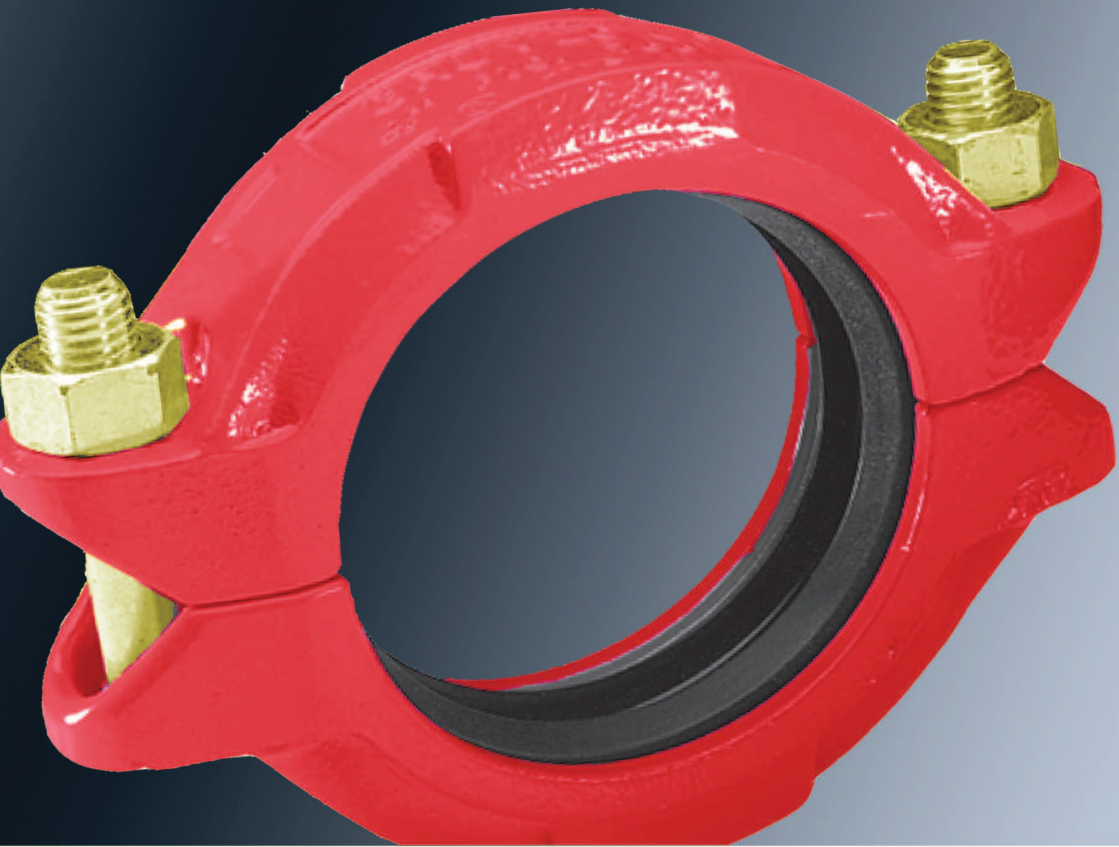




Gr8LOK by GRUVLOK®



BUILDING CONNECTIONS THAT LAST



BUILDING CONNECTIONS THAT LAST



pipe to pipe and people to people.

We pride ourselves in providing the finest-quality pipe products and services with integrity and dedication to superior customer service at all levels.



oil and gas. Our comprehensive line of products includes: grooved pipe



help you determine the most effective and cost-efficient piping solutions.

and delivering solutions.

Gr8LOK by



Mechanical Piping Products



Durable. Flexible. Safe. Easy to install. Easy to maintain. That's Anvil's Gruvlok® product line. Gruvlok gives your building the toughest, simplest, and most adaptable piping system possible.

Through a combination of roll-grooving and two-bolt coupling design, this innovative product line joins piping and other components into a single rugged yet flexible system. This makes Gruvlok products ideal for a variety of applications — particularly in tight spaces such as subfloors, UFAD systems, crawlspaces, trenches, and tunnels.

Gruvlok products eliminate the need for traditional expansion joints, allowing your system to expand and contract with your needs. With a Gruvlok union at every joint, you have the freedom to make on-site tweaks without altering the overall design of your system.

Maintenance is as simple and flexible as installation. Every component in a Gruvlok system is easily replaceable and easily accessed, so that you can make repairs without resorting to a total shut-down.

New 3-D CAD Library



Anvil's Gruvlok product line is now available in 3-D CAD Models, as well as the standard 2-D drawings, at www.anvilintl.com. Anvil

Building Green with Anvil

Anvil manufactures an extensive line of products composed of 90% recycled materials, visit www.anvilintl.com for current certificates related to recycled material. Anvil is a member of the United States Green Building Council.

Products include:

® Couplings, Fittings, and Flanges

® Cast and Malleable Threaded Fittings

® Tee-Lets and Drop Nipples

8400

Rigid Coupling

Gr8LOK by **GRUVLOK**

The 8400 Coupling is our standard coupling and is designed for rigid piping applications. The 8400 is specially designed to provide a rigid, locked-in pipe connection to meet the specific demands of rigid design steel pipe.

For the latest UL/ULC listed, LPCB, VdS and FM Approved pressure ratings versus pipe schedule, contact your local Anvil Representative.



MATERIAL SPECIFICATIONS

HOUSING:

Ductile Iron conforming to ASTM A-536, Grade 65-45-12

ANSI BOLTS & HEAVY HEX NUTS:

Heat treated, oval-neck track head bolts conforming to SAE J429 Grade 5 with a minimum tensile strength of 120,000 psi and heavy hex nuts of carbon steel conforming to ASTM A-563 Grade A or B, or SAE J995 Grade 2. Bolts and nuts are provided zinc electroplated as standard.

