



1467 Elmwood Ave.
 Cranston, RI 02910 USA
 Phone: 401-781-8220
 Fax: 401-781-7313
 ISO 9001-2008 Registered

Certificate of Compliance

Grooved Couplings

This is to certify that Grinnell Grooved Couplings are manufactured in compliance with the following specifications:

Casting Material	ASTM A-536 Gr. 65-45-12 Ductile Iron
Coatings	Rust Inhibiting Non-Lead Paint: Orange, Red ASTM A-153, Hot Dip Galvanizing
Bolts	SAE J429 Grade 5; Zinc Electroplated To ASTM B633 ASTM F568M; Zinc Plated per ASTM
Nuts	SAE J995 Grade 5; Zinc Electroplated to ASTM B633 ASTM A563M Class 9; Zinc Plated per ASTM B633
Gaskets	ASTM D-2000, EPDM, Nitrile, Silicone, Fluoroelastomer

Ductile iron conforming to ASTM A 536, Grade 65-45-12									
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	C %	Si %	Mn %	P (Max. %)	S (Max. %)	Mg %	HBW
65,000	45,000	12	3.20-4.10	1.80-3.00	0.10-1.00	0.05	0.035	.025-.060	156-217

Galvanized Coating Chemistry, ASTM B6								
Grade	Composition, %							
	Lead Max	Iron Max	Cadmium Max	Aluminum Max	Copper Max	Tin Max	Total Non-Zinc Max	Zinc Min.
High Grade	0.03	0.02	0.01	0.01	0.002	0.001	0.05	99.95

Certified for and on behalf of Tyco Fire Protection Products

Michael Horgan

Senior Engineering Manager



January 2, 2015



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Cast Fittings

This is to certify that Grinnell Cast Fittings are manufactured in compliance with the following specifications:

Material, Cast Fittings	ASTM A-536 Gr. 65-45-12 Ductile Iron
Material, Fabricated Fittings	ASTM A-53 Grade B, Carbon Steel
Coatings	Rust Inhibiting Non-Lead Paint: Orange, Red ASTM A-153, Hot Dip Galvanizing

Ductile iron conforming to ASTM A 536, Grade 65-45-12									
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	C %	Si %	Mn %	P (Max. %)	S (Max. %)	Mg %	HBW
65,000	45,000	12	3.20-4.10	1.80-3.00	0.10-1.00	0.05	0.035	.025-.060	156-217

Carbon Steel conforming to ASTM A-53, Grade B										
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	C % Max	Mn % Max	P % Max	S % Max	Cu % Max	Ni % Max	Cr % Max	Mo % Max	V % Max
60,000	35,000	0.3	1.2	0.05	0.045	0.4	0.4	0.4	0.15	0.08

Galvanized Coating Chemistry, ASTM B6								
Grade	Composition, %							
	Lead Max	Iron Max	Cadmium Max	Aluminum Max	Copper Max	Tin Max	Total Non-Zinc Max	Zinc Min.
High Grade	0.03	0.02	0.01	0.01	0.002	0.001	0.05	99.95

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Fittings

This is to certify that Grinnell Fittings are manufactured in compliance with the following specifications:

Material, Cast Fittings	ASTM A-536 Gr. 65-45-12 Ductile Iron
Material, Fabricated Fittings	ASTM A-53 Grade B, Carbon Steel
Coatings	Rust Inhibiting Non-Lead Paint: Orange, Red ASTM A-153, Hot Dip Galvanizing

Ductile iron conforming to ASTM A 536, Grade 65-45-12									
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	C %	Si %	Mn %	P (Max. %)	S (Max. %)	Mg %	HBW
65,000	45,000	12	3.20-4.10	1.80-3.00	0.10-1.00	0.05	0.035	.025-.060	156-217

Carbon Steel conforming to ASTM A-53, Grade B										
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	C % Max	Mn % Max	P % Max	S % Max	Cu % Max	Ni % Max	Cr % Max	Mo % Max	V % Max
60,000	35,000	0.3	1.2	0.05	0.045	0.4	0.4	0.4	0.15	0.08

