to be connected using a specially designed coupling and spline.

Pipe shall be listed under NSF Standard 61 for potable water (health effects) and designated as NSF-61.

##### 3.0 COUPLINGS

Couplings shall be Victaulic Aquamine brand made from a special high impact formulation of PVC 1120 (type 1, grade 1 or class 12454 according to ASTM D-1784). Couplings shall be designed to meet ASTM D-3139 standards for joints for plastic pressure pipes using flexible elastomeric seals.

Couplings shall provide a restrained joint by means of a nylon spline inserted into the space created when the groove on the pipe and the interior groove in the coupling are aligned.

Couplings shall contain a pre-lubricated permanent type O-ring seal on each end for a watertight hydraulic seal. The O-rings shall meet ASTM F-477 (Standard Specification for Elastomeric Seal for Joining PVC Pipe).

Couplings shall be listed under NSF Standard 61, for potable water (health effects) and designated as NSF-61.

##### 4.0 FITTINGS

Fittings shall be manufactured by Aquamine, LLC with spline-grooved ends for use with Aquamine pipe and couplings.

##### 5.0 VALVES

Valves shall be Aquamine AQP Series butterfly valves, rated 250 psi at 73°F/1725kPa at 23°C.

NOTE: Operating pressure is reduced at temperatures greater than 70°F. Ductile iron (ASTM A-536, grade 65-45-12) housing, PVC 1120 body. Ductile iron disc, rubber encapsulated with Grade "T" Nitrile compound conforming to ASTM D-2000 designation 5BG615A14B24.

##### 6.0 ASSEMBLY

Assembly of Aquamine couplings and pipe shall be in accordance with the latest revision of the Aquamine Assembly and Installation Instructions AM-I-100.

# Coupling

## STYLE 31



SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS

Style 31 couplings are designed to provide a strong component for ductile iron pipe systems of AWWA dimensions. The Style 31 coupling is designed for use on radius cut grooved pipe with minimum wall thickness of ANSI/AWWA C151/A21.51, Class 53. The Style 31 FlushSeal® gasket is specifically designed for ductile pipe surfaces and provides an efficient triple seal. Rigid radius grooved ductile iron systems with Style 31 couplings are comparable with flanged ductile iron systems.

The outside surface of pipe between the groove and pipe end must be smooth and free from deep pits or swells to provide a leak-tight seal for the Victaulic gasket. All rust, loose scale, oil, grease and dirt shall be removed. Peened surfaces may require corrective action in order to provide a leak-tight gasket seal.

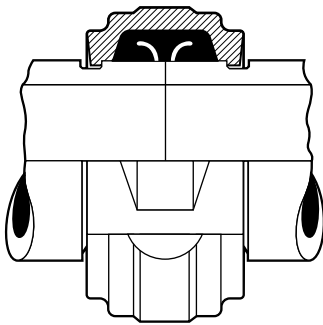
Sizes 3 – 12"/80 – 300mm are two-piece housings, with 14 – 20"/350 – 500mm sizes cast in four identical segments and 24 – 36"/650 – 900mm in six segments, to assure concentricity and easy handling.

All sizes are supplied painted, with plated nuts and bolts.



PATENTED

### MATERIAL SPECIFICATIONS



Exaggerated for Clarity

**Housing:** Ductile iron conforming to ASTM A-536, grade 65-45-12. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

**Housing Coating:** Couplings are alkyd-phenolic primer (2.5 mil)

**Optional:**

- Orange enamel
- Coal tar epoxy coating (3 mils)
- Organic zinc primer (3 mils)
- Bituminous coating
- Others available, contact Victaulic

**Gasket** (specify choice\*):

**Grade "M" FlushSeal**

Halogenated Butyl (Brown color code). Temperature range –20°F to +200°F / –29°C to +93°C. Specially compounded to conform to ductile pipe surfaces. Recommended for 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 +86°F/+30°C potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

**Grade "S" FlushSeal**

Nitrile (Red color code). Temperature range –20°F to +180°F / –29°C to +82°C. Specifically compounded to conform to ductile pipe surfaces. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range; except hot air over +140°F/+60°C and water over +150°F/+66°C. NOT RECOMMENDED FOR HOT WATER SERVICES.

\* Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

**Bolts/Nuts:** Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183.

**Optional:** Type 316 Stainless Steel, Grade B-8M, Class 2

**JOB/OWNER**

System No. \_\_\_\_\_  
 Location \_\_\_\_\_

**CONTRACTOR**

Submitted By \_\_\_\_\_  
 Date \_\_\_\_\_

**ENGINEER**

Spec Sect \_\_\_\_\_ Para \_\_\_\_\_  
 Approved \_\_\_\_\_  
 Date \_\_\_\_\_

www.victaulic.com

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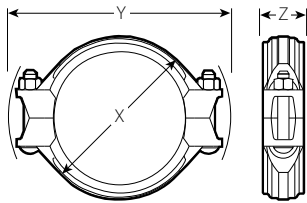
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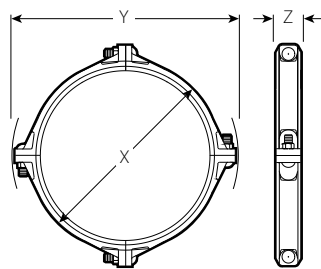
# Coupling