METRIC BOLTS & HEAVY HEX NUTS:

Heat treated, zinc electroplated oval-neck track head bolts made of carbon steel with mechanical properties per ISO 898-1 Class 8.8. Hex nuts and bolts are zinc electroplated followed by a yellow chromate dip.

COATINGS:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized (optional)

For other coating requirements contact an Anvil Representative.

GASKETS

Properties as designated in accordance with ASTM D-2000

GRADE "E" EPDM (Green Stripe)

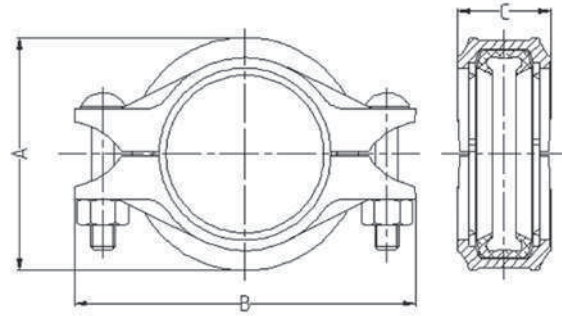
Working Temperature Range is -30°F to 230°F (-34°C to 110°C)
Recommended for water service, diluted acids, alkalis solutions, oil-free air and many chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS OR WITH HYDROCARBONS.

8400

Rigid Coupling

Gr8LOK by **GRUVLOK**



Nominal Size mm/in	Pipe O.D. mm/in	Working Pressure MPa/PSI	Dimensions			Bolt Size No.-Size mm
			A mm/in	B mm/in	C mm/in	
25 1	33.7 1.327	3.45 500	59 2.32	100 3.94	44 1.73	2 - M10 x 57
32 1 1/4	42.4 1.669	3.45 500	66 2.60	105 4.13	45 1.77	2 - M10 x 57
40 1 1/2	48.3 1.900	3.45 500	72 2.83	112 4.41	45 1.77	2 - M10 x 57
50 2	60.3 2.375	3.45 500	85 3.35	130 5.12	45 1.77	2 - M10 x 57
65 2 1/2	73.0 2.875	3.45 500	98 3.86	140 5.51	45 1.77	2 - M10 x 57
65 2 1/2	76.1 3.000	3.45 500	101 3.98	145 5.71	45 1.77	2 - M10 x 57
80 3	88.9 3.500	3.45 500	115 4.53	168 6.61	46 1.81	2 - M12 x 70
100 4	108.0 4.250	3.45 500	140 5.51	197 7.76	52 2.05	2 - M12 x 70
100 4	114.3 4.500	3.45 500	146 5.75	200 7.87	52 2.05	2 - M12 x 70
125 5	133.0 5.250	3.10 450	165 6.50	226 8.90	52 2.05	2 - M16 x 85
125 5	139.7 5.500	3.10 450	170 6.69	235 9.25	52 2.05	2 - M16 x 85
125 5	141.3 5.563	3.10 450	172 6.77	233 9.17	52 2.05	2 - M16 x 85
150 6	159.0 6.250	3.10 450	190 7.48	254 10.00	52 2.05	2 - M16 x 85
150 6	165.1 6.500	3.10 450	198 7.80	263.5 10.37	52 2.05	2 - M16 x 85
150 6	168.3 6.625	3.10 450	202 7.95	265 10.43	52 2.05	2 - M16 x 85
200 8	219.1 8.625	3.10 450	260 10.24	342 13.46	62 2.44	2 - M20 x 115
250 10	273.0 10.750	2.07 300	327 12.87	420 16.54	63 2.48	2 - M22 x 125
300 12	323.9 12.750	2.07 300	378 14.88	466.5 18.37	63 2.48	2 - M22 x 140

1. Working pressure and/or end load are total allowable, based on standard weight steel pipe, roll or cut grooved.
2. One time field test pressure may be increased to 1.5 times the figures listed above.

Working Pressure Ratings are for reference only and based on Sch. 40 pipe. For the latest UL/ULC, FM, VdS and LPCB pressure ratings versus pipe schedule, please contact your local Anvil Representative.

Installation Instructions for Rigid Couplings



1. Check & Lubricate Gasket

Check gasket to be sure it is compatible for the intended service. Apply a thin coating of Gruvlok Lubricant to the outside and sealing lips of the gasket. Be careful that foreign particles do not adhere to lubricated surfaces.



2. Gasket Installation

Slip the gasket over the pipe end, making sure the gasket lip does not overhang the pipe end.



3. Alignment

After aligning the two pipe ends together, pull the gasket into position, centering it between the grooves on each pipe. Gasket should not extend into groove on either pipe.



4. Housings

With one nut unthreaded to the end of the bolt, unthread the other nut completely and swing the coupling housing halves over the gasket, making sure the housing keys engage the grooves. Insert the bolt and turn the nuts finger tight.



5. Tighten Nuts

Tighten the nuts alternately and equally to the specified bolt torque. The housing bolt pads must make metal-to-metal contact.

Caution: Uneven tightening may cause gasket to pinch.



6. Assembly is Complete

Visually inspect the pipe joint to assure the coupling keys are fully engaged in the pipe grooves and the bolt pads are in firm even metal-to-metal contact on both sides of the coupling.

