

# Victaulic FireLock™ Innovative Groove System | IGS™ for 1"/DN25 Sprinkler Pipe



10.54



No. 142  
Welded Outlet



Style 922  
Outlet-T



Style 920N  
Mechanical-T Outlet



No. 101  
Installation-Ready™  
90° Elbow



No. 102  
Installation-Ready™  
Tee



Style 108  
Installation-Ready™  
Rigid Coupling



Style 115  
OGS x IGS  
Reducing Coupling



Style 118  
1" Outlet Coupling



No. 65 OGS x IGS  
Grooved End of  
Run Fitting



No. 111 IGS  
Grooved End Elbow



No. 113  
OGS x IGS x IGS  
Reduce on the Run  
and Outlet Tee



No. 114  
IGS x IGS x IGS  
Grooved Tee



No. 117  
IGS 45° Elbow



No. 143  
Close Nipple



No. 144  
OGS x IGS Grooved  
Concentric  
Reducer



No. 145 Female  
NPT or BSPT  
Threaded x Groove  
90° Elbow



No. 147  
Back-To-Back  
sprinkler tee



No. 148 Sprinkler  
Reducer, NPT or  
BSPT sprinkler outlet



No. 140  
Male NPT or BSPT  
Threaded x Groove  
Adapter



No. 141  
Female NPT or  
BSPT Threaded x  
Groove Adapter



No. 116 CPVC  
Female Socket x  
Brass IGS Groove  
Adapter  
(Refer to  
[publication 10.85](#)  
and [10.95](#))



No. 146 Cap



WB-1  
IGS Weld  
Plunger Cone



NAP-1  
IGS Weld  
Plunger Cone



RG2100 Roll Grooving  
Tool



RG1 Manual Roll  
Grooving Tool (Refer to  
[publication 24.01](#))



VicFlex™ Series  
AH2-CC Braided  
Flexible Hose  
with Captured  
Coupling (Refer to  
[publication 10.85](#))



VicFlex™ Series  
AH1-CC Braided  
Flexible Hose  
with Captured  
Coupling (Refer to  
[publication 10.95](#))

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



## 1.0 PRODUCT DESCRIPTION

### Pipe Material

- Carbon steel, Sch. 40, Sch. 10, light-wall/specialty pipe. For use with alternative materials please contact Victaulic.
- For exceptions reference section 6.0 Notifications

### Maximum Working Pressure

- Up to 365 psi/2517 kPa/25 bar

### Pipe Preparation

- Cut (Sch. 40) or roll (Sch. 40, Sch. 10, light-wall) grooved in accordance with publication 25.14: Victaulic /GS Groove Specifications

### RG2100 Grooving Capability

- 1"/DN25
- Workstation designed to cut, ream and form a roll groove on carbon steel, Sch 40, Sch 10, and light-wall pipe
- This tool has a minimum pipe length requirement of 4 ½"/114 mm

## 2.0 CERTIFICATION/LISTINGS



LPS 1219: Issue 3.1



Cert/LPCB Ref. 104-1a/39, 104-1a/41, 104-1a/42, 104-1b/03, 104-1b/04, 104-1b/05, 104-1b/06, 104-1b/07, 104-1b/08, 104-1b/09, 104-1b/10, 104-1b/11

### NOTES

- Approvals listed above do not apply to the RG2100 Roll Grooving Tool.

## 3.0 SPECIFICATIONS – MATERIAL

**Housing:** Ductile iron conforming to ASTM A536, Grade 65-45-12

### Housing Coating: (specify choice)

- ☐ Orange coating.
- ☐ Red coating (standard for EMEA-I and Asia Pacific).
- ☐ Optional: Hot dipped galvanized.

### Gasket:

#### ☐ Grade “E” EPDM (Type A) Vic-Plus™ Pre-lubricated Gasket

EPDM (Violet Color Code). Applicable for wet and dry (oil-free air) fire protection systems only. Listed/Approved for continuous use in wet and dry systems. Listed/Approved for dry systems at -40°F/-40°C and above. NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.

### NOTES:

- Reference should always be made to [publication I-100](#), Victaulic Field Installation Handbook for gasket lubrication instructions.
- 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 [publication 05.01](#), Victaulic Gasket Selection Guide for specific gasket service guidelines and for a listing of services which are not compatible.

### Bolts/Nuts:

- ☐ Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). 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/Zn 5, finish Type III (imperial) or Type II (metric).

### 3.0 SPECIFICATIONS – MATERIAL (CONTINUED)

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**Coupling Linkage:** High Strength Steel with comparable physical properties to that of the Track Bolt (ASTM A449).  
Linkage is zinc electroplated per ASTM B633 Fe/Zn 5, Type III Finish

**No. 140, 141, 142, 143, 144, 148:** Carbon steel meeting the chemical and mechanical property requirements of ASTM A53 Grade A, Type E or S

**No. 65, 111, 113, 114, 117, 145, 146, 147:** Ductile iron conforming to ASTM A536, Grade 65-45-12

**No. WB-1: Steel Alloy**

**No. NAP-1: Aluminum Alloy**

**RG2100 Roll Grooving Tool:**

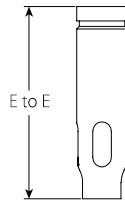
**Required Power Supply:** Power Drive with Foot Switch (½ HP, Universal reversible motor, single-phase, 25-60 HZ)

