

Ward on Board.

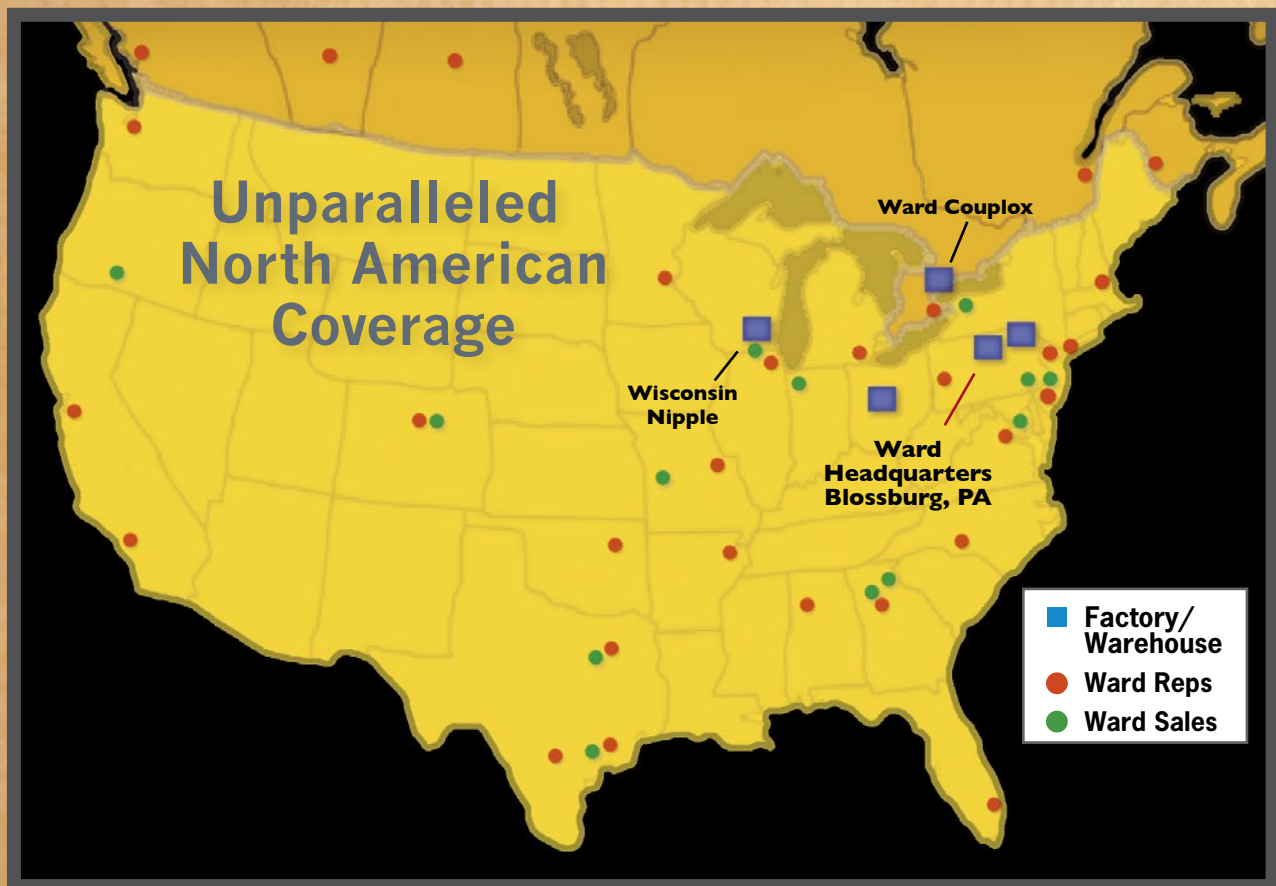
WARD Flex[®]

THE SMART CONNECTION



Flexibility near you.

You work hard. Ward makes life easier with 34 sales offices and 23 warehouses across the USA and Canada ready to serve your needs with service accuracy and on-demand delivery. Large orders can also be fulfilled quickly through our corporate headquarters in Blossburg, PA. Just call toll free (800) 248-1027 and select Customer Service from the Departments menu or visit our **Where to Buy** locator at www.wardflex.com.



