

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



No. 142
Welded Outlet



Style 922
Outlet-T



Style 920N
Mechanical-T Outlet



No. 101
Installation-Ready™
90° Elbow



Style 108
Installation-Ready™
Rigid Coupling



No. 102
Installation-Ready™
Tee



Style 115
OGS x IGS™
Reducing Coupling



No. 148 Sprinkler
Reducer, NPT or
BSPT sprinkler outlet



No. 65
Grooved End
of Run Fitting



No. 144
OGS x IGS™ Grooved
Concentric Reducer



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



No. 143
Close Nipple



No. 140
Male NPT or BSPT
Threaded x Groove
Adapter



No. 141
Female NPT or BSPT
Threaded x Groove
Adapter



No. 146 Cap



RG2100 Roll
Grooving Tool



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](#))

1.0 PRODUCT DESCRIPTION

Pipe Material

- Carbon steel, Schedule 10, Schedule 40. For use with alternative materials please contact Victaulic.

Maximum Working Pressure

- Up to 365 psi/2517 kPa/25 bar

Pipe Preparation

- Cut (Sch. 40) or roll (Sch. 10 or Sch. 40) grooved in accordance with [publication 25.14](#): Victaulic /IGS Groove Specifications.

RG2100 Grooving Capability

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

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	

2.0 CERTIFICATION/LISTINGS



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:

- ☐ Orange enamel
- ☐ Red enamel (Europe)
- ☐ 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).

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

No. 65, 145, 146: Ductile iron conforming to ASTM A536, Grade 65-45-12

RG2100 Roll Grooving Tool:

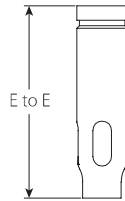
Required Power Supply: Power Drive with Foot Switch (½ HP, Universal reversible motor, single-phase, 25-60 HZ)

Accessories/Components:

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

4.7 DIMENSIONS

No. 148 Sprinkler Reducer



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

NOTE

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

NOTE

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

5.0 PERFORMANCE

Friction Flow Data

Size				Equivalent Length of 1" Sch. 40 Pipe (C=12)							
Nominal inches DN		Actual Outside Diameter inches mm		Style 922	Style 920N	No. 101 feet meters	No. 102 (Branch) feet meters	No. 102 (Run) feet meters	Style 115 feet meters	No. 148 feet meters	No. 144 feet meters
1 DN25	x 1 DN25	1.315 33.7	x 1.315 33.7	See publication 10.52	See publication 11.02	2.0 0.61	5.0 1.52	2.7 0.82	–	See note	–
1 ¼ DN32		1.660 42.4		–	–	–	–	–	5.7 1.74	–	3.9 1.19
1 ½ DN40		1.900 48.3		–	–	–	–	–	5.0 1.52	–	4.3 1.31

NOTE

- In accordance with NFPA 13, friction loss shall be excluded for fittings directly connected to a sprinkler. For hydraulic calculations, Victaulic recommends using the installed length (E-E or cut length) of the No. 148 Sprinkler Reducer as the equivalent length of 1"/DN25 Sch. 40 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](#)

Victaulic No. 148		
Length	½" DN15 outlet	¾" DN20 outlet
E to E inches mm	Equivalent Length of 1" Sched. 40 Pipe (C=120) feet meters	
≤6 152	6.6 2.0	3.8 1.2
6 – 12 152 – 305	5.5 1.7	3.8 1.2
12 – 18 305 – 457	6.2 1.9	4.3 1.3
18 – 24 457 – 610	6.7 2.0	4.7 1.4
24 – 30 610 – 762	7.1 2.2	5.2 1.6
30 – 36 762 – 914	7.4 2.3	5.4 1.6

NOTE

- When installed in pipe to pipe connections or it is required by the authority having jurisdiction, the equivalent length data in the table above may apply.

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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