

Victaulic® AGS™ Rigid Coupling

Style W07



14 – 24"/350 – 600 mm sizes
Patented



26 – 50"/650 – 1250 mm sizes
Patented



1.0 PRODUCT DESCRIPTION

Available Sizes

- 14 – 50"/350 – 1250 mm

Maximum Working Pressure

- 14 – 24"/350 – DN600: 350 psi/2400 kPa
- 26 – 42"/650 – DN1050: 300 psi/2065 kPa
- 44 – 50"/1100 – DN1250: 232 psi/1600 kPa

Function

- Unique wedge-shaped key profile increases allowable pipe end separation, resulting in easier assembly.
- Style W07 AGS coupling in 26 – 50"/ DN650 – 1250 sizes, features lifting lugs integrated into the housings to help ease handling during installation.
- Provide rigidity for valve connections, machinery rooms, and long straight runs.

NOTES

- Style W07 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 W07 AGS rigid couplings can also be used on abrasive/slurry services in combination with an AGS Vic-Ring. See [publication 16.11](#).

2.0 CERTIFICATION/LISTINGS



NOTES

- Refer to [submittal 02.06](#) for a full list of approval and listing data.
- Refer to [submittal 10.01](#) for a full list of fire protection regulatory approvals.

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

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

3.0 SPECIFICATIONS – MATERIAL

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

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

Housing Coating: (specify choice)

Standard: Orange enamel.

Optional: Hot dipped galvanized and others.

Optional: Fusion Bonded Epoxy.

NOTE

- For additional coating options contact Victaulic.

Coupling Gasket: (specify choice¹)

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.

Grade “T” Nitrile

Nitrile (Orange color code). Temperature range –20°F to +180°F/–29°C to +82°C. May be specified 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.

Grade “L” 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.

¹ 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 Gasket Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

Bolts/Nuts: (specify choice²)

Standard: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449.

Carbon steel heavy hex nuts meeting the mechanical property requirements of ASTM A563 Grade B. Track bolts and heavy hex nuts are zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) or Type II (metric).

Bolts - Oval Neck Track Bolts or Studs. Stainless steel, meeting the mechanical property requirements of ASTM A193 Grade B8M, Class 2 (316 Stainless Steel).

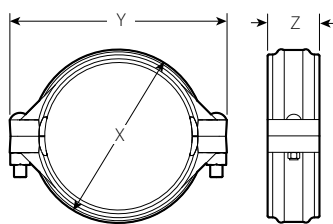
Condition CW Nuts- Stainless steel meeting the mechanical property requirements of ASTM A194 Grade 8M (316 Stainless steel) heavy hex. Condition CW with galling reducing coating.

For 26 – 50”/DN650 – DN1250 sizes:

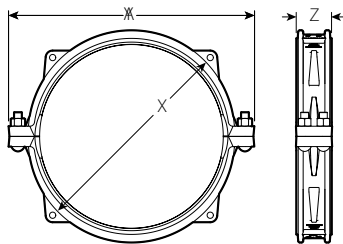
Washers: Plated carbon steel, flat, SAE high strength conforming to ASTM F-436 or high strength stainless steel.

² Optional bolts/nuts are available in imperial size only.