## STYLE 31

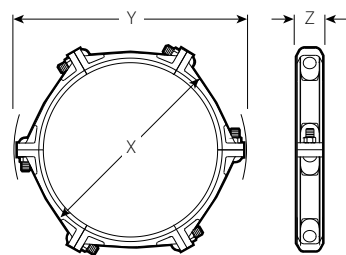
### DIMENSIONS



3 – 12" Sizes



14 – 20" Sizes



24 – 36" Sizes

Pipe Size		Max. Work Pres. PSI/kPa	Max. End Load Lbs./N	Allow. Pipe End Sep. In./mm	Deflect Fr. C <sub>L</sub> *†		Bolt/Nut No. Size Inches @	Coupling Dimensions Inches/mm			Aprx. Wgt. Each Lbs./kg
Nominal Dia. In./mm	Actual Out. Dia. In./mm				Per Cplg. Degree	Pipe In./Ft. mm/m		X	Y	Z	
3 80	3.960 100.6	500 3450	6200 27590	0 - 0.09 0 - 2.4	1° - 21'	0.28 23	2 - ½ x 2¾	5.50 140	7.63 194	2.13 54	4.8 2.2
4 100	4.800 121.9	500 3450	9000 40050	0 - 0.09 0 - 2.4	1° - 8'	0.21 17	2 - ⅝ x 3¼	6.25 159	9.20 234	2.09 53	7.5 3.4
6 150	6.900 175.3	400 2750	14950 66528	0 - 0.09 0 - 2.4	0° - 47'	0.14 12	2 - ⅝ x 3¼	8.28 284	11.19 284	2.22 56	9.4 4.3
8 200	9.050 229.9	400 2750	25600 113920	0 - 0.09 0 - 2.4	0° - 36'	0.11 9	2 - ¾ x 5	10.74 273	14.33 364	2.59 66	16.5 7.5
10 250	11.100 281.9	350 2410	33850 150632	0 - 0.16 0 - 4.0	0° - 48'	0.15 13	2 - ¾ x 5	12.84 418	16.44 418	2.75 70	22.5 10.2
12 300	13.200 335.3	350 2410	47.900 21150	0 - 0.16 0 - 4.0	0° - 41'	0.13 11	2 - ⅝ x 5	15.27 388	19.16 487	2.75 70	30.0 14.0
14 350	15.300 388.6	250 1725	45950 204470	0 - 0.16 0 - 4.0	0° - 35'	0.11 9	4 - 1 x 3½	17.21 437	21.96 558	2.75 70	40.8 18.5
16 400	17.400 442.0	250 1725	59400 264330	0 - 0.25 0 - 6.4	0° - 49'	0.16 13	4 - 1 x 3½	19.90 505	23.96 609	3.50 89	61.3 27.8
18 ‡ 450	19.500 495.3	250 1725	74650 332190	0 - 0.25 0 - 6.4	0° - 44'	0.14 12	4 - 1 x 3½	22.03 560	26.33 669	3.50 89	80.0 36.3
20 500	21.600 548.6	150 1035	54900 244305	0 - 0.25 0 - 6.4	0° - 40'	0.12 10	4 - 1 ⅝ x 4	24.13 613	28.69 729	3.50 89	76.0 34.5
24 600	25.800 655.3	150 1035	78.400 34880	0 - 0.25 0 - 6.4	0° - 33'	0.11 9	6 - 1 ⅝ x 4	28.31 719	33.06 840	3.50 89	104.0 47.2
30 750	32.000 812.8	150 1035	120570 536530	0 - 0.47 0 - 11.9	0° - 51'	0.17 14	6 - 1 ⅝ x 4	35.02 890	39.39 1001	4.38 111	162.0 73.5
36 900	38.300 972.8	150 1035	172815 769030	0 - 0.47 0 - 11.9	0° - 47'	0.15 13	6 - 1 ⅝ x 4	41.56 1056	46.04 1169	4.44 113	200.0 90.7

‡ For class 53 pipe rating is 150 psi (1035 kPa). For larger couplings contact Victaulic.

\* Working Pressure and End Load are total, from all internal and external loads, based on AWWA class 53 (except where noted) ductile iron pipe radius cut grooved in accordance with ANSI/AWWA C-606 specifications. Contact Victaulic for performance on other pipe. WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

† Allowable Pipe End Separation and Deflection figures show the maximum nominal range of movement available at each joint for pipe prepared to flexible radius cut grooved specifications. Pipe cut grooved to rigid specifications is essentially rigid and does not permit expansion and contraction.

@ Number of bolts required equals number of housing segments. Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

## Coupling

### STYLE 31

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**WARRANTY**

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

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**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.

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**INSTALLATION**

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at [www.victaulic.com](http://www.victaulic.com).

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For complete contact information, visit [www.victaulic.com](http://www.victaulic.com)

23.02 1656 REV F UPDATED 3/2010

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23.02



# Standard Flexible Coupling



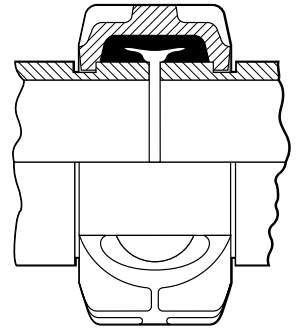
## STYLE 77

Style 77 couplings are designed with cross-ribbed construction to provide a strong component for pressure piping systems. Sizes ¾ – 12”/20 – 300 mm are two-piece housings. For 14 – 24”/350 – 600 mm sizes, Victaulic offers the Advanced Groove System (AGS) line of products. Request publication 20.03 for information on the flexible Style W77 AGS coupling.

All sizes are provided with plated bolts and nuts. Galvanized and stainless steel housings are also available.

Independent testing has shown the Style 77 coupling to be an effective stress relief and vibration attenuation device providing performance superior to braided steel and elastomeric arch-type connectors when used in close proximity to the source of vibration. Refer to 26.04 for vibration information.

Independent testing has shown that Victaulic Style 77 flexible couplings provide exceptional functionality during and after earthquake conditions. Refer to 26.12 for further information.



Exaggerated for clarity

### MATERIAL SPECIFICATIONS

**Housing:** Ductile iron conforming to ASTM A-536, grade 65-45-12. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

**Housing Coating:** Orange enamel.

- **Optional:** Hot dipped galvanized and others.

**Coupling Gasket:** (specify choice\*)†

- **Grade “E” EPDM (All other sizes)**  
EPDM (Green color code). Temperature range –30°F to +230°F/–34°C to +110°C. Recommended 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 +86°F/+30°C and hot +180°F/+82°C potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.
- **Grade “T” nitrile**  
Nitrile (Orange color code). Temperature range –20°F to +180°F/–29°C to +82°C. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

\* Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

**Bolts/Nuts:** Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183.

- **Optional:** Type 316 stainless steel, Grade B-8M, Class 2.

† Supplemental lubricant is recommended for services installed at or continuously operating below 0°F/–18°C.