SPECIFIED BOLT TORQUE

ANSI Bolts

Bolt Size Inch	Specified Bolt Torque	
	ft-lb	N-M
3/8 or M10	30-45	40-60
1/2 or M12	80-100	110-135
5/8 or M16	100-130	135-175
3/4 or M20	130-180	175-245
7/8 or M22	180-220	245-300

CAUTION

Proper torquing of bolts is required to obtain specified performance.

torque output can vary significantly due to many variables including air pressure supply, battery strength and operational variations.

and/or casting which could result in pipe joint separation.

retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

8400S

Light-Duty Rigid Coupling

Gr8LOK by **GRUVLOK**

The 8400S Coupling is specially designed to provide a rigid, locked-in pipe connection to meet the specific demands of rigid design steel pipe systems. Fast and easy swing-over installation of the rugged lightweight housing produces a secure, rigid pipe joint.

For the latest UL/ULC listed, LPCB, VdS and FM Approved pressure ratings versus pipe schedule, contact your local Anvil Representative.



MATERIAL SPECIFICATIONS

HOUSING:

Ductile Iron conforming to ASTM A-536, Grade 65-45-12

ANSI BOLTS & HEAVY HEX NUTS:

Heat treated, oval-neck track head bolts conforming to SAE J429 Grade 5 with a minimum tensile strength of 120,000 psi and heavy hex nuts of carbon steel conforming to ASTM A-563 Grade A or B, or SAE J995 Grade 2. Bolts and nuts are provided zinc electroplated as standard.

METRIC BOLTS & HEAVY HEX NUTS:

Heat treated, zinc electroplated oval-neck track head bolts made of carbon steel with mechanical properties per ISO 898-1 Class 8.8. Hex nuts and bolts are zinc electroplated followed by a yellow chromate dip.

COATINGS:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized (optional)

For other coating requirements contact an Anvil Representative.

GASKETS

Properties as designated in accordance with ASTM D-2000

GRADE "E" EPDM (Green Stripe)

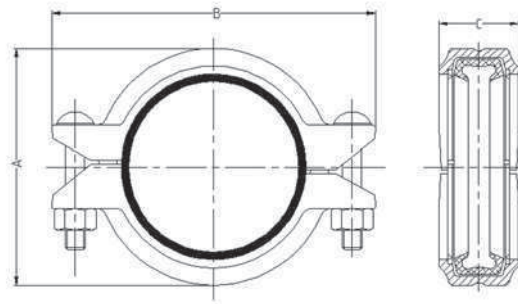
Working Temperature Range is -30°F to 230°F (-34°C to 110°C)
Recommended for water service, diluted acids, alkalis solutions, oil-free air and many chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS OR WITH HYDROCARBONS.

8400S

Light-Duty Rigid Coupling

Gr8LOK by **GRUVLOK**



Nominal Size mm/in	Pipe O.D. mm/in	Working Pressure MPa/PSI	Dimensions			Bolt Size No.-Size mm
			A mm/in	B mm/in	C mm/in	
65 2 1/2	76.1 3.000	2.07 300	100 3.94	140 5.51	45 1.77	2 - M10 x 57
80 3	88.9 3.500	2.07 300	114 4.49	160 6.30	45 1.77	2 - M10 x 57
100 4	108.0 4.250	2.07 300	135 5.31	185 7.28	50 1.97	2 - M12 x 70
100 4	114.3 4.500	2.07 300	140 5.51	192 7.56	50 1.97	2 - M12 x 70
125 5	139.7 5.500	2.07 300	168 6.61	225 8.86	50 1.97	2 - M12 x 76
125 5	141.3 5.563	2.07 300	170 6.69	225 8.86	50 1.97	2 - M12 x 76
150 6	159.0 6.250	2.07 300	190 7.48	250 9.84	50 1.97	2 - M16 x 85
150 6	165.1 6.500	2.07 300	195 7.68	250 9.84	50 1.97	2 - M12 x 76
150 6	168.3 6.625	2.07 300	200 7.87	255 10.04	50 1.97	2 - M12 x 76
200 8	219.1 8.625	2.07 300	255 10.04	323 12.72	58 2.28	2 - M16 x 85
250 10	273.0 10.750	2.07 300	318 12.52	410 16.14	63 2.48	2 - M20 x 115

1. Working pressure and/or end load are total allowable, based on standard weight steel pipe, roll or cut grooved.
2. One time field test pressure may be increased to 1.5 times the figures listed above.

Working Pressure Ratings are for reference only and based on Sch. 40 pipe. For the latest UL/ULC, FM, VdS and LPCB pressure ratings versus pipe schedule, please contact your local Anvil Representative.

Installation Instructions for Rigid Couplings



1. Check & Lubricate Gasket

Check gasket to be sure it is compatible for the intended service. Apply a thin coating of Gruvlok Lubricant to the outside and sealing lips of the gasket. Be careful that foreign particles do not adhere to lubricated surfaces.



2. Gasket Installation

Slip the gasket over the pipe end, making sure the gasket lip does not overhang the pipe end.



3. Alignment

After aligning the two pipe ends together, pull the gasket into position, centering it between the grooves on each pipe. Gasket should not extend into groove on either pipe.



4. Housings

With one nut unthreaded to the end of the bolt, unthread the other nut completely and swing the coupling housing halves over the gasket, making sure the housing keys engage the grooves. Insert the bolt and turn the nuts finger tight.



5. Tighten Nuts

Tighten the nuts alternately and equally to the specified bolt torque. The housing bolt pads must make metal-to-metal contact.

Caution: Uneven tightening may cause gasket to pinch.



6. Assembly is Complete

Visually inspect the pipe joint to assure the coupling keys are fully engaged in the pipe grooves and the bolt pads are in firm even metal-to-metal contact on both sides of the coupling.

