Victaulic[®] QuickVic[™] Installation-Ready[™] Rigid Coupling for Potable Water Applications

Style 807N





1.0 PRODUCT DESCRIPTION

Available Sizes

• 2 - 12"/DN50 - DN300

Pipe Material

- Schedules 10S and 40S stainless steel pipe
- Schedules 10 and 40 galvanized carbon steel

Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg/760 mm Hg) up to 750 psi/5171 kPa
- Working pressure dependent on pipe material, wall thickness and size of pipe

Operating Temperature

• +0°F to +180°F/-18°C to +82°C

Function

- Intended for use in potable water systems
- Joins Schedules 10S and 40S stainless steel pipe or Schedules 10 and 40 galvanized carbon steel pipe
- Provides a rigid pipe joint designed to restrict axial or angular movement

NOTE

• For non-potable water systems, refer to <u>publication 06.23</u>: Victaulic QuickVic[™] Rigid Coupling Style 107N.

Pipe Preparation

• Cut or roll grooved in accordance with <u>publication 25.01</u>: Victaulic Standard Groove Specifications

Codes and Requirements

• Hanger support spacing corresponds to ASME B31.1 Power Piping Code and ASME B31.9 Building Services Piping Code

2.0 CERTIFICATION/LISTINGS



The Victaulic Grade P gasket supplied with the Style 807N QuickVic[™] Installation-Ready[™] Rigid Coupling is UL Classified in accordance with NSF/ANSI/CAN 61 and NSF/ANSI/CAN 372 as noted in section 3.0 Specifications – Material.

The Style 807N QuickVic[™] Installation-Ready[™] Rigid Coupling is UPC Listed in accordance with PS-53 for use with Schedule 10 stainless steel pipe in sizes 2 – 6"/DN50 – DN150.

NOTE

• See <u>publication 02.06</u>: Victaulic Potable Water Approvals ANSI/NSF for potable water approvals if applicable.

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



3.0 SPECIFICATIONS - MATERIAL

Housing: Ductile iron conforming to ASTM A536, Grade 65-45-12. Ductile iron conforming to ASTM A395, Grade 65-45-15, is available upon special request.

Housing Coating: (specify choice)

Standard: Blue coating.

Optional: Hot dipped galvanized conforming to ASTM A123.

Gasket1: Grade "P" Fluoroelastomer Blend

P (Double blue stripe color code). Temperature range +0°F to +180°F/-18°C to +82°C. Specifically formulated for compatibility with potable water systems. Optimized for improved resistance to chlorine, chloramine and other typical potable water disinfectants. UL Classified in accordance with NSF/ANSI/CAN 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and NSF/ANSI/CAN 372.

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 <u>Victaulic Seal Selection Guide</u> for specific gasket service guidelines and for a listing of services which are not compatible.

NOTE

• Victaulic reserves the right to substitute equivalent and/or higher grade elastomer products.

Bolts/Nuts: (specify choice²)

Standard: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (metric). 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: Stainless steel oval neck track bolts meeting the mechanical property requirements of ASTM F593, Group 2 (316 stainless steel), condition CW. Stainless steel heavy nuts meeting the mechanical property requirements of ASTM F594, Group 2 (316 stainless steel), condition CW. Bolts and nuts include galling reducing coating.²

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

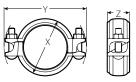




4.0 DIMENSIONS

Style 807N QuickVic[™] Installation-Ready[™] Rigid Coupling for Potable Water Applications





Pre-Assembled (Installation-Ready™ Condition)