WARDFlex®

WARDMFG

117 Gulick Street • Blossburg, PA 16912 • (800) 248-1027 • www.wardmfg.com

US MADE
SINCE 1924

Why choose WARDFLEX®?

Flexibility at every turn.

Delivering fuel gas to its point of use has come a long way since the ancient Chinese method of hollowed out bamboo with raw gum connections. Even contemporary installation using black pipe and fittings is time consuming and labor intensive, creating service points at every turn and connection. Today, professional contractors have the advantage of a far more flexible, reliable and effective method of installation and distribution with WARDFLEX®.

Introduced to the North American market by Ward Manufacturing, LLC in 1990, the WARDFLEX corrugated stainless steel tubing (csst) system sets the standard by which all others are measured. WARDFLEX is a continuous, flexible gas piping system that delivers significant performance and installation advantages over black-steel pipe or competitive csst products. Originally developed as a safer system for earthquake prone regions, the system has been used in millions of installations around the world.

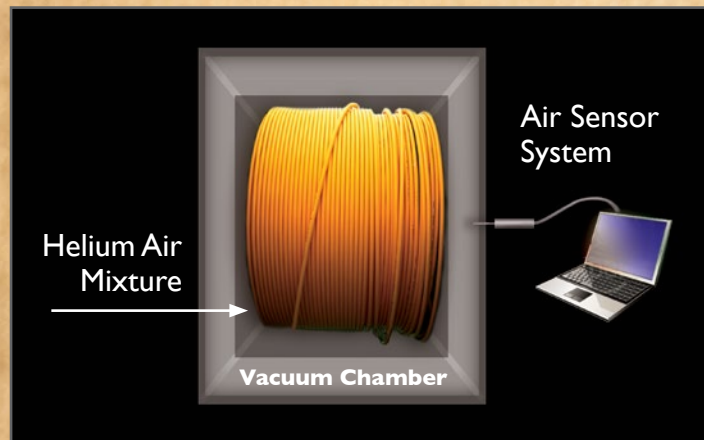
Fully annealed, WARDFLEX offers exceptional flexibility for more efficient installation. Continuous lengths of tubing allow you to custom size and route WARDFLEX with the right pressure, more directly, using far fewer angles of any measure. This ensures the absolute minimal number of connections, practically eliminating opportunities for connection leaks or service call-backs.

Continuous Run Coils

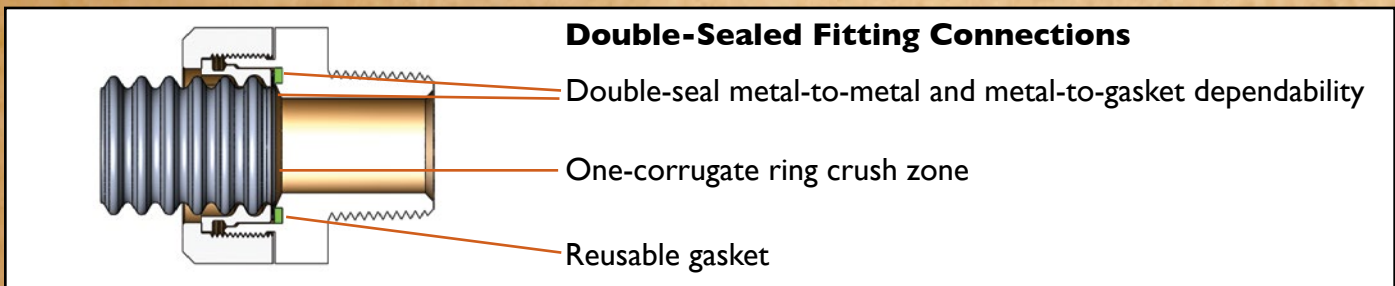


WARDFLEX features vertical seamless coils that remove the need for butt-connections of any kind, completely eliminating one major source of weakness and leaks.