SPECIFIED BOLT TORQUE

ANSI Bolts

Bolt Size Inch	Specified Bolt Torque	
	ft-lb	N-M
3/8 or M10	30-45	40-60
1/2 or M12	80-100	110-135
5/8 or M16	100-130	135-175
3/4 or M20	130-180	175-245
7/8 or M22	180-220	245-300

CAUTION

Proper torquing of bolts is required to obtain specified performance.

torque output can vary significantly due to many variables including air pressure supply, battery strength and operational variations.

and/or casting which could result in pipe joint separation.

retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

8000

Flexible Coupling

Gr8LOK by **GRUVLOK**

The 8000 Coupling is a flexible light weight style which is ideal for fire protection services and other services where low pressure and ambient temperature conditions are expected.

For the latest UL/ULC listed, LPCB, VdS and FM Approved pressure ratings versus pipe schedule, contact your local Anvil Representative.



MATERIAL SPECIFICATIONS

HOUSING:

Ductile Iron conforming to ASTM A-536, Grade 65-45-12

ANSI BOLTS & HEAVY HEX NUTS:

Heat treated, oval-neck track head bolts conforming to SAE J429 Grade 5 with a minimum tensile strength of 120,000 psi and heavy hex nuts of carbon steel conforming to ASTM A-563 Grade A or B, or SAE J995 Grade 2. Bolts and nuts are provided zinc electroplated as standard.

METRIC BOLTS & HEAVY HEX NUTS:

Heat treated, zinc electroplated oval-neck track head bolts made of carbon steel with mechanical properties per ISO 898-1 Class 8.8. Hex nuts and bolts are zinc electroplated followed by a yellow chromate dip.

COATINGS:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized (optional)

For other coating requirements contact an Anvil Representative.

GASKETS

Properties as designated in accordance with ASTM D-2000

GRADE "E" EPDM (Green Stripe)

Working Temperature Range is -30°F to 230°F (-34°C to 110°C)
Recommended for water service, diluted acids, alkalis solutions, oil-free air and many chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS OR WITH HYDROCARBONS.

GASKET TYPE:

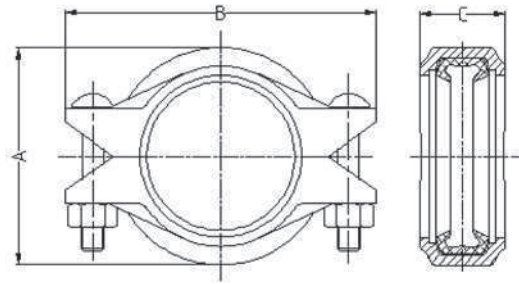
Standard C Style

EPDM F

8000

Flexible Coupling

Gr8LOK by **GRUVLOK**



Nominal Size mm/in	Pipe O.D. mm/in	Working Pressure MPa/PSI	Dimensions			Bolt Size No.-Size mm	Approx. Wt. Ea. Kg/lbs
			A mm/in	B mm/in	C mm/in		
25 1	33.7 1.327	3.45 500	55 2.17	92 3.62	42 1.65	2 - M10 x 57	0.40 0.88
32 1 1/4	42.4 1.669	3.45 500	65 2.56	104 4.14	44 1.74	2 - M10 x 57	0.45 1.00
40 1 1/2	48.3 1.900	3.45 500	70 2.75	110 4.33	44 1.74	2 - M10 x 57	0.56 1.24
50 2	60.3 2.375	3.45 500	83 3.27	124 4.88	44 1.74	2 - M10 x 57	0.60 1.33
65 2 1/2	73.0 2.875	3.45 500	96 3.78	143 5.63	45 1.78	2 - M10 x 57	0.65 1.44
65 2 1/2	76.1 3.000	3.45 500	100 3.94	145 5.71	45 1.78	2 - M10 x 57	0.84 1.85
80 3	88.9 3.500	3.45 500	115 4.53	160 6.30	45 1.78	2 - M12 x 70	0.86 1.89
100 4	108.0 4.250	3.45 500	138 5.43	190 7.48	50 1.97	2 - M12 x 70	1.21 2.66
100 4	114.3 4.500	3.45 500	145 5.71	198 7.80	50 1.97	2 - M12 x 70	1.69 3.73
125 5	133 5.250	3.10 450	162 6.38	225 8.86	51 2.01	2 - M16 x 85	1.75 3.87
125 5	139.7 5.500	3.10 450	169 6.65	230 9.06	52 2.05	2 - M16 x 85	2.37 5.22
125 5	141.3 5.563	3.10 450	170 6.69	232 9.13	51 2.01	2 - M16 x 85	2.52 5.56
150 6	159.0 6.250	3.10 450	190 7.48	254 10.00	52 2.05	2 - M16 x 85	2.27 5.01
150 6	165.1 6.500	3.10 450	196 7.72	260 10.24	52 2.05	2 - M16 x 85	2.64 5.82
150 6	168.3 6.625	3.10 450	200 7.87	265 10.43	52 2.05	2 - M16 x 85	2.65 5.85
200 8	219.1 8.625	3.10 450	262 10.31	340 13.39	60 2.37	2 - M20 x 115	3.09 6.81
250 10	273.0 10.750	2.07 300	327 12.87	420 16.54	63.5 2.50	2 - M22 x 140	5.44 11.98
300 12	323.9 12.750	2.07 300	378 14.88	462.5 18.21	65 2.56	2 - M22 x 140	10.79 23.78

1. Working pressure and/or end load are total allowable, based on standard weight steel pipe, roll or cut grooved.
2. One time field test pressure may be increased to 1.5 times the figures listed above.