**Accessories/Components:**

- ☐ Tool head assembly
- ☐ Carriage assembly - accepts RG2100 tool head assembly, Standard Cutter, Standard Reamer and Standard Lever

## 4.17 DIMENSIONS

### No. 148 Sprinkler Reducer

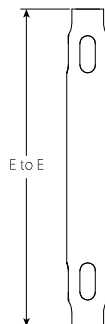


Length	Size		Threaded Outlet Size		Weight
	Nominal	Actual Outside Diameter			Approximate (Each)
E to E inches mm	inches DN	inches mm	inches DN	inches DN	lb kg
3	1	1.315	½	¾	0.4
76	DN25	33.7	DN15	DN20	0.2
3.5	1	1.315	½	¾	0.5
89	DN25	33.7	DN15	DN20	0.2
4	1	1.315	½	¾	0.6
102	DN25	33.7	DN15	DN20	0.3
4.5	1	1.315	½	¾	0.6
114	DN25	33.7	DN15	DN20	0.3
5	1	1.315	½	¾	0.7
127	DN25	33.7	DN15	DN20	0.3
5.5	1	1.315	½	¾	0.8
140	DN25	33.7	DN15	DN20	0.3
6	1	1.315	½	¾	0.8
152	DN25	33.7	DN15	DN20	0.4
12	1	1.315	½	¾	1.7
305	DN25	33.7	DN15	DN20	0.8
18	1	1.315	½	¾	2.5
457	DN25	33.7	DN15	DN20	1.1
24	1	1.315	½	¾	3.4
610	DN25	33.7	DN15	DN20	1.5
30	1	1.315	½	¾	4.2
762	DN25	33.7	DN15	DN20	1.9

#### NOTES

- NPT or BSPT available
- It is acceptable to cut and groove any No. 148 longer than 6"/152mm. The minimum allowable cut length is 6"/152mm for a No. 148.

### No. 148 Double Ended Sprinkler Reducer



Length	Size		Threaded Outlet Size		Weight
	Nominal	Actual Outside Diameter			Approximate (Each)
E to E inches mm	inches DN	inches mm	inches DN	inches DN	lb kg
36	1	1.315	½	¾	5.0
914	DN25	33.7	DN15	DN20	2.3

#### NOTE

- 36"/914mm size features sprinkler outlet on both ends for field fabrication.

## 6.0 NOTIFICATIONS

### ⚠ WARNING



- Read and understand all instructions before attempting to install any Victaulic products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Wear safety glasses, hardhat, and foot protection.

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

- These products shall be used only in fire protection systems that are designed and installed in accordance with current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards, or equivalent standards, and in accordance with applicable building and fire codes. These standards and codes contain important information regarding protection of systems from freezing temperatures, corrosion, mechanical damage, etc.
- The installer shall understand the use of this product and why it was specified for the particular application.
- The installer shall understand common industry safety standards and potential consequences of improper product installation.
- It is the system designer's responsibility to verify suitability of materials for use with the intended fluid media within the piping system and external environment.
- The material specifier shall evaluate the effect of chemical composition, pH level, operating temperature, chloride level, oxygen level, and flow rate on materials to confirm system life will be acceptable for the intended service.

Failure to follow installation requirements and local and national codes and standards could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.

### ⚠ WARNING



- Failure to follow instructions and warnings could result in serious personal injury, property damage, and/or product damage.
- Before operating or servicing any grooving tools, read all instructions in the manual and all warning labels on the tool.
- Wear safety glasses, hardhat, foot protection, and hearing protection while working around the tool.
- Save the operating and maintenance manual in a place accessible to all operators of the tool

If you need additional copies of any literature, or if you have questions concerning the safe and proper operation of the tool, contact Victaulic, P.O. Box 31, Easton, PA 18044-0031, Phone: 1-800-PICK VIC, E-Mail: pickvic@victaulic.com.

### NOTICE

- Victaulic does not recommend the use of any furnace butt-welded pipe with sizes 2"/DN50 and smaller Victaulic gasketed joint products. This includes, but is not limited to, ASTM A53 Type F pipe.

## 7.0 REFERENCE MATERIALS

[10.06: FireLock Installation-Ready Fittings](#)

[10.52: Style 922 Outlet Tee](#)

[10.85: VicFlex Series AH2 ad AH2-CC Braided Hose](#)

[11.02 Mechanical-T Bolted Branch Outlets](#)

[25.14: Victaulic IGS Groove Specification](#)

[I-101-103: FireLock™ Installation-Ready™ Fittings Installation Instruction](#)

[I-102: FireLock™ Installation-Ready™ Fittings Installation Instruction](#)

[I-108: FireLock™ Installation-Ready™ Coupling](#)

[I-115: FireLock EZ™ Installation-Ready™ Reducing Coupling Installation Instruction](#)

[I-ENDCAP: Victaulic End Cap Installation Safety Instructions](#)

[I-V9: Style V9 Victaulic FireLock™ IGS™ Installation-Ready™ Sprinkler Coupling](#)

[TM-RG2100: Operating and Maintenance Instructions Manual](#)

### 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](http://www.victaulic.com).

### Warranty

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

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