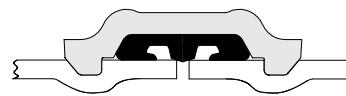
4.0 DIMENSIONS



Typical 14 – 24"/350 – 600 mm



Typical 26 – 50"/650 – 1250 mm



Exaggerated for clarity

Size*		Maximum Working Pressure			Max. End Load ³ lb kg	Pipe End Separation	Qty.	Bolt/Nut		Dimensions			Weight
Nominal inches DN	Actual Outside Diameter inches mm	Light Wall ⁴ psi kPa	Std. Wall psi kPa	Extra Heavy 1/2–3/4" 13–19mm		Allowable inches mm		Size inches mm		X inches mm	Y inches mm	Z inches mm	Approximate (Each) lb kg
14 350	14.000 355.6	350 2400	350 2400	350 2400	55800 248310	0.25 6.4	2	1 x 5 1/2		15.88 403	20.63 524	4.75 121	49.0 22.2
16 400	16.000 406.4	350 2400	350 2400	350 2400	72885 324338	0.25 6.4	2	1 x 5 1/2		18.13 460	23.50 597	4.75 121	61.0 27.7
18 450	18.000 457.0	350 2400	350 2400	350 2400	92245 410490	0.25 6.4	2	1 x 5 1/2		20.25 514	25.50 648	4.75 121	71.0 32.2
20 500	20.000 508.0	350 2400	350 2400	350 2400	113880 506766	0.25 6.4	2	1 1/8 x 5 1/2		22.50 570	27.13 689	4.75 121	82.0 37.2
22 550	22.000 559.0	350 2400	350 2400	350 2400	114000 507080	0.25 6.4	2	1 1/8 x 6		24.75 629	29.38 746	4.75 121	110.0 49.9
24 ⁵ 600	24.000 610.0	225 1600	350 2400	350 2400	163990 729756	0.25 6.4	2	1 1/8 x 5 1/2		26.63 677	32.38 822	4.75 121	116.0 52.6
26 650	26.000 660.4	300 2065	300 2065	300 2065	159279 708508	0.38 9.6	4	1 1/8 x 6		30.13 765	35.25 895	5.75 146	205.0 93.0
28 700	28.000 711.2	300 2065	300 2065	300 2065	184726 821702	0.38 9.6	4	1 1/8 x 6		32.25 819	37.25 945	5.75 146	220.0 99.8
30 750	30.000 762.0	300 2065	300 2065	300 2065	212058 943281	0.38 9.6	4	1 1/4 x 7		33.88 863	39.63 1007	5.75 146	227.0 103.0
32 800	32.000 812.8	300 2065	300 2065	300 2065	241274 1073240	0.38 9.6	4	1 1/4 x 7		36.13 917	41.75 1060	5.75 146	242.0 109.8
34 850	34.000 864.0	300 2065	300 2065	300 2065	305363 1358322	0.38 9.6	4	1 1/4 x 7		38.25 972	43.75 1161	5.75 146	255.0 115.7
36 900	36.000 914.4	300 2065	300 2065	300 2065	305363 1358322	0.38 9.6	4	1 1/4 x 7		40.25 1022	45.75 1161	5.75 146	268.0 121.6
38 950	38.000 965.0	300 2065	300 2065	300 2065	340235 1513365	0.38 9.6	4	1 1/4 x 7		41.25 1048	48.00 1219	5.75 146	304.0 138.2
40 1000	40.000 1016.0	300 2065	300 2065	300 2065	376991 1676940	0.44 11.1	4	1 1/2 x 8		44.00 1117	50.50 1283	6.50 165	340.0 154.2

³ End loads are total from all internal and external loads, based on carbon steel pipe, rolled with Victaulic AGS rolls in accordance with Victaulic AGS roll groove specifications 25.09. Contact Victaulic for performance on other pipe.

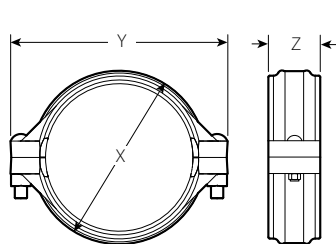
⁴ Light Wall for 14"/350 mm = 0.22"/5.6 mm; 16 – 24"/400 – 600 mm = 0.25"/6.35 mm; 26 – 50"/650 – 1250 mm = 0.312"/7.9 mm

⁵ The end load for 24"/600 mm installed on light wall pipe is 101790 Lbs/456426 N.

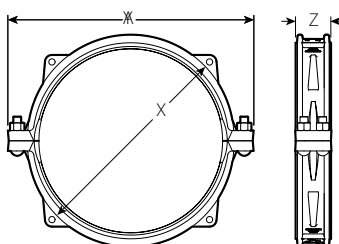
NOTES

- WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.
- The outside diameter, ovality, and surface finish including flat spots and imperfections shall not vary more than the limits of API 5L end tolerance.
- Refer to [publication 25.09](#) for proper groove specifications.
- Style W07 AGS couplings are essentially rigid and do not permit expansion/contraction.
- Additional wall thicknesses available. For performance on additional pipe wall thicknesses contact Victaulic.
- For additional pipe sizes, please contact Victaulic