Working Pressure Ratings are for reference only and based on Sch. 40 pipe. For the latest UL/ULC, FM, VdS and LPCB pressure ratings versus pipe schedule, please contact your local Anvil Representative.

Installation Instructions for Flexible Couplings



1. Check & Lubricate Gasket

Check gasket to be sure it is compatible for the intended service. Apply a thin coating of Gruvlok lubricant to the exterior surface and sealing lips of the gasket. Be careful that foreign particles do not adhere to lubricated surfaces.



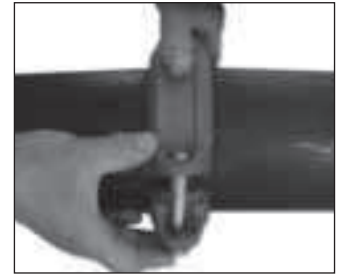
2. Gasket Installation

Slip the gasket over the pipe end, making sure the gasket lip does not overhang the pipe end.



3. Alignment

After aligning the two pipe ends together, pull the gasket into position, centering it between the grooves on each pipe. Gasket should not extend into groove on either pipe.



4. Housings

With one nut unthreaded to the end of the bolt, unthread the other nut completely and swing the coupling housing halves over the gasket, making sure the housing keys engage the grooves. Insert the bolt and turn the nuts finger tight.



5. Tighten Nuts

Tighten the nuts alternately and equally to the specified bolt torque. The housing bolt pads must make metal-to-metal contact.

Caution: Uneven tightening may cause gasket to pinch.



6. Assembly is Complete

Visually inspect the pipe joint to assure the coupling keys are fully engaged in the pipe grooves and the bolt pads are in firm even metal-to-metal contact on both sides of the coupling.

SPECIFIED BOLT TORQUE

ANSI Bolts

Bolt Size Inch	Specified Bolt Torque	
	ft-lb	N-M
3/8 or M10	30-45	40-60
1/2 or M12	80-100	110-135
5/8 or M16	100-130	135-175
3/4 or M20	130-180	175-245
7/8 or M22	180-220	245-300

CAUTION

Proper torquing of bolts is required to obtain specified performance.

torque output can vary significantly due to many variables including air pressure supply, battery strength and operational variations.

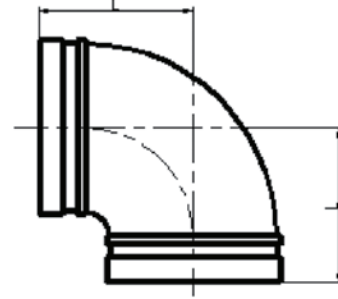
and/or casting which could result in pipe joint separation.

retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

8450

Short Style 90° Elbow

Gr8LOK by **GRUVLOK**



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

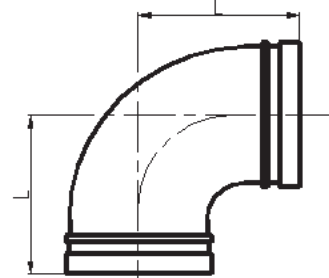
Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)
For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimensions L mm/in
50 2	60.3 2.375	2.07 300	70.0 2.76
65 2½	73.0 2.875	2.07 300	76.0 2.99
65 2½	76.1 3.000	2.07 300	76.0 2.99
80 3	88.9 3.500	2.07 300	85.5 3.37
100 4	108.0 4.250	2.07 300	101.0 3.98
100 4	114.3 4.500	2.07 300	101.0 3.98
125 5	139.7 5.500	2.07 300	124.0 4.88
150 6	159.0 6.250	2.07 300	140.0 5.51
150 6	165.1 6.500	2.07 300	140.0 5.51
150 6	168.3 6.625	2.07 300	140.0 5.51
200 8	216.3 8.516	2.07 300	175.0 6.89
200 8	219.1 8.625	2.07 300	165.0 6.50

8050

90° Elbow



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)

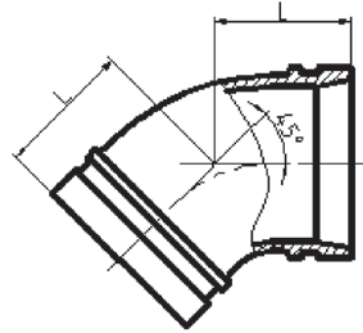
For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Center to End mm/in	Approx. Weight Ea. Kg/lbs
25 1	33.7 1.327	3.45 500	57 2.24	0.24 0.52
32 1¼	42.4 1.669	3.45 500	70 2.75	0.41 0.91
40 1½	48.3 1.900	3.45 500	70 2.75	0.48 1.06
50 2	60.3 2.375	3.45 500	82.5 3.25	0.65 1.44
65 2½	73.0 2.875	3.45 500	95 3.74	1.10 2.42
65 2½	76.1 3.000	3.45 500	95 3.74	1.15 2.54
80 3	88.9 3.500	3.45 500	108 4.25	1.61 3.54
100 4	114.3 4.500	3.45 500	127 5.00	2.66 5.87
125 5	139.7 5.500	3.45 500	140 5.50	4.09 9.02
125 5	141.3 5.563	3.45 500	140 5.50	4.23 9.33
150 6	165.1 6.500	3.45 500	165 6.50	5.99 13.21
150 6	168.3 6.625	3.45 500	165 6.50	6.07 13.38
200 8	219.1 8.625	3.45 500	197 7.75	11.12 24.51
250 10	273.0 10.750	3.45 500	229 9.00	24.58 54.19
300 12	323.9 12.750	3.45 500	254 10.00	35.52 78.31