Galvanized Coating Chemistry, ASTM B6								
Grade	Composition, %							
	Lead Max	Iron Max	Cadmium Max	Aluminum Max	Copper Max	Tin Max	Total Non-Zinc Max	Zinc Min.
High Grade	0.03	0.02	0.01	0.01	0.002	0.001	0.05	99.95

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Mechanical Tees

This is to certify that Grinnell Mechanical Tees are manufactured in compliance with the following specifications:

Casting Material	ASTM A-536 Gr. 65-45-12 Ductile Iron
Coatings	Rust Inhibiting Non-Lead Paint: Orange, Red ASTM A-153, Hot Dip Galvanizing
Bolts	SAE J429 Grade 5; Zinc Electroplated per ASTM B633 ASTM F568M; Zinc Plated per ASTM B633
Nuts	SAE J995 Grade 5; Zinc Electroplated per ASTM B633 ASTM A563M Class 9; Zinc Plated per ASTM B633
U-Bolts	ANSI - ASTM A307 Grade A; Zinc Electroplated per ASTM B633 Metric - ASTM F68 Class 4.8; Zinc Electroplated per ASTM B633
Flanged Nuts	ANSI - ASTM A563 Grade A; Zinc Electroplated per ASTM B633 Metric - ASTM A563M Class 9; Zinc Electroplated per ASTM B633
Gaskets	ASTM D-2000, EPDM, Nitrile

Ductile iron conforming to ASTM A 536, Grade 65-45-12									
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	C %	Si %	Mn %	P (Max. %)	S (Max. %)	Mg %	HBW
65,000	45,000	12	3.20-4.10	1.80-3.00	0.10-1.00	0.05	0.035	.025-.060	156-217

Galvanized Coating Chemistry, ASTM B6								
Grade	Composition, %							
	Lead Max	Iron Max	Cadmium Max	Aluminum Max	Copper Max	Tin Max	Total Non-Zinc Max	Zinc Min.
High Grade	0.03	0.02	0.01	0.01	0.002	0.001	0.05	99.95

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Plain End Couplings

This is to certify that Grinnell Plain End Couplings are manufactured in compliance with the following specifications:

Casting Material	ASTM A-536 Gr. 65-45-12 Ductile Iron
Coatings	Rust Inhibiting Non-Lead Paint: Orange, Red ASTM A-153, Hot Dip Galvanizing
Bolts	SAE J429 Grade 5; Zinc Electroplated To ASTM B633 ASTM F568M; Zinc Plated per ASTM B633
Nuts	SAE J995 Grade 5; Zinc Electroplated to ASTM B633 ASTM A563M Class 9; Zinc Plated per ASTM B633
Gaskets	ASTM D-2000, EPDM, Nitrile, Silicone, Fluoroelastomer

Ductile iron conforming to ASTM A 536, Grade 65-45-12									
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	C %	Si %	Mn %	P (Max. %)	S (Max. %)	Mg %	HBW
65,000	45,000	12	3.20-4.10	1.80-3.00	0.10-1.00	0.05	0.035	.025-.060	156-217

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Copper Systems

This is to certify that Grinnell Copper Systems are manufactured in compliance with the following specifications:

Casting Material, Couplings	ASTM A-536 Gr. 65-45-12 Ductile Iron
Wrot Fittings	ASTM B-75, Seamless Copper Tube
Casting Material, Fittings	CDA C89833, Copper Alloy
Coatings, Couplings	Copper Acrylic Enamel
Bolts	SAE J429 Grade 5; Zinc Electroplated To ASTM B633 ASTM F568M; Zinc Plated per ASTM B633
Nuts	SAE J995 Grade 5; Zinc Electroplated to ASTM B633 ASTM A563M Class 9; Zinc Plated per ASTM B633
Gaskets	ASTM D-2000, EPDM

ASTM B 75 C12200					
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	Cu % Min	P%	Rockwell Hardness
40,000	32,000	25	99.9	.015-.040	Scale:30T - 30

Ductile iron conforming to ASTM A 536, Grade 65-45-12									
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	C %	Si %	Mn %	P (Max. %)	S (Max. %)	Mg %	HBW
65,000	45,000	12	3.20-4.10	1.80-3.00	0.10-1.00	0.05	0.035	.025-.060	156-217

