

## UNISEAL STAINLESS STEEL

# PIPE COUPLINGS

UP TO 3,000 LB.



### INTRODUCTION

Stainless Steel ground-joint-pipe unions have been used for years in virtually every type of industry. The majority of ground-joint-pipe unions consist of a metal to metal seal. During installation, this type of seal is subject to scoring damage on the lapped seats causing leakage which requires the entire union to be replaced. Also, during normal operation, the piping system vibration, pressure surges and flexing movement of the union cause the metal to metal seals to wear and eventually cause leakage problems. This results in dangerous leaks of product, replacement costs, and excessive downtime.



### UNISEAL PIPE COUPLING

The Uniseal Pipe Coupling (WU) has successfully solved frequent leakage, intensive maintenance and stocking difficulties associated with ground-joint-pipe unions.

The WU is a modified stainless steel pipe union which utilizes a spiral-wound gasket to provide a leak-tight joint. This design, similar in principle to flange joints, has been proven in the field for many years. Because the joint seal is formed by the replaceable gasket (not a ground joint finish), failures caused by poor mating surfaces are eliminated. Components may be stocked and replaced individually because mated parts are not required for sealing.



### FEATURES

#### No Losses, No Leaks

- No loss of expensive cryogenic liquids, cold gas vapors or process fluid. A spiral-wound gasket ensures a leak-tight seal.

#### Lower Maintenance / Labor Costs

- Replacement of the union housing is eliminated. Only a change of gasket is required when the Uniseal Coupling is disassembled.
- No need to spring the pipe during make-up or disassembly.
- It is less costly to make and break than flanges.

#### Lower Inventory Costs

- Only a few Uniseal Pipe Couplings and gasket kits in each size are required to back up installations.
- One Uniseal satisfies all pressure series of flanges in pipe sizes 1/2" to 2".

#### Ease of Installation

- The gasket is held firmly in place with a patented retainer.
- There is no danger of damaging the seal during installation as it is fully protected from over-torquing.

#### Welded Piping Systems

- With the gasket removed while welding the coupling into the piping, the danger of damaging the seal is eliminated.
- Costly removal of sections of pipe to replace leaky unions is eliminated.

#### Component Interchangeability

- All components of the Uniseal Couplings, in each size class, are fully interchangeable.
- End connections can be socket weld, threaded, or a combination of both.

# PIPE COUPLINGS

## ORDERING GUIDE

**BASE MODEL NUMBER**  
Uniseal Pipe Coupling

**PIPE UNION**  
T - Threaded  
W - Socket Welded  
K - Gasket Kit

**PIPE SIZE**  
04 - 1/2"  
06 - 3/4"  
08 - 1"  
12 - 1-1/2"  
16 - 2"

F - WU T - 04 - X F

**GASKET MATERIAL**

F - Flexite Super with 316L Stainless Steel  
G - Graphite with 316L Stainless Steel  
T - PTFE with 316L Stainless Steel

**UNION HOUSING**

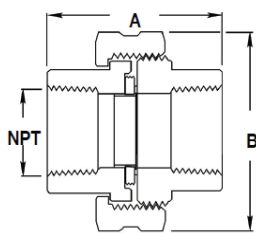
X - 316L Stainless Steel  
M - Monel  
Z - 304 Stainless Steel  
(Others Available Upon Request)



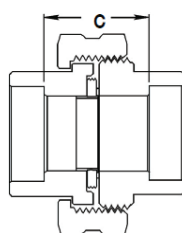
## APPLICATIONS

The Uniseal Pipe Coupling (WU) has provided leak-tight performance in a variety of industries.

- Cryogenic Fluids & Cold Gases
- Steam Systems - up to 1500 PSIG Superheat
- Variety of process fluids and gases to 2,400 PSIG CW; i.e.: Acids, Caustics, Nitrogen, etc.
- Steam Trap, Valve, Pump & Compressor Manifolds
- Power Plants and Utilities
- Hydraulic Fluids / Hot Oils



Uniseal WUT



Uniseal WUW



## DIMENSIONS

Pipe Size	A	B	C	Weight (lbs.)
1/2"	2.01"	1.80"	0.937"	0.80
3/4"	2.24"	2.20"	1.123"	1.20
1"	2.44"	2.57"	1.128"	1.60
1-1/2"	3.01"	3.39"	1.482"	3.30
2"	3.39"	4.05"	1.633"	4.73

Average weights listed, actual weights may vary slightly.



## SPECIFICATIONS

### Materials of Construction:

Housing .....	316L Stainless Steel
Gasket .....	Type 347 (ASTM-240) with Flexite Super (direct replacement for asbestos)
Gasket Retainer .....	316L Stainless Steel

### Optional Materials:

Gasket Filler .....	Graphite, PTFE
Gasket Metal Winding .....	304 or 316L S/S, Monel, Inconel 600, Hastelloy, Nickel and others
Union Housing .....	304 S/S, 90/10 Copper-Nickel, Alloy 20, Hastelloy, Chrome-Moly, Forged Carbon Steel, ASTM A165, Galvanized and others

### Assembly:

Equal to MSS-SP-83 - Pipe Unions - Socket Welding and Threaded

### TEMPERATURE / PRESSURE RATINGS 316L SST

Temperature	-325° to 100° F	200° F	300° F	400° F	500° F
Pressure (PSIG)	2430*	2050	1835	1670	1545

Forged carbon steel unions (ASTM A105) have a working pressure of 3000 psi.

\*Minimum recommended temperature for 316L SS is -325°F

CPC-Cryolab has a policy of continuous product research and improvement and reserves the right to change design and specifications without notice. Please consult your Distributor, Representative or Factory for information on special connections, alternate materials, and larger sizes.