8051

45° Elbow

Gr8LOK by **GRUVLOK**



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

Rust inhibiting paint – Color: Red (standard)

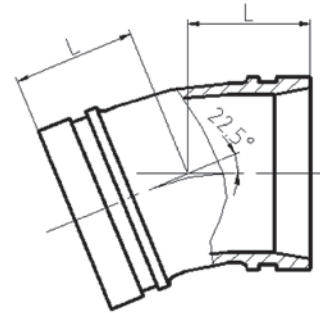
Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)

For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimensions L mm/in
25	33.7	3.45	44.5
1	1.327	500	1.75
32	42.4	3.45	44.5
1 ¹ / ₄	1.669	500	1.75
40	48.3	3.45	44.5
1 ¹ / ₂	1.900	500	1.75
50	60.3	3.45	51.0
2	2.375	500	2.00
65	73.0	3.45	57.0
2 ¹ / ₂	2.875	500	2.24
65	76.1	3.45	57.0
2 ¹ / ₂	3.000	500	2.24
80	88.9	3.45	63.5
3	3.500	500	2.50
100	108.0	3.45	76.0
4	4.250	500	3.00
100	114.3	3.45	76.0
4	4.500	500	3.00
125	133.0	3.45	82.5
5	5.250	500	3.25
125	139.7	3.45	82.5
5	5.500	500	3.25
125	141.3	3.45	82.5
5	5.563	500	3.25
150	159.0	3.45	89.0
6	6.250	500	3.50
150	165.1	3.45	89.0
6	6.500	500	3.50
150	168.3	3.45	89.0
6	6.625	500	3.50
200	216.3	3.45	108.0
8	8.516	500	4.25
200	219.1	3.45	108.0
8	8.625	500	4.25
250	267.4	3.45	120.5
10	10.528	500	4.75
250	273.0	3.45	120.5
10	10.750	500	4.75
300	318.5	3.45	133.0
12	12.750	500	5.25
300	323.9	3.45	133.0
12	12.750	500	5.25
350	377.0	2.07	122.0
14	14.840	300	4.80

8052

22½° Elbow



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

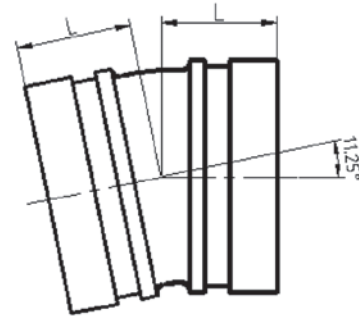
Rust inhibiting paint – Color: Red (standard)
 Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)
 For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimensions L mm/in
32 1¼	42.4 1.669	3.45 500	45 1.77
40 1½	48.3 1.900	3.45 500	45 1.77
50 2	60.3 2.375	3.45 500	48 1.89
65 2½	73.0 2.875	3.45 500	51 2.00
65 2½	76.1 3.000	3.45 500	51 2.00
80 3	88.9 3.500	3.45 500	57 2.24
100 4	108.0 4.250	3.45 500	73 2.87
100 4	114.3 4.500	3.45 500	73 2.87
125 5	139.7 5.500	3.45 500	73 2.87
150 6	159.0 6.250	3.45 500	79 3.11
150 6	165.1 6.500	3.45 500	79 3.11
150 6	168.3 6.625	3.45 500	79 3.11
200 8	219.1 8.625	3.45 500	98 3.86

8053

11¹/₄° Elbow

Gr8LOK by **GRUVLOK**



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)

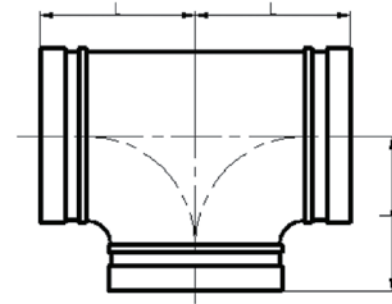
For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimensions L mm/in
32 1 ¹ / ₄	42.4 1.669	3.45 500	35 1.38
40 1 ¹ / ₂	48.3 1.900	3.45 500	35 1.38
50 2	60.3 2.375	3.45 500	35 1.38
65 2 ¹ / ₂	76.1 3.000	3.45 500	38 1.50
80 3	88.9 3.500	3.45 500	38 1.50
100 4	108.0 4.250	3.45 500	44 1.73
100 4	114.3 4.500	3.45 500	44 1.73
125 5	139.7 5.500	3.45 500	51 2.00
150 6	159.0 6.250	3.45 500	51 2.00
150 6	165.1 6.500	3.45 500	51 2.00
150 6	168.3 6.625	3.45 500	51 2.00
200 8	219.1 8.625	3.45 500	51 2.00

8460

Short Style Tee

Gr8LOK by **GRUVLOK**



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

Rust inhibiting paint – Color: Red (standard)

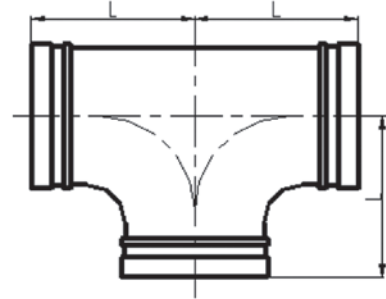
Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)
For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimensions L mm/in
50 2	60.3 2.375	2.07 300	70.0 2.75
65 2½	73.0 2.875	2.07 300	76.0 3.00
65 2½	76.1 3.000	2.07 300	76.0 3.00
80 3	88.9 3.500	2.07 300	85.5 3.37
100 4	108.0 4.250	2.07 300	101.0 3.98
100 4	114.3 4.500	2.07 300	101.0 3.98
125 5	139.7 5.500	2.07 300	124.0 4.88
150 6	159.0 6.250	2.07 300	140.0 5.50
150 6	165.1 6.500	2.07 300	140.0 5.50
150 6	168.3 6.625	2.07 300	140.0 5.50
200 8	216.3 8.516	2.07 300	175.0 6.89
200 8	219.1 8.625	2.07 300	175.0 6.89