Copper Alloy conforming to CDA C89833															
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	Cu %	Al% Max	Sb% Max	Bi%	Fe% Max	Pb% max	Ni% Max	P% Max	Si% Mac	S%Max	Sn%	Zn%	HB(500)
37,000	17,000	28	86.0-91.0	0.005	0.25	1.7-2.7	0.3	0.09	1	0.05	0.005	0.08	4.0-6.0	2.0-6.0	60

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Stainless Steel Systems

This is to certify that Grinnell Stainless Steel Systems are manufactured in compliance with the following specifications:

Casting Material, Couplings	ASTM A-743/A-743M, CF8M Stainless Steel
Material, Fittings	ASTM A-403/A-403M, CR or WPW Stainless Steel Pipe Fittings
Bolts	ASTM A193 Class 2 B8M ASTM A193M Class 2 B8M
Nuts	ASTM A194, Type 316, Grade 8M ASTM A194M, Type 316, Grade 8M
Gaskets	ASTM D-2000, EPDM, Nitrile, Silicone, Fluoro-elastomer

Stainless Steel conforming to ASTM A-743/ A-743M, CF8M										
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	C % (Max)	Si % (Max)	Mn % (Max)	P (Max. %)	S (Max. %)	Ni	Cr	Mo
70,000	30,000	30%	0.08	2	1.5	0.04	0.04	9.0-12.0	18.0-21.0	2.00-3.00

Stainless Steel conforming to ASTM A-403/ A-403M, WP304/ CR304										
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	C % (Max)	Si % (Max)	Mn % (Max)	P (Max. %)	S (Max. %)	Ni	Cr	
75,000	30,000	28%	0.08	1	2	0.045	0.03	8.0-11.0	18.0-20.0	

Stainless Steel conforming to ASTM A-403/ A-403M, WP316/ CR316										
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	C % (Max)	Si % (Max)	Mn % (Max)	P (Max. %)	S (Max. %)	Ni	Cr	Mo
75,000	30,000	28%	0.08	1.5	1.5	0.04	0.04	10.0-14.0	16.0-18.0	2.00-3.00

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Certificate of Compliance Stainless Steel G-Press

This is to certify that Grinnell Fittings are manufactured in compliance with the following specifications:

Material, Fittings

AISI 316/316L Stainless Steel

Gaskets, O-rings

ASTM D2000, EPDM, Fluoroelastomer, Nitrile

316 Stainless Steel per AISI												
Tensile Strength (PSI)	Yield Offset Method (PSI)	Elongation	C%	Mn %	Cr %	Ni %	Mo %	Si %	P	S%	N %	HV
75,000	30,000	40	0.08	2	16-18	10.0-14.0	2.0-3.0	0.75	0.045	0.03	0.1	170

316L Stainless Steel per AISI												
Tensile Strength (PSI)	Yield Offset Method (PSI)	Elongation	C%	Mn %	Cr %	Ni %	Mo %	Si %	P	S%	N %	HV
70,000	25,000	40	0.03	2	16-18	10.0-14.0	2.0-3.0	0.75	0.045	0.03	0.1	170

Maximum % by weight unless otherwise indicated

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HDPE Systems

This is to certify that Grinnell HDPE Systems are manufactured in compliance with the following specifications:

Casting Material	ASTM A-536 Gr. 65-45-12 Ductile Iron
Coatings	Rust Inhibiting Non-Lead Paint: Orange
Bolts	SAE J429 Grade 5; Zinc Electroplated To ASTM B633 ASTM F568M; Zinc Plated per ASTM B633
Nuts	SAE J995 Grade 5; Zinc Electroplated to ASTM B633 ASTM A563M Class 9; Zinc Plated per ASTM B633
Gaskets	ASTM D-2000, EPDM

Ductile iron conforming to ASTM A 536, Grade 65-45-12									
Tensile Strength (Min. PSI)	Yield Offset method (Min PSI)	Elongation	C %	Si %	Mn %	P (Max. %)	S (Max. %)	Mg %	HBW
65,000	45,000	12	3.20-4.10	1.80-3.00	0.10-1.00	0.05	0.035	.025-.060	156-217

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