JOB/OWNER	CONTRACTOR	ENGINEER
System No. _____	Submitted By _____	Spec Sect _____ Para _____
Location _____	Date _____	Approved _____
		Date _____



# Standard Flexible Coupling

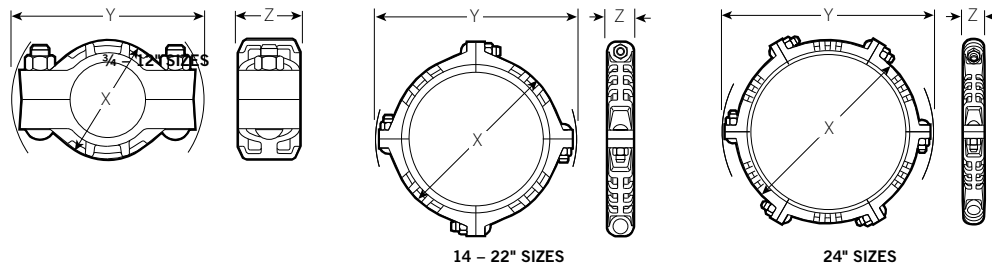
## STYLE 77

### DIMENSIONS

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. †	Deflect. Fr. C, †		Bolt/Nut@ No - Size	Dimensions – Inches/mm			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm				Per Cplg. Deg.	Pipe In./Ft. mm/m		X	Y	Z	
¾ 20	1.050 26.7	1,000 6900	865 3850	0 – 0.06 0 – 1.6	3° – 24'	0.72 60	2 – ¾ x 2	2.13 54	4.00 102	1.75 44	1.1 0.5
1 25	1.315 33.4	1,000 6900	1,360 6050	0 – 0.06 0 – 1.6	2° – 43'	0.57 48	2 – ¾ x 2	2.38 61	4.12 105	1.75 44	1.2 0.5
1¼ 32	1.660 42.2	1,000 6900	2,160 9610	0 – 0.06 0 – 1.6	2° – 10'	0.45 38	2 – ½ x 2½	2.65 67	5.00 127	1.88 48	2.0 0.9
1½ 40	1.900 48.3	1,000 6900	2,835 12615	0 – 0.06 0 – 1.6	1° – 56'	0.40 33	2 – ½ x 2½	3.13 79	5.38 137	1.88 48	2.1 1.0
2 50	2.375 60.3	1,000 6900	4,430 19715	0 – 0.06 0 – 1.6	1° – 31'	0.32 26	2 – ½ x 2½	3.63 92	5.88 149	1.88 48	2.6 1.2
57.0mm	2.664 57.0	1,000 6900	3955 17592	0 – 0.16 0 – 1.6	1° – 34'	0.33 27	2 – ½ x 2½	3.43 87	5.73 146	1.9 48	3.0 1.4
2½ 65	2.875 73.0	1,000 6900	6,490 28880	0 – 0.06 0 – 1.6	1° – 15'	0.26 22	2 – ½ x 2¾	4.25 108	6.50 165	1.88 48	3.1 1.4
76.1 mm	3.000 76.1	1,000 6900	7,070 31460	0 – 0.06 0 – 1.6	1° – 12'	0.26 22	2 – ½ x 2¾	4.38 111	6.63 168	1.88 48	3.2 1.5
3 80	3.500 88.9	1,000 6900	9,620 46810	0 – 0.06 0 – 1.6	1° – 2'	0.22 18	2 – ½ x 2¾	5.00 127	7.13 181	1.88 48	3.7 1.7
3½ 90	4.000 101.6	1,000 6900	12,565 55915	0 – 0.06 0 – 1.6	0° – 54'	0.19 16	2 – ¾ x 3¼	5.63 143	8.25 210	1.88 48	5.6 2.5
4 100	4.500 114.3	1,000 6900	15,900 70755	0 – 0.13 0 – 3.2	1° – 36'	0.34 28	2 – ¾ x 3¼	6.13 156	8.88 226	2.13 54	6.7 3.0
108.0mm	4.250 108.0	1,000 6900	14,180 63100	0 – 0.13 0 – 3.2	1° – 41'	0.35 29	2 – 16 x 82.5	6.00 152	8.63 219	2.13 54	11.0 5.0
5 125	5.563 141.3	1,000 6900	24,300 108135	0 – 0.13 0 – 3.2	1° – 18'	0.27 23	2 – ¾ x 4¼	7.75 197	10.65 270	2.13 54	10.6 4.8
133.0mm	5.250 133.0	1,000 6900	21,635 96275	0 – 0.13 0 – 3.2	1° – 21'	0.28 24	2 – 20 x 108	7.63 194	10.38 264	2.13 54	10.0 4.5
139.7mm	5.500 139.7	1,000 6900	23,745 105665	0 – 0.13 0 – 3.2	1° – 18'	0.28 24	2 – 20 x 108	8.63 219	10.65 270	2.13 54	10.0 4.5
6 150	6.625 168.3	1,000 6900	34,470 153390	0 – 0.13 0 – 3.2	1° – 5'	0.23 18	2 – ¾ x 4¼	8.63 219	11.88 302	2.13 54	12.0 5.4
159.0mm	6.250 159.0	1,000 6900	30,665 136460	0 – 0.13 0 – 3.2	1° – 9'	0.24 20	2 – 20 x 108	8.63 219	11.50 292	2.13 54	13.2 6.0
165.1 mm	6.500 165.1	1,000 6900	33,185 147660	0 – 0.13 0 – 3.2	1° – 6'	0.23 19	2 – ¾ x 4¼	8.88 226	11.63 295	2.13 54	13.2 6.0

Table continued on page 3.

See notes on page 3.