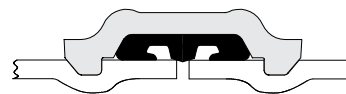
4.0 DIMENSIONS (Continued)



Typical 14 – 24"/350 – 600 mm



Typical 26 – 50"/650 – 1250 mm



Exaggerated for clarity

Size		Maximum Working Pressure			Max. End Load ³ lb kg	Pipe End Separation	Bolt/Nut		Dimensions			Weight
Nominal inches DN	Actual Outside Diameter inches mm	Light Wall ⁴ psi kPa	Std. Wall psi kPa	Extra Heavy ¾"/19.4 mm psi kPa		Allowable inches mm	Qty.	Size inches mm	X inches mm	Y inches mm	Z inches mm	Approximate (Each) lb kg
42 1050	42.000 1066.8	300 2065	300 2065	300 2065	415632 1848823	0.44 11.1	4	1 ½ x 8	46.00 1168	54.50 1384	6.50 165	360.0 163.3
44 1100	44.000 1117.6	232 1600	232 1600	232 1600	352763 1569168	0.44 11.1	4	1 ½ x 8	48.00 1219	54.50 1384	6.50 165	390.0 177.0
46 1150	46.000 1168.4	232 1600	232 1600	232 1600	385561 1715746	0.44 11.1	4	1 ½ x 8	50.25 1277	56.50 1435	6.50 165	415.0 188.2
48 1200	48.000 1219.2	232 1600	232 1600	232 1600	419820 1868199	0.44 11.1	4	1 ½ x 8	52.25 1328	58.50 1485	6.50 165	425.0 192.8
50 1250	50.000 1270.0	232 1600	232 1600	232 1600	4555530 2026298	0.44 11.1	4	1 ½ x 8	53.63 1362	60.88 1546	10.00 254	500.0 227.0

³ End loads are total from all internal and external loads, based on carbon steel pipe, rolled with Victaulic AGS rolls in accordance with Victaulic AGS roll groove specifications 25.09. Contact Victaulic for performance on other pipe.

⁴ Light Wall for 14"/350 mm = 0.22"/5.6 mm; 16 – 24"/400 – 600 mm = 0.25"/6.35 mm; 26 – 50"/650 – 1250 mm = 0.312"/7.9 mm

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- For additional pipe sizes, please contact Victaulic

5.0 PERFORMANCE

Torque Requirements

Nominal Pipe Size inches DN	Required Torque ft. lbs. N•m
14, 16, 18	250
350, 400, 450	340
20, 22, 24, 26, 28	375
500, 550, 600, 650, 700	500
30, 32, 34, 36, 38	500
750, 800, 850, 900, 950	680
40, 42, 44, 46, 48, 50	600
1000, 1050, 1100, 1150, 1200, 1250	813

6.0 NOTIFICATIONS

WARNING

- When grooving pipe for use with AGS products, Victaulic roll grooving tools must be equipped with AGS roll sets (RW for steel or RWX for stainless steel).
- RWX grooving rolls are identified by a silver color and the designation "RWX" on the front of the roll sets.
- Victaulic AGS products **MUST NOT** be installed on pipe that is prepared with original-type grooving roll sets.
- To ensure proper pipe end preparation refer to [publication 25.09](#) for AGS (Advanced Groove System) roll groove pipe specifications.

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: Potable Water Approvals](#)

[05.01: Seal Selection Guide](#)

[10.01: Regulatory Approval Reference Guide](#)

[16.11 AGS Vic-Ring® Systems](#)

[17.01: Pipe Preparation for Use on Stainless Steel Pipe With Victaulic Products](#)

[17.09: Victaulic Grooved Couplings Performance Data on Stainless Steel Pipe](#)

[20.05: AGS Fittings](#)

[24.01: Tools](#)

[25.09: AGS Roll Groove Data](#)

[26.01: Design Data](#)

[29.01: Terms and Conditions/Warranty](#)

[I-100: Field Installation Handbook](#)

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, and the applicable building codes and related regulations 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.

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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.

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.

Warranty

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

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