8060

Tee

Gr8LOK by GRUVLOK®



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

Rust inhibiting paint – Color: Red (standard)

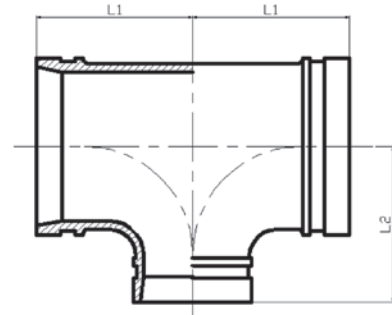
Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)
For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimensions L mm/in
25	33.7	3.45	57.0
1	1.327	500	2.24
32	42.4	3.45	70.0
1 ¹ / ₄	1.669	500	2.75
40	48.3	3.45	70.0
1 ¹ / ₂	1.900	500	2.75
50	60.3	3.45	82.5
2	2.375	500	3.25
65	73.0	3.45	95.0
2 ¹ / ₂	2.875	500	3.74
65	76.1	3.45	95.0
2 ¹ / ₂	3.000	500	3.74
80	88.9	3.45	108.0
3	3.500	500	4.25
100	114.3	3.45	127.0
4	4.500	500	5.00
125	133.0	3.45	122.0
5	5.250	500	4.80
125	139.7	3.45	140.0
5	5.500	500	5.50
125	141.3	3.45	140.0
5	5.563	500	5.50
150	165.1	3.45	165.0
6	6.500	500	6.50
150	168.3	3.45	165.0
6	6.625	500	6.50
200	219.1	3.45	197.0
8	8.625	500	7.75
250	267.4	3.45	229.0
10	10.528	500	9.00
250	273.0	3.45	229.0
10	10.750	500	9.00
300	318.5	3.45	254.0
12	12.539	500	10.00
300	323.9	3.45	254.0
12	12.750	500	10.00
350	377.0	2.07	279.0
14	14.840	300	10.98
400	426.0	2.07	305.0
16	16.770	300	12.00

8061

Reducing Tee

Gr8LOK by GRUVLOK®



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)

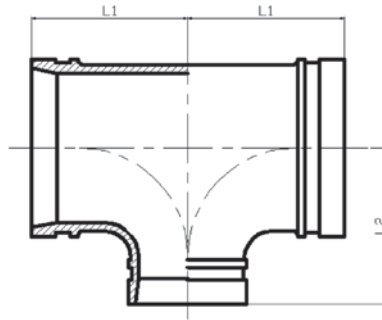
For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimensions	
			L1 mm/in	L2 mm/in
50 x 25 2 x 1	60.3 x 33.7 2.375 x 1.327	3.45 500	70.0 2.75	70.0 2.75
50 x 40 2 x 1½	60.3 x 48.3 2.375 x 1.900	3.45 500	70.0 2.75	70.0 2.75
65 x 40 2½ x 1½	73.0 x 48.3 2.875 x 1.900	3.45 500	76.0 3.00	76.0 3.00
65 x 50 2½ x 2	73.0 x 60.3 2.875 x 2.375	3.45 500	69.0 2.71	75.5 2.97
65 x 32 2½ x 1¼	76.1 x 42.4 3.000 x 1.669	3.45 500	76.0 3.00	76.0 3.00
65 x 40 2½ x 1½	76.1 x 48.3 3.000 x 1.900	3.45 500	76.0 3.00	76.0 3.00
65 x 50 2½ x 2	76.1 x 60.3 3.000 x 2.375	3.45 500	69.0 2.71	75.5 2.97
80 x 25 3 x 1	88.9 x 33.7 3.500 x 1.327	3.45 500	108.0 4.25	108.0 4.25
80 x 32 3 x 1¼	88.9 x 42.4 3.500 x 1.669	3.45 500	85.5 3.37	85.5 3.37
80 x 40 3 x 1½	88.9 x 48.3 3.500 x 1.900	3.45 500	85.5 3.37	85.5 3.37
80 x 50 3 x 2	88.9 x 60.3 3.500 x 2.375	3.45 500	85.5 3.37	85.5 3.37
80 x 65 3 x 2½	88.9 x 73.0 3.500 x 2.875	3.45 500	85.5 3.37	85.5 3.37
80 x 65 3 x 2½	88.9 x 76.1 3.500 x 3.000	3.45 500	85.5 3.37	85.5 3.37
100 x 50 4 x 2	108.0 x 60.3 4.250 x 2.375	3.45 500	101.0 3.98	101.0 3.98
100 x 80 4 x 3	108.0 x 88.9 4.250 x 3.500	3.45 500	101.0 3.98	101.0 3.98
100 x 25 4 x 1	114.3 x 33.7 4.500 x 1.327	3.45 500	101.0 3.98	101.0 3.98
100 x 40 4 x 1½	114.3 x 48.3 4.500 x 1.900	3.45 500	101.0 3.98	101.0 3.98
100 x 50 4 x 2	114.3 x 60.3 4.500 x 2.375	3.45 500	101.0 3.98	101.0 3.98
100 x 65 4 x 2½	114.3 x 73.0 4.500 x 2.875	3.45 500	101.0 3.98	101.0 3.98
100 x 65 4 x 2½	114.3 x 76.1 4.500 x 3.000	3.45 500	101.0 3.98	101.0 3.98
100 x 80 4 x 3	114.3 x 88.9 4.500 x 3.500	3.45 500	101.0 3.98	101.0 3.98
125 x 50 5 x 2	133.0 x 60.3 5.250 x 2.375	3.45 500	124.0 4.88	124.0 4.88