# Standard Flexible Coupling

## STYLE 77

### DIMENSIONS

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. †	Deflect. Fr. C <sub>1</sub> †		Bolt/Nut@ No - Size	Dimensions – Inches/mm			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	Per Cplg. Deg.	Pipe In./Ft. mm/m	Inches mm	X	Y	Z	Lbs. kg
8 § 200	8.625 219.1	800 5500	46,740 207995	0 – 0.13 0 – 3.2	0° – 50'	0.18 14	2 – 7/8 x 5	11.00 279	14.75 375	2.50 63	20.8 9.4
10 § 250	10.750 273.0	800 5500	73,280 326100	0 – 0.13 0 – 3.2	0° – 40'	0.14 12	2 – 1 x 6	13.63 346	17.13 435	2.63 67	31.1 14.1
12 § 300	12.750 323.9	800 5500	102,000 453900	0 – 0.13 0 – 3.2	0° – 34'	0.12 9	2 – 1 x 6 1/2	15.63 397	19.25 489	2.63 67	27.8 12.6
14 ‡ 350	14.000 355.6	300 2065	46,180 205500	0 – 0.13 0 – 3.2	0° – 31'	0.11 9	4 – 1 x 3 1/2	16.63 422	19.88 505	2.88 73	35.6 16.1
377.0mm μ	14.842 377.0	300 2065	51,875 230,845	0 – 0.13 0 – 3.2	0° – 31'	0.11 9	4 – 1 x 3 1/2	17.39 442	20.96 531	2.8 71	48.8 22.1
16 ‡ 400	16.000 406.4	300 2065	60,320 268425	0 – 0.13 0 – 3.2	0° – 27'	0.10 9	4 – 1 x 3 1/2	19.00 482	22.13 562	3.00 76	51.1 23.2
426.0mm μ	16.772 426	300 2065	66,245 294,795	0 – 0.13 0 – 3.2	0° – 27'	0.10 9	4 – 1 x 3 1/2	19.69 500	22.92 581	2.92 74	56.7 25.7
18 ‡ 450	18.000 457.2	300 2065	76,340 339710	0 – 0.13 0 – 3.2	0° – 24'	0.08 7	4 – 1 x 3 1/2	21.38 543	24.50 622	3.13 80	64.4 29.2
480.0mm μ	18.898 48	300 2065	84,105 374,265	0 – 0.13 0 – 3.2	0° – 24'	0.08 7	4 – 1 x 3 1/2	22.38 569	25.86 655	3.04 77	77.2 35
20 ‡ 500	20.000 508.0	300 2065	94,000 418300	0 – 0.13 0 – 3.2	0° – 22'	0.08 7	4 – 1 1/2 x 4	23.63 600	27.25 692	3.13 80	91.2 41.4
530.0mm μ	20.866 530	300 2065	102,535 456,280	0 – 0.13 0 – 3.2	0° – 22'	0.08 7	4 – 1 1/2 x 4	24.29 617	27.8 704	3.07 77	91.7 41.6
22 ‡ 550	22.000 559.0	300 2065	114,000 507300	0 – 0.13 0 – 3.2	0° – 19'	0.07 6	4 – 1 1/2 x 4	25.75 654	29.50 749	3.13 80	92.0 41.7
580.0mm μ	22.835 580	300 2065	102,380 455,591	0 – 0.13 0 – 3.2	0° – 19'	0.07 6	4 – 1 1/2 x 4	26.76 680	30.01 762	3.12 79	92.8 42.2
24 ‡ 600	24.000 609.6	250 1725	113,000 502850	0 – 0.13 0 – 3.2	0° – 18'	0.07 6	6 – 1 1/2 x 4	27.75 704	31.25 794	3.13 80	94.0 42.6
630.0mm μ	24.803 630	250 1725	102,790 457,416	0 – 0.13 0 – 3.2	0° – 18'	0.07 6	6 – 1 1/2 x 4	28.42 722	32.16 817	3.12 79	96.8 44
14 – 24 350 – 600	<b>AGS</b> See Style W77, Publication 20.03										

§ Couplings 8, 10, 12"/200, 250, 300 mm sizes available to JIS standards. Refer to Section 06.17 for details.

\* Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard **roll** or **cut** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.

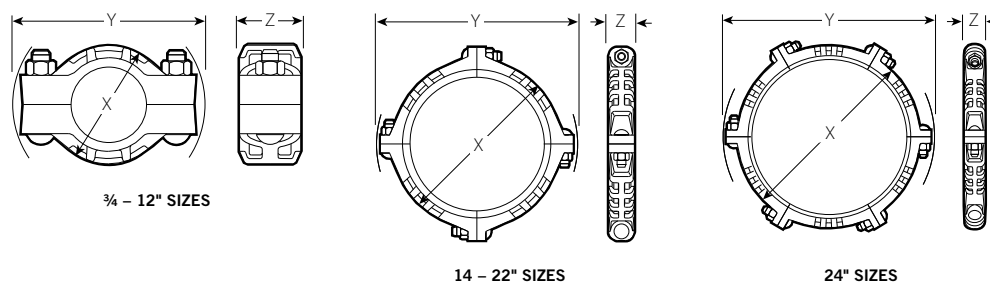
† Allowable Pipe End Separation and Deflection figures show the maximum nominal range of movement available at each joint for standard **roll** grooved pipe. Figures for standard **cut** grooved pipe may be doubled. These figures are maximums; for design and installation purposes these figures should be reduced by: 50% for ¾ – 3 ½"/20 – 90 mm; 25% for 4"/100 mm and larger.

@ Number of bolts required equals number of housing segments.

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

‡ For cut groove systems only. For 14 – 24"/350 – 600 mm Roll Groove systems Victaulic offers the Advanced Groove System (AGS) line of products. Request publication 20.03 for information on the Style W77 flexible AGS coupling.

μ CIS size product is designed with two housings and requires two bolts.



## Standard Flexible Coupling

### STYLE 77

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**INSTALLATION**

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at [www.victaulic.com](http://www.victaulic.com).

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**WARRANTY**

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

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**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.



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For complete contact information, visit [www.victaulic.com](http://www.victaulic.com)

06.04 1469 REV J UPDATED 1/2008

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06.04





## Style 44 Vic-Ring® Coupling

### PRODUCT DESCRIPTION



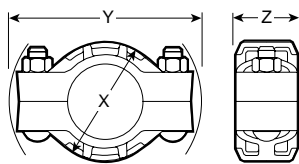
Style 44 couplings are designed with cross-ribbed construction to provide a strong component for use on steel pipe with applied Vic-Ring adapters. Many sizes may be used on pipe with cast shoulders.

Style 44 sizes 4 - 12" (100 - 300 mm) are cast in two segments; 14 - 20" (350 - 500 mm) sizes in four segments; 24 - 36" (600 - 900 mm) sizes in six segments; 42 - 54" (1050 - 1375 mm) sizes in eight segments; and 60" (1500 mm) in 10 segments, to assure concentricity and ease of handling.

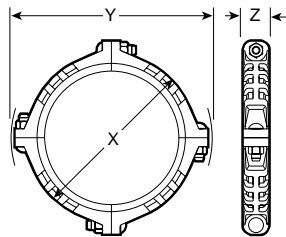
Style 44 couplings are supplied with "E" or "T" gaskets. FlushSeal® gaskets are available upon request.