Helium/Vacuum Testing



Exclusive helium pressurization and vacuum leak detection technology ensures the highest leak-free integrity for every WARDFLEX installation. Every inch is tested and any section not testing 100% leak-free is eliminated from the production stream.



Exclusive features, multiple installation benefits.

As the original csst in North America, WARDFLEX offers features and benefits that simply surpass the alternatives.

WARDFLEX takes less people less time, saving time and money on job sites and achieving more installed feet, and profit, per day. The system eliminates heavy lifting, extensive measuring, cutting and re-cutting, threading, and extra hands to position and install. Connections can be made with simple hand tools in minutes.

The WARDFLEX system includes tubing, fittings, striker plates, supportive hardware, regulators and termination devices. It's one smart system with multiple benefits for both new construction and remodeling/retrofit projects, in residential, commercial, and industrial applications.

For flexibility you can rely on for natural and other fuel gas distribution, turn to Ward.

Full Annealing

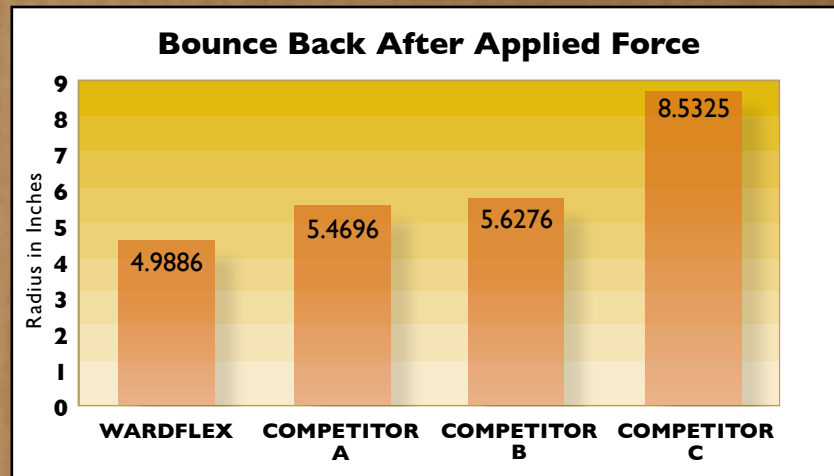
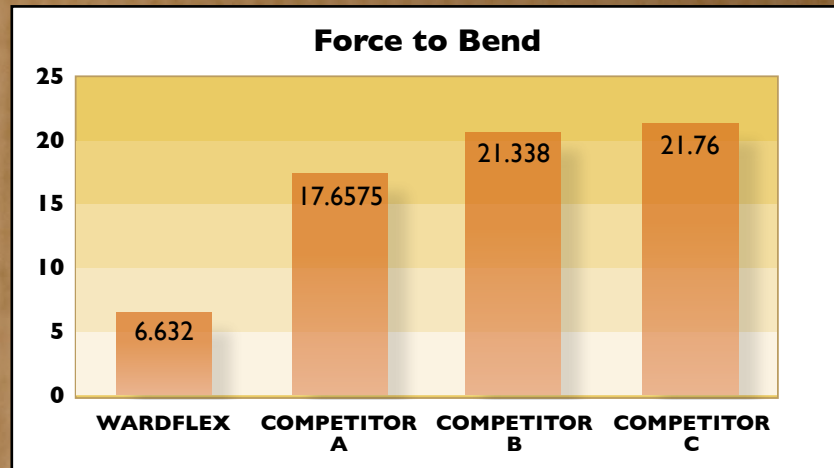
All stainless steel is annealed. Only WARDFLEX is annealed a second time, after the material is corrugated. WARDFLEX delivers significantly greater integrity and flexibility with substantially less “bounce back” than any other product available today. Tests show that WARDFLEX is as much as 62% more flexible than its nearest competitor where it matters the most – in the short run.