Joint	Assembled	

Si	ize	Pipe End Separation ³		Bolt/Nut ⁴	Dimensions			Weight		
	Actual Outside				Pre-Assembled (Installation-Ready [™] Condition)		Joint Assembled			Approximate
Nominal	Diameter	Allowable	Qty.	Size	X	Y	X	Y	Z	(Each)
inches	inches	inches		inches	inches	inches	inches	inches	inches	lb
DN	mm	mm		mm	mm	mm	mm	mm	mm	kg
2	2.375	0.15	2	½ x 3	4.00	6.13	3.63	6.13	2.13	2.7
DN50	60.3	3.8		M12 x 76	100	156	92	156	54	1.2
2 1⁄2	2.875 73.0	0.15 3.8	2	½ x 3 M12 x 76	4.50 114	6.75 171	4.00 102	6.75 171	2.13 54	3.0 1.4
3	3.500	0.15	2	½ x 3 ¼	5.25	7.38	4.63	7.50	2.13	3.7
DN80	88.9	3.8		M12 x 83	133	187	118	191	54	1.7
4	4.500	0.15	2	½ x 3 ¼	6.63	8.75	5.88	8.75	2.13	5.1
DN100	114.3	3.8		M12 x 83	168	222	149	222	54	2.3
6	6.625	0.15	2	5% x 4	8.88	11.38	8.13	11.25	2.25	8.2
DN150	168.3	3.8		M16 x 101	226	289	207	286	57	3.7
8	8.625	0.20	2	¾ x 5	11.25	14.37	10.50	14.25	2.63	15.1
DN200	219.1	5.1		M20 x 127	286	365	267	362	67	6.8
10	10.750	0.20	2	⅔ x 6½	13.75	17.00	13.00	17.13	2.75	23.6
DN250	273.0	5.1		M22 x 165	349	432	330	435	70	10.7
12	12.750	0.20	2	% x 6½	15.63	19.00	15.00	19.00	2.75	27.2
DN300	323.9	5.1		M22 x 165	397	483	381	483	70	12.3

³ The allowable pipe end separation dimension shown is for system layout purposes only. Style 807N QuickVic[™] Installation-Ready[™] rigid couplings are considered rigid connections and will not accommodate expansion/contraction or angular movement of the piping system. Contact Victaulic for torsional resistance information.

⁴ Number of bolts required equals number of housing segments.





5.0 PERFORMANCE

Style 807N QuickVic[™] Installation-Ready[™] Rigid Coupling for Potable Water Applications – ANSI Standard

Schedules 10S and 40S Stainless Steel Pipe

S	Size	Schedule 10S			Schedule 40S		
Nominal	Actual Outside Diameter	Pipe Wall Thickness	Maximum Joint Working Pressure ⁵⁻⁶	Maximum Permissible End Load ⁶	Pipe Wall Thickness	Maximum Joint Working Pressure ⁶	Maximum Permissible End Load ⁶
inches	inches	inches	psi	lb	inches	psi	lb
DN	mm	mm	kPa	N	mm	kPa	N
2	2.375	0.109	300	1329	0.154	600	2658
DN50	60.3	2.8	2068	5912	3.9	4137	11823
2 1/2	2.875	0.120	300	1948	0.203	600	3895
	73.0	3.0	2068	8665	5.2	4137	17326
3	3.500	0.120	300	2886	0.216	600	5773
DN80	88.9	3.0	2068	12838	5.5	4137	25680
4	4.500	0.120	300	4771	0.237	600	9543
DN100	114.3	3.0	2068	21222	6.0	4137	42449
6	6.625	0.134	300	10341	0.280	600	20683
DN150	168.3	3.4	2068	45999	7.1	4137	92003
8	8.625	0.148	150	8764	0.322	400	23371
DN200	219.1	3.8	1034	38984	8.2	2758	103959
10	10.750	0.165	100	9076	0.365	300	27229
DN250	273.0	4.2	689	40371	9.3	2068	121114
12	12.750	0.180	100	12768	0.375	300	38303
DN300	323.9	4.6	689	56790	9.5	2068	170371

⁵ Maximum Joint Working Pressures on Schedule 10 stainless steel pipe are based on the use of RX grooving rolls. RX roll sets for light wall stainless steel pipe are marked with the prefix "RX."

⁶ Working Pressure and End Load are total, from all internal and external loads, based on ANSI Types 304/304L and 316/316L stainless steel pipe, grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

NOTE

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

Schedules 10 and 40 Galvanized Carbon Steel Pipe

5	Size		Schedule 10			Schedule 40		
Nominal	Actual Outside Diameter	Pipe Wall Thickness	Maximum Joint Working Pressure ⁷	Maximum Permissible End Load ⁷	Pipe Wall Thickness	Maximum Joint Working Pressure ⁷	Maximum Permissible End Load ⁷	
inches	inches	inches	psi	lb	inches	psi	lb	
DN	mm	mm	kPa	N	mm	kPa	N	
2	2.375	0.109	750	3323	0.154	750	3323	
DN50	60.3	2.8	5171	14781	3.9	5171	14780	
21/2	2.875	0.120	600	3895	0.203	750	4869	
	73.0	3.0	4137	17325	5.2	5171	21658	
3	3.500	0.120	600	5773	0.216	750	7216	
DN80	88.9	3.0	4137	25680	5.5	5171	32098	
4	4.500	0.120	600	9543	0.237	750	11928	
DN100	114.3	3.0	4137	42449	6.0	5171	53058	
6	6.625	0.134	500	17236	0.280	700	24130	
DN150	168.3	3.4	3447	76670	7.1	4826	107335	
8	8.625	0.148	300	17528	0.322	600	35056	
DN200	219.1	3.8	2068	77970	8.2	4137	155936	
10	10.750	0.165	300	27200	0.365	500	45400	
DN250	273.0	4.2	2068	121040	9.3	3447	202030	
12	12.750	0.180	200	25500	0.375	400	51000	
DN300	323.9	4.6	1379	113475	9.5	2758	226950	