All sizes are supplied painted with alkyd phenolic primer and with plated nuts and bolts.

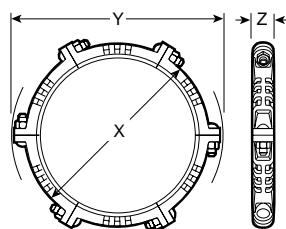
### DIMENSIONS



4 - 12" sizes



14 - 20" sizes



24 - 36" sizes

Pipe Size		Coupling Dimensions Inches/millimeters			Bolt Dimensions Inches/millimeters		Approx. Weight Ea. Lbs. kg
Nominal Diameter Inches/mm	Actual Outside Diameter Inches/mm	Height X	Width Y	Depth Z	No.	Diameter X Length	
4 100	4.500 114,3	7.00 178	9.65 245	2.25 57	2	<sup>5</sup> / <sub>8</sub> X 4	8.0 3,6
6 150	6.625 168,3	9.25 235	12.05 306	2.38 60	2	<sup>5</sup> / <sub>8</sub> X 4	11.0 5,0
8 200	8.625 219,1	12.00 305	15.00 381	2.63 67	2	<sup>3</sup> / <sub>4</sub> X 5	17.0 7,7
10 250	10.750 273,0	14.25 362	17.75 450	2.88 73	2	<sup>3</sup> / <sub>4</sub> X 5	23.0 10,4
12 300	12.750 323,9	16.75 425	20.03 509	3.00 76	2	<sup>7</sup> / <sub>8</sub> X 5 <sup>1</sup> / <sub>2</sub>	31.0 14,1
14 350	14.000 355,6	18.88 480	22.75 578	3.63 92	4	1 X 3 <sup>1</sup> / <sub>2</sub>	43.0 19,5
16 400	16.000 406,4	21.13 538	25.68 652	3.63 92	4	1 X 3 <sup>1</sup> / <sub>2</sub>	63.0 28,6
18 450	18.000 457,0	24.63 626	28.25 717	3.75 95	4	1 X 3 <sup>1</sup> / <sub>2</sub>	85.0 38,6
20 500	20.000 508,0	26.25 668	30.88 784	3.75 95	4	1 <sup>1</sup> / <sub>4</sub> X 5 <sup>1</sup> / <sub>2</sub>	90.0 40,8
24 600	24.000 610,0	30.25 768	35.00 889	3.75 95	6	1 <sup>1</sup> / <sub>4</sub> X 3 <sup>1</sup> / <sub>2</sub>	107.0 48,5
30 750	30.000 762,0	37.75 959	43.21 1098	5.38 137	6	1 <sup>1</sup> / <sub>2</sub> X 5 <sup>3</sup> / <sub>4</sub>	225.0 102,1
36 900	36.000 914,0	44.38 1127	50.00 1270	5.38 137	6	1 <sup>1</sup> / <sub>2</sub> X 5 <sup>3</sup> / <sub>4</sub>	270.0 122,5
42 1050	42.000 1067,0	50.75 1289	57.50 1461	5.38 137	8	1 <sup>3</sup> / <sub>4</sub> X 6	380.0 172,4
48 1200	48.000 1219,2	57.75 1467	63.00 1600	5.50 140	16	1 <sup>3</sup> / <sub>8</sub> X 5 <sup>3</sup> / <sub>4</sub>	515.0 233,6
54 1375	54.000 1371,6	64.63 1642	70.50 1791	5.63 143	16	1 <sup>1</sup> / <sub>2</sub> X 5 <sup>3</sup> / <sub>4</sub>	615.0 279,0
60 1500	60.000 1524,0	71.38 1813	77.00 1956	5.75 146	20	1 <sup>1</sup> / <sub>2</sub> X 5 <sup>3</sup> / <sub>4</sub>	688.0 312,1

PERFORMANCE

1		2	3	4	5	6	7	8		9
Pipe Size		Cast Shoulder O.D. In./mm	Applied Vic-Ring Adapter O.D. In./mm	Max. Joint Working Press. † PSI/kPa	Maximum Permiss. End Load Lbf/N	§ ‡ Pipe End Sep. Min.-Max. In./mm	§ ‡ Max. Allow. Pipe End Mvmt. In./mm	§ ‡ Max. Deflection from Center Line		
Nom. Dia. In./mm	Actual Outside Dia. In./mm							Degrees per Coupling	In./Ft. of Pipe mm/m of Pipe	
4	4.500	5.312	5.312	175	3860	0 - 3/16	3/16	2° 2'	0.42	
100	114,3	134,9	134,9	1206	17170	0 - 4,8	4,8		35,0	
6	6.625	7.500	7.500	175	7700	0 - 3/16	3/16	1° 26'	0.30	
150	168,3	190,5	190,5	1206	34250	0 - 4,8	4,8		25,0	
8	8.625	9.750	9.750	175	13000	0 - 3/16	3/16	1° 6'	0.23	
200	219,1	247,6	247,6	1206	57800	0 - 4,8	4,8		19,2	
10	10.750	12.000	12.000	175	19700	0 - 1/4	1/4	1° 12'	0.25	
250	273,0	304,8	304,8	1206	87600	0 - 6,4	6,4		20,8	
12	12.750	14.250	14.250	175	27900	0 - 1/4	1/4	1° 0'	0.21	
300	323,9	361,9	361,9	1206	124100	0 - 6,4	6,4		17,5	
14	14.000	16.437	16.437	175	37100	0 - 1/4	1/4	0° 52'	0.18	
350	355,6	417,5	417,5	1206	165000	0 - 6,4	6,4		15,0	
16	16.000	18.500	18.500	175	47000	0 - 3/8	3/8	1° 10'	0.24	
400	406,4	469,9	469,9	1206	209050	0 - 9,7	9,7		20,0	
18	18.000	20.937	20.937	175	60200	0 - 1/4	1/4	0° 43'	0.15	
450	457,0	531,8	531,8	1206	267750	0 - 6,4	6,4		12,5	
20	20.000	22.875	22.875	175	71900	0 - 3/8	3/8	0° 56'	0.20	
500	508,0	581,0	581,0	1206	319800	0 - 9,7	9,7		16,7	
24	24.000	27.125	27.125	175	101100	0 - 3/8	3/8	0° 48'	0.16	
600	610,0	689,0	689,0	1206	449700	0 - 9,7	9,7		13,3	
30	30.000	33.750	33.750	175	156600	0 - 1/2	1/2	0° 51'	0.18	
750	762,0	857,2	857,2	1206	696600	0 - 12,7	12,7		15,0	
36	36.000	40.187	40.187	175	221950	0 - 1/2	1/2	0° 43'	0.15	
900	914,0	1020,7	1020,7	1206	987250	0 - 12,7	12,7		12,5	
42	42.000	46.625	46.625	175	298750	0 - 1/2	1/2	0° 37'	0.12	
1050	1067,0	1184,3	1184,3	1206	1328900	0 - 12,7	12,7		10,0	
48	48.000	53.125	53.125	175	388000	0 - 1/2	1/2	0° 32'	0.11	
1200	1219,2	1349,4	1349,4	1206	1725900	0 - 12,7	12,7		9,2	
54	54.000	59.687	59.687	175	489600	0 - 1/2	1/2	0° 29'	0.10	
1375	1371,6	1516,0	1516,0	1206	2177850	0 - 12,7	12,7		8,3	
60	60.000	66.187	66.187	175	602100	0 - 1/2	1/2	0° 26'	0.09	
1500	1524,0	1681,1	1681,1	1206	2678250	0 - 12,7	12,7		7,5	