- Less energy expended
- Less worker fatigue
- Less repetitive stress

Position it once and WARDFLEX stays where you put it. The integrity of the tubing:

- Allows less rebending and redo's
- Reduces the risk of unexpected positioning and injury
- Eliminates frustration with less repositioning and injury

Test Method: Consistent lengths of coated 1/2" csst were tested with a Tinius Olsen Tensile Tester. The maximum force and outside radius of tubing were observed and charted over repeated tests to evaluate the flexibility of competitive brands of tubing.



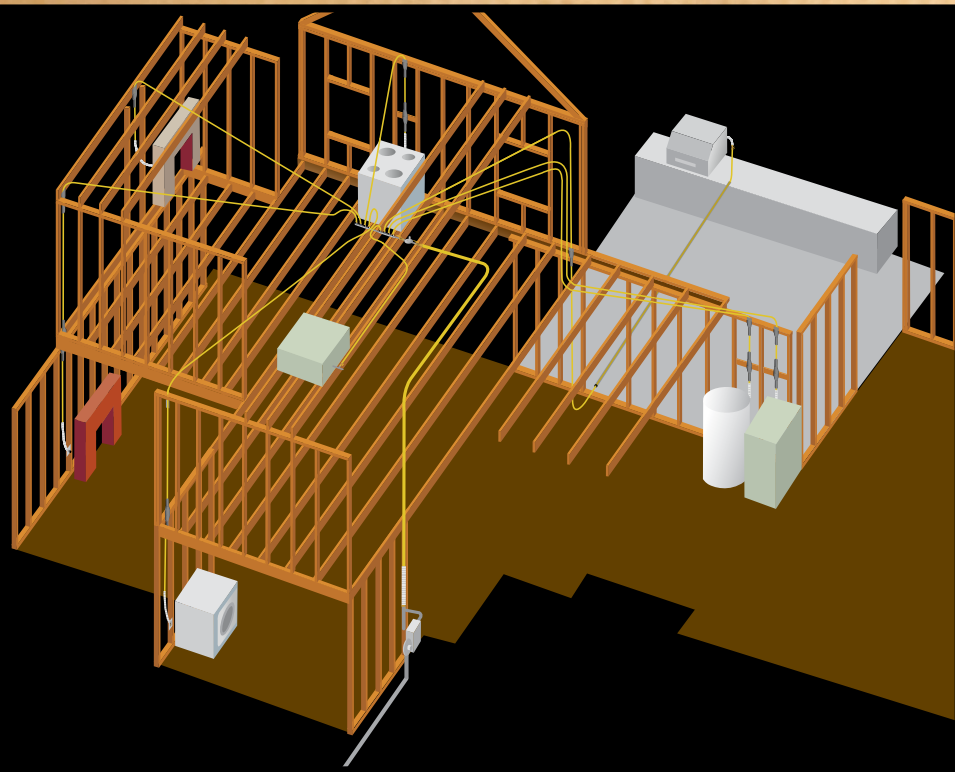
2-Year Limited Warranty: As with every product Ward manufactures, we're so confident in the features of WARDFLEX that we offer an a 2-Year Limited Warranty. The product is just that good.

A professional-grade product

Installation flexibility: any job, anywhere.

A professionally-sized system makes the difference between perfect performance and spotty pressure. From the gas meter to appliances, inside and out, every WARDFLEX installation is custom-sized to meet the job specification. Ward's customer service department provides technical help, and sizing software makes complex jobs simpler, faster and easier.

With CSA Certification for single family, multi-family, commercial and industrial use, WARDFLEX is an ideal choice for new construction, rehabilitation or remodeling in commercial or residential applications. WARDFLEX handles even the most difficult installations with contractor-grade durability.