⁷ Working Pressure and End Load are total, from all internal and external loads, based on ANSI B36.10 sized carbon steel pipe, grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

NOTE

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

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5.1 PERFORMANCE

Style 807N QuickVic[™] Installation-Ready[™] Rigid Coupling for Potable Water Applications – FM Ratings⁸⁻⁹

Schedules 10S and 40S Stainless Steel Pipe

Si	ze	Schedu	ule 10S	Schedu	ıle 40S
Nominal	Actual Outside Diameter	Pipe Wall Thickness	Maximum Joint Working Pressure ¹⁰⁻¹¹	Pipe Wall Thickness	Maximum Joint Working Pressure ¹¹
inches	inches	inches	psi	inches	psi
DN	mm	mm	kPa	mm	kPa
2	2.375	0.109	175	0.154	365
DN50	60.3	2.8	1207	3.9	2517
2 1/2	2.875	0.120	175	0.203	365
	73.0	3.0	1207	5.2	2517
3	3.500	0.120	175	0.216	365
DN80	88.9	3.0	1207	5.5	2517
4	4.500	0.120	175	0.237	365
DN100	114.3	3.0	1207	6.0	2517
6	6.625	0.134		0.280	365
DN150	168.3	3.4	_	7.1	2517
8	8.625	0.148		0.322	300
DN200	219.1	3.8	_	8.2	2068
10	10.750	0.165		0.365	300
DN250	273.0	4.2	_	9.3	2068
12	12.750	0.180		0.375	300
DN300	323.9	4.6		9.5	2068

⁸ FM approved with standard blue enamel housing coating and standard carbon steel fasteners. Optional housing coatings and optional bolts/nuts not FM approved.

⁹ FM approved for use in wet sprinkler systems only.

¹⁰ Maximum Joint Working Pressures on Schedule 10 stainless steel pipe are based on the use of RX grooving rolls. RX roll sets for light wall stainless steel pipe are marked with the prefix "RX."

¹¹ Working Pressure is total, from all internal and external loads, based on ANSI Types 304/304L and 316/316L stainless steel pipe, grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

NOTE

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



6.0 NOTIFICATIONS



- Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Wear safety glasses, hardhat, and foot protection.

Failure to follow these instructions could result in death or serious personal injury and property damage.

• Victaulic RX roll sets must be used when grooving light-wall/thin-wall stainless steel pipe for use with Victaulic Couplings.

Failure to use Victauilc RX roll sets when grooving light-wall/thin-wall stainless steel pipe may cause joint failure, resulting in serious personal injury and/or property damage.

NOTICE

• Victaulic RX grooving rolls must be ordered separately. They are identified by a silver color and the designation RX on the front of the roll sets.

- When assembling Style 807N couplings onto end caps, take additional care to ensure the end cap is seated fully against the center leg of the gasket.
- Use only No. 60 End Caps containing the "EZ QV" marking on the inside face, or No. 460 Stainless Steel End Caps containing the "QV" marking on the inside face.
- Victaulic recommends the use of Victaulic fittings with Style 807N couplings.

Failure to follow this instruction could cause improper product installation, resulting in personal injury and/or property damage.





7.0 REFERENCE MATERIALS

02.06: Victaulic Potable Water Approvals ANSI/NSF

- 05.01: Victaulic Seal Selection Guide
- 06.23: Victaulic QuickVic[™] Rigid Coupling Style 107N
- 17.01: Victaulic Pipe Preparation for Use on Stainless Steel Pipe With Victaulic Products
- 25.01: Victaulic Standard Groove Specifications
- 26.01: Victaulic Design Data
- 29.01: Victaulic Terms and Conditions of Sale
- I-100: Victaulic Field Installation Handbook
- I-807N: Victaulic Installation Instructions Style 807N QuickVic™ Installation-Ready™ Rigid Coupling
- I-ENDCAP: Victaulic End Caps Installation Instructions
- I-IMPACT: Victaulic Impact Tool Usage Guidelines

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.

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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 t

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