COLUMN 1 - Victaulic couplings are identified by nominal pipe size.  
 COLUMN 2 - Nominal cast shoulder diameter on pipe of AWWA diameter (as per Fed. Spec. WW-P 421b and ASA A21.6 and A21.8).  
 COLUMN 3 - Nominal Vic-Ring adapter outside diameter.  
 COLUMN 4 - Maximum line pressure, including surge, to which the joint may be subjected, depending upon steel pipe wall thickness and properly applied Vic-Ring adapter.  
 COLUMN 5 - Maximum end load from all internal and/or external forces to which the joint should be subjected under working conditions.  
 COLUMN 6 - Range of pipe end separation normally available with above couplings.  
 COLUMN 7 - Maximum linear movement available at joints made with the above couplings, subject to tolerances (Request 26.01). Movement is the difference between minimum and maximum pipe end separation (Request 26.01 and refer to Linear Movement Tolerance on page 2).  
 COLUMNS 8 & 9 - Maximum allowable deflection of pipe from centerline, subject to tolerances (Request 26.01 and refer to Angular Movement Tolerance on page 2).  
 † FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 1/2 times the figures shown.  
 § Maximum Pipe will be reduced by Deflection and vice versa.  
 ‡ Refer to Design Data for information on tolerances and pipe gap settings.

## MATERIAL SPECIFICATIONS

**Housing:** Ductile iron conforming to ASTM A-536, grade 65-45-12. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

**Housing Coating:** Alkyd phenolic primer

- **Optional:** Hot dipped galvanized and others

**Coupling Gasket:** (specify choice\*)

- **Grade “E” EPDM**

EPDM (Green color code). Temperature range –30°F to +230°F (–34°C to +110°C). Recommended for cold and 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 +86°F (+30°C) and hot +180°F (+82°C) potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

- **Grade “T” nitrile**

Nitrile (Orange color code). Temperature range –20°F to +180°F (–29°C to +82°C). Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F (+66°C) or for hot dry air over +140°F (+60°C).

\*Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

**Bolts/Nuts:** Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183.

- **Optional:** Type 316 stainless steel, Grade B-8M, Class 2.

## AWWA Grooved Piping Method

Pipe of AWWA dimensions can be joined quickly and easily with the Victaulic grooved piping method. Victaulic products and recommendations conform to ANSI/AWWA C-606, Standard for Grooved and Shouldered Type Joints and CSA 242 M1980.

The groove configuration for ductile (cast) pipe includes a large radius, eliminating sharp corners and stress concentration. This provides stronger beam load capability and higher working pressures for radius grooved systems than available with conventional flanged systems.

### FlushSeal® Gasket

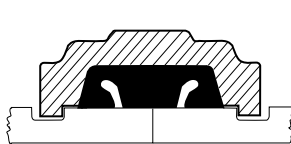
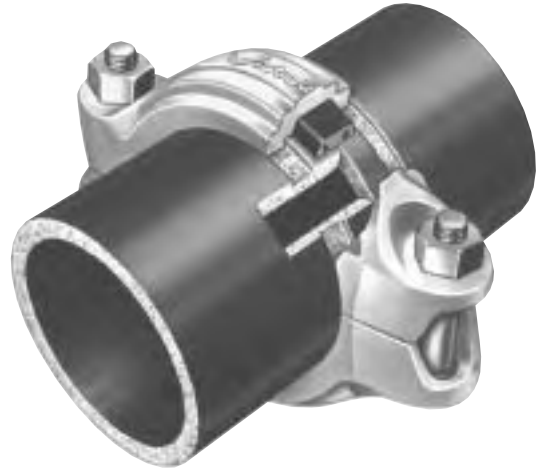
The FlushSeal® gasket is designed specifically to seal on ductile iron pipe surfaces. It provides a triple-seal to assure leak-free service for the life of the system.

- 1 Stretching the Victaulic gasket over pipe ends puts the angular lips in immediate and automatic sealing tension.
- 2 Gasket center leg is compressed over pipe ends as coupling is assembled.
- 3 Line pressure automatically strengthens the seal by acting internally on the gasket lips – the higher the pressure, the tighter the seal.

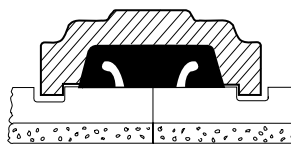
### Rigid or Flexible Grooving

Grooving can be done quickly and easily in the field or shop. Standard "Rigid" radius grooving provides the ease of grooved pipe assembly in a rigid joint. The design of the groove and Victaulic coupling draws the pipe ends into contact as the coupling is tightened.

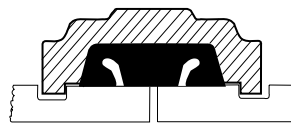
Where flexibility is desirable, "flexible" radius groove dimensions should be used. Flexible grooving provides the added advantages of expansion, contraction and deflection. This is useful to accommodate movement from thermal changes, settling, seismic effect or other causes.