WARDFLEX can be installed in concealed spaces such as:

- Attics
- Basements
- Crawl spaces
- Interior and exterior wall cavities
- Non-metal conduit underground or in concrete

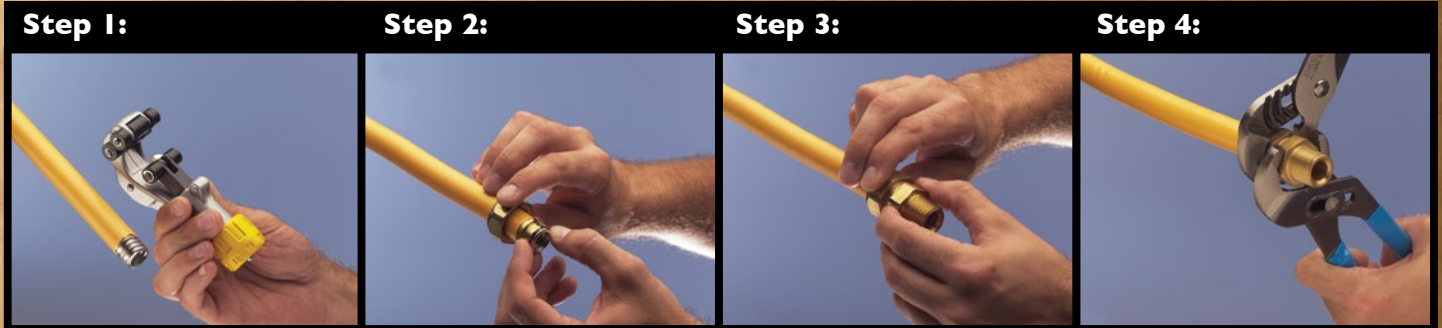
WARDFLEX is ideal for direct connection to:

- Fixed appliances like furnaces, water heaters and stoves
- Quick-disconnect devices
- Gas grills, patio heaters, fire pits and lights
- Roof-top equipment
- Pad-mounted appliances



for professional contractors.

Connects in less time. Time after time.



Step 1:
Cut WARDFLEX tubing and remove PE coating to expose a minimum of four corrugations.

Step 2:
Slide nut over tubing and place retainer ring. Leave one corrugation exposed on the end of tubing.

Step 3:
Slide nut over retainer ring and hand-tighten nut to body.

Step 4:
Tighten with wrenches until nut contacts body.

Free training, invaluable customer support.

Proper installation and safety training is an absolute pre-requisite prior to purchasing WARDFLEX. No contractor can install this product without training by an authorized WARDFLEX trainer. Professional, complimentary training addresses the considerations, specifications, advantages, sizing and installation process for any kind of WARDFLEX application. Our training is so well known in the industry that competitors accept WARDFLEX training outright and some states recognize CE credits for gas installation skills.

The Ward sales team and our knowledgeable distributors conduct classes across the USA on a regular basis. Need training faster? We are happy to schedule training at a contractor's facility or even on site at a time that's most convenient for you. With 120 authorized trainers nationwide, Ward makes it simple to get trained.

After successfully completing the training, participants receive an installer training card required to purchase WARDFLEX. Trained installers also receive new product updates and recertification requirements as they become available.

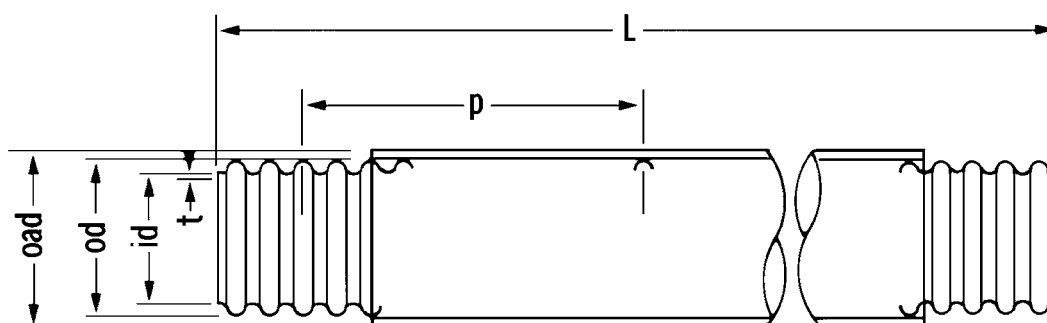
It's important to note that trained WARDFLEX installers must also meet all qualifications required by the state and/or local administrative authority administering the provisions of the code where the WARDFLEX gas piping system is installed.