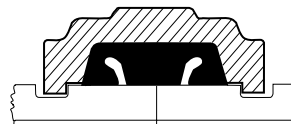
**Rigid Radius Cut Groove**



**Cement Lined Pipe**

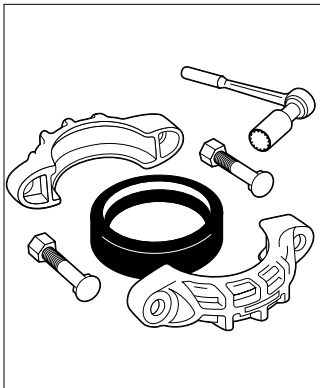


**Flexible Radius Cut Groove**



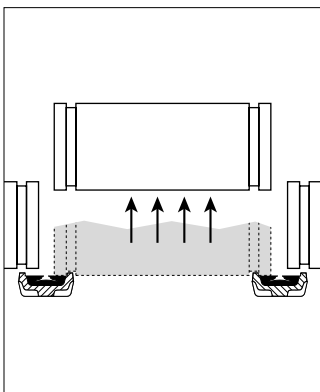
**Glass Lined**

*Exaggerated for clarity*



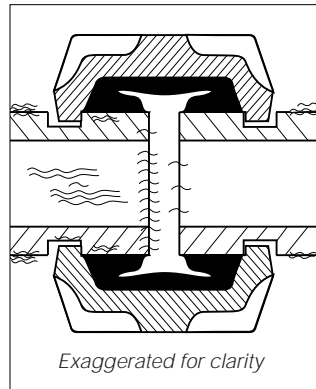
**Installed cost savings from 10% to 30%**

- Minimal equipment investment
- Fast assembly in tight places
- Clean system. . . no pipe dope or welding slag to contaminate pipes
- Costs are more predictable. . . estimates more accurate



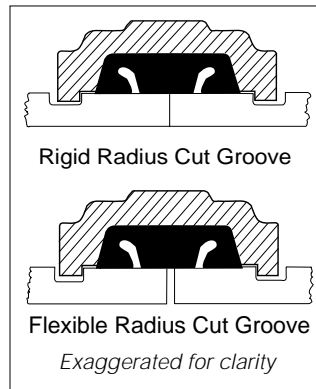
**Each joint is a union**

- Removal of two couplings permits removal of pipe section for cleaning or servicing
- Easy future add-on, change or renovation of pipe to distribute internal wear from abrasives or slurries
- **WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.**



**Proven joint reliability**

- Full circumferential engagement of housing into groove provides end pull strength
- Couplings available for working pressures to 2,500 psi (17,235 kPa). . . vacuum services to 29.9" Hg



**Rigidity or flexibility**

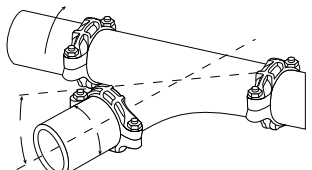
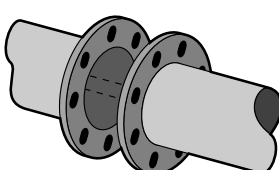
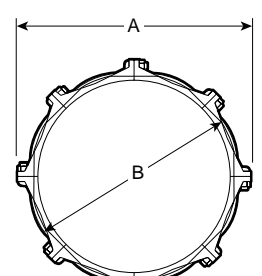
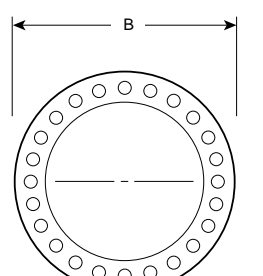
**Rigid Radius Cut Groove**

- Prevents expansion/contraction
- Ideal for long pipe runs
- Designed for systems with cycling pressure

**Flexible Radius Cut Groove**

- Allows up to 0.47" of expansion/contraction
- Ideal for uneven surfaces or where settlement is expected

**VICTAULIC SYSTEM ELIMINATES ALIGNMENT PROBLEMS**

<p><b>Victaulic</b> Rotates for Alignment</p>	<p><b>Flanged</b> Must be "two holed"</p>	<p><b>Victaulic</b> 54" Typical</p>	<p><b>Flanged</b> 54" Typical</p>
			
<ul style="list-style-type: none"> <li>• Grooved piping can pass through wall sleeves</li> <li>• Special design considerations eliminated</li> <li>• Compression type couplings not required</li> </ul>	<ul style="list-style-type: none"> <li>• Require special design considerations</li> <li>• Flanging must be made-on loose or have coupling adapter added to pass through a wall sleeve</li> </ul>	<ul style="list-style-type: none"> <li>• No two-holing required</li> <li>• No space needed for bolts</li> <li>• 1/3 the weight of flanged systems</li> <li>• Number of bolts greatly reduced</li> </ul>	<ul style="list-style-type: none"> <li>• Two-holing required</li> <li>• Side space needed for bolts</li> <li>• Heavier, more costly to install</li> <li>• More bolts, longer installation time</li> </ul>

This product shall be manufactured by Victaulic Company. 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.

# Zero-Flex® Rigid Coupling



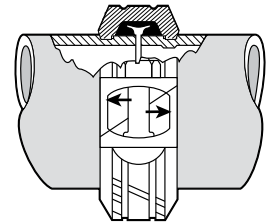
## STYLE 07

The unique angle-pad design of the Zero-Flex® Style 07 coupling adjusts to standard pipe and roll or cut groove tolerances, positively clamping the pipe to resist flexural and torsional loads. The wider key section fills more of the groove area.

The Victaulic standard rigid coupling offering for grade “EHP” or “T” gaskets is the Style 107 installation-ready rigid coupling. For all available sizes, the Style 107 is the standard rigid coupling Victaulic supplies in North America for piping systems using Grade “EHP” or “T” gaskets. Contact Victaulic for further details.

Style 07 couplings are rated up to 750psi/5175kPa, dependant on size, for 1 – 12”/25 – 300mm piping systems. Rigid couplings provide rigidity for valve connections, machinery rooms, fire mains, and long straight runs. Support and hanging requirements correspond to ASME B31.1 Power Piping Code, ASME B31.9 Building Services Code and NFPA 13 Sprinkler Systems. Angle-pad design permits assembly by removing one nut/bolt and scissoring housing over gasket. This reduces the number of components to handle during assembly, speeds and eases installation.