WARDFLEX[®] Specifications.

Compliance with Industry standards.

- ANSI/ISO 14001:2004 (Environmental Certification)
- ISO 9001:2008 Certified
- ANSI LC I (CSA Design Certified)
- CSA 6.26-M05 (Canadian Gas Association)
- National Fuel Gas Code (NFPA 54)
- Standard Gas Code (SBCCI)
- BOCA Mechanical Code
- IAPMO Classified Marking (File No. 3353)
- CABO One & Two Family Dwelling Code
- Uniform Mechanical Code (ICBO)
- International Fuel Gas Code
- International Plumbing Code
- International Mechanical Code
- ICC ESR-1879
- FM 3011939
- City of Los Angeles Approval



QA / QC: 100% vacuum testing on every WARDFLEX coil.

Maximum certified working pressure: 25 psig

Equivalent Hydraulic diameter	<i>EHD</i>	15	19	25	31	39	48	62
Nominal diameter	<i>in.</i>	3/8	1/2	3/4	1	1-1/4	1-1/2	2
	<i>mm</i>	(10)	(15)	(20)	(25)	(32)	(38)	(50)
Inside diameter (id)	<i>in.</i>	0.45	0.59	0.79	0.98	1.26	1.593	2.114
	<i>mm</i>	(11.5)	(15.0)	(20.0)	(25.0)	(32)	(40.45)	(53.70)
Outside diameter (od)	<i>in.</i>	0.56	0.72	0.98	1.21	1.53	2.020	2.555
	<i>mm</i>	(14.2)	(18.4)	(24.9)	(30.8)	(38.8)	(51.31)	(64.90)
Pitch/10 corrugations (p)	<i>in.</i>	1.34	1.50	1.97	2.36	2.76	3.630	4.455
	<i>mm</i>	(34)	(38)	(50)	(60)	(70)	(92.20)	(113.16)
Tube wall thickness (t)	<i>in.</i>	0.008	0.01	0.01	0.01	0.01	0.012	0.012
	<i>mm</i>	(0.20)	(0.25)	(0.25)	(0.25)	(.25)	(.30)	(.30)
Coating thickness	<i>in.</i>	0.020	0.020	0.020	0.020	0.020	0.020	0.020
	<i>mm</i>	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)
O.D. of coating (oad)	<i>in.</i>	0.61	0.77	1.03	1.26	1.58	2.060	2.594
	<i>mm</i>	(15.4)	(19.6)	(26.1)	(32.0)	(40)	(52.3)	(65.9)

Available in multiple coil lengths.

The system of choice.

Compare the WARDFLEX advantages for yourself.

	WARDFLEX®	COMPETITOR A	COMPETITOR B	COMPETITOR C
TUBING SIZE RANGE	3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2" & 2"	3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2" & 2"	3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2" & 2"	3/8", 1/2", 3/4", 1" & 1-1/4"
TUBING ANNEALED	YES	NO	NO	NO
CONTINUOUS RUN COILS	YES	NO	NO	NO
STANDARD COIL LENGTHS	50-100-180-250-500-1,000 ft.	150-100-500 ft.	150-250 ft.	25-50-75-225 ft.
100% VACUUM TESTING	YES	NO	NO	NO
RE-USABLE PLASTIC REELS	YES	Wood Spools	Wood Spools	Wood Spools
WARRANTY	2-Year Limited	12 months	Unlimited	12 months
FITTING TYPE	Dual seal	Metal-to-metal	Metal-to-metal	Gasket/O-ring combination

Fittings and accessories make customization easy.

In addition to the PE-coated corrugated stainless steel tubing, Ward offers everything you need to configure WARDFLEX for countless applications. System components include:

- StepSaver Double-Seal Fitting
- Termination fittings
- Tee fittings
- Pipe fittings
- Striker plates and strip wound conduit
- Multiport manifolds
- Manifold brackets
- Valves
- Stub outs
- Regulators
- Gas outlet boxes
- Reusable tubing reel
- Reel stand