For 14 – 24”/350 – 600mm sizes Victaulic offers the Advanced Groove System (AGS) line of products. Request publication 20.02 for information on the rigid W07 AGS coupling.



Exaggerated for clarity

### MATERIAL SPECIFICATIONS

**Housing:** Ductile iron conforming to ASTM A-536, grade 65-45-12. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

**Housing Coating:** Orange enamel.  
 • **Optional:** Hot dipped galvanized and others.

**Coupling Gasket:** (specify choice‡)

- **Grade “E” EPDM**  
 EPDM (Green color code). Temperature range –30°F to +230°F/–34°C to +110°C. Recommended for cold and 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 +86°F/+30°C and hot +180°F/+82°C potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.
- **Grade “T” nitrile**  
 Nitrile (Orange color code). Temperature range –20°F to +180°F/–29°C to +82°C. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

‡ Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

NOTE: Additional gasket styles are available. Contact Victaulic for details.

**Bolts/Nuts:** Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183.

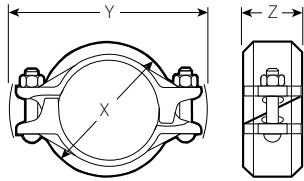
<b>JOB/OWNER</b>	<b>CONTRACTOR</b>	<b>ENGINEER</b>
System No. _____	Submitted By _____	Spec Sect _____ Para _____
Location _____	Date _____	Approved _____
		Date _____




# Zero-Flex® Rigid Coupling

STYLE 07

## DIMENSIONS



TYPICAL 1 – 12"

Size		Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. †	Bolt/Nut@ No – Size	Dimensions – Inches/mm			Approx. Wgt. Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	psi kPa	Lbs. N	Inches mm	Inches	X	Y	Z	Lbs. kg
1 25	1.315 33.7	750 5175	650 2890	0.05 1.2	2 – 3/8 x 2	2.36 60	4.22 107	1.84 47	1.6 0.7
1 1/4 32	1.660 42.4	750 5175	1,620 7210	0.05 1.2	2 – 3/8 x 2	2.69 68	4.62 117	1.84 47	1.6 0.7
1 1/2 40	1.900 48.3	750 5175	2,130 9480	0.05 1.2	2 – 3/8 x 2	2.94 75	5.81 148	1.84 47	1.6 0.7
2 50	2.375 60.3	750 5175	3,320 14775	0.07 1.7	2 – 1/2 x 2 1/2	3.35 85	5.78 147	1.84 47	2.3 1.0
2 1/2 65	2.875 73.0	750 5175	4,875 21695	0.07 1.7	2 – 1/2 x 2 3/4	3.88 98	6.38 162	1.84 47	2.6 1.2
76.1 mm	3.000 76.1	750 5175	5,300 23585	0.07 1.7	2 – 12 x 70.0	4.21 107	6.61 168	1.84 47	3.6 1.6
3 80	3.500 88.9	750 5175	7,215 32105	0.07 1.7	2 – 1/2 x 2 1/2	4.54 115	6.81 173	1.84 47	3.0 1.4
4 100	4.500 114.3	750 5175	11,925 53065	0.16 4.1	2 – 1/2 x 2 3/4	5.81 148	8.21 209	2.07 53	5.3 2.4
108.0mm	4.250 108.0	750 5175	10,635 47325	0.16 4.1	2 – 12 x 70.0	5.56 141	7.98 203	2.07 53	5.2 2.4
5 125	5.563 141.3	750 5175	18,225 81100	0.16 4.1	2 – 5/8 x 3 1/4	7.03 179	9.89 251	2.07 53	7.4 3.4
133.0mm	5.250 133.0	700 4825	15,145 67395	0.16 4.1	2 – 16 x 82.5	6.69 170	9.60 244	2.07 53	7.4 3.4
139.7 mm	5.500 139.7	700 4825	16,625 73980	0.16 4.1	2 – 16 x 82.5	6.94 176	9.82 249	2.07 53	7.6 3.4
6 150	6.625 168.3	700 4825	24,130 107380	0.16 4.1	2 – 5/8 x 3 1/4	8.26 210	10.83 275	2.07 53	8.3 3.8
159.0mm	6.250 159.0	700 4825	21,465 95520	0.16 4.1	2 – 16 x 82.5	7.84 199	10.54 268	2.07 53	9.2 4.2
165.1 mm	6.500 165.1	700 4825	23,225 103305	0.16 4.1	2 – 5/8 x 3 1/4	8.13 207	10.84 275	2.07 53	8.3 3.8
8 § 200	8.625 219.1	600 4130	35,000 155750	0.19 4.8	2 – 3/4 x 4 1/4	10.54 268	13.74 349	2.51 64	15.1 6.8
10 § 250	10.750 273.0	500 3450	45,400 202030	0.13 3.3	2 – 7/8 x 6 1/2	12.86 327	16.98 431	2.56 65	23.5 10.7
12 § 300	12.750 323.9	400 2750	51,000 226950	0.13 3.3	2 – 7/8 x 6 1/2	14.86 377	18.88 480	2.56 65	28.2 12.8
14 – 24 350 – 600	 For 14 – 24"/350 – 600 mm sizes Victaulic offers the Advanced Groove System (AGS) line of products. Request publication 20.02 for information on the rigid W07 AGS coupling.								

§ Couplings 8, 10, 12"/200, 250, 300mm sizes available to JIS standard. Refer to section 06.17 for details.

\* Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard **roll** or **cut** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 1/2 times the figures shown.

† For field installation only on roll grooved pipe or cut grooved pipe. Zero-Flex Style 07 couplings are essentially rigid and do not permit expansion/contraction.

@ Number of bolts required equals number of housing segments.

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

Style 07 couplings must **not** be used to join PVC pipe.

## Zero-Flex® Rigid Coupling

### STYLE 07

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**INSTALLATION**

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at [www.victaulic.com](http://www.victaulic.com).

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**WARRANTY**

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

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**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.

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For complete contact information, visit [www.victaulic.com](http://www.victaulic.com)

06.02 1482 REV K UPDATED 3/2009

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06.02