8061

Reducing Tee

Gr8LOK by **GRUVLOK**



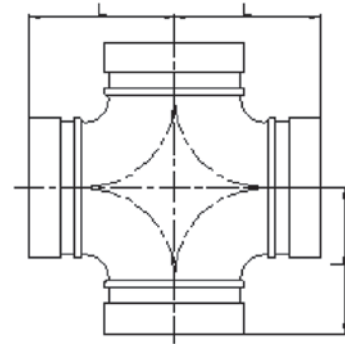
Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimensions	
			L1 mm/in	L2 mm/in
125 x 65 5 x 2½	133.0 x 76.1 5.250 x 3.000	3.45 500	124.0 4.88	124.0 4.88
125 x 100 5 x 4	133.0 x 108.0 5.250 x 4.250	3.45 500	124.0 4.88	124.0 4.88
125 x 100 5 x 4	133.0 x 114.3 5.250 x 4.500	3.45 500	124.0 4.88	124.0 4.88
125 x 40 5 x 1½	139.7 x 48.3 5.500 x 1.900	3.45 500	140.0 5.50	140.0 5.50
125 x 50 5 x 2	139.7 x 60.3 5.500 x 2.375	3.45 500	124.0 4.88	124.0 4.88
125 x 65 5 x 2½	139.7 x 76.1 5.500 x 3.000	3.45 500	124.0 4.88	124.0 4.88
125 x 80 5 x 3	139.7 x 88.9 5.500 x 3.500	3.45 500	124.0 4.88	124.0 4.88
125 x 100 5 x 4	139.7 x 114.3 5.500 x 4.500	3.45 500	124.0 4.88	124.0 4.88
125 x 50 5 x 2	141.3 x 60.3 5.563 x 2.375	3.45 500	124.0 4.88	124.0 4.88
125 x 80 5 x 3	141.3 x 88.9 5.563 x 3.500	3.45 500	124.0 4.88	124.0 4.88
125 x 100 5 x 4	141.3 x 114.3 5.563 x 4.500	3.45 500	124.0 4.88	124.0 4.88
150 x 50 6 x 2	159.0 x 60.3 6.250 x 2.375	3.45 500	140.0 5.50	140.0 5.50
150 x 65 6 x 2½	159.0 x 76.1 6.250 x 3.000	3.45 500	140.0 5.50	140.0 5.50
150 x 80 6 x 3	159.0 x 88.9 6.250 x 3.500	3.45 500	140.0 5.50	140.0 5.50
150 x 100 6 x 4	159.0 x 108.0 6.250 x 4.250	3.45 500	140.0 5.50	140.0 5.50
150 x 100 6 x 4	159.0 x 114.3 6.250 x 4.500	3.45 500	140.0 5.50	140.0 5.50
150 x 125 6 x 5	159.0 x 133.0 6.250 x 5.250	3.45 500	140.0 5.50	140.0 5.50
150 x 50 6 x 2	165.1 x 60.3 6.500 x 2.375	3.45 500	140.0 5.50	140.0 5.50
150 x 65 6 x 2½	165.1 x 76.1 6.500 x 3.000	3.45 500	140.0 5.50	140.0 5.50
150 x 80 6 x 3	165.1 x 88.9 6.500 x 3.500	3.45 500	140.0 5.50	140.0 5.50
150 x 100 6 x 4	165.1 x 114.3 6.500 x 4.500	3.45 500	140.0 5.50	140.0 5.50
150 x 125 6 x 5	165.1 x 139.7 6.500 x 5.500	3.45 500	140.0 5.50	140.0 5.50
150 x 50 6 x 2	168.3 x 60.3 6.625 x 2.375	3.45 500	140.0 5.50	140.0 5.50

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimensions	
			L1 mm/in	L2 mm/in
150 x 65 6 x 2½	168.3 x 73.0 6.625 x 2.875	3.45 500	140.0 5.50	140.0 5.50
150 x 65 6 x 2½	168.3 x 76.1 6.625 x 3.000	3.45 500	140.0 5.50	140.0 5.50
150 x 80 6 x 3	168.3 x 88.9 6.625 x 3.500	3.45 500	140.0 5.50	140.0 5.50
150 x 100 6 x 4	168.3 x 114.3 6.625 x 4.500	3.45 500	140.0 5.50	140.0 5.50
150 x 125 6 x 5	168.3 x 139.7 6.625 x 5.500	3.45 500	140.0 5.50	140.0 5.50
150 x 125 6 x 5	168.3 x 141.3 6.625 x 5.563	3.45 500	140.0 5.50	140.0 5.50
200 x 150 8 x 6	216.3 x 165.1 8.516 x 6.500	3.45 500	175.0 6.89	175.0 6.89
200 x 50 8 x 2	219.1 x 60.3 8.625 x 2.375	3.45 500	175.0 6.89	175.0 6.89
200 x 65 8 x 2½	219.1 x 76.1 8.625 x 3.000	3.45 500	175.0 6.89	175.0 6.89
200 x 80 8 x 3	219.1 x 88.9 8.625 x 3.500	3.45 500	175.0 6.89	175.0 6.89
200 x 100 8 x 4	219.1 x 108.0 8.625 x 4.250	3.45 500	175.0 6.89	175.0 6.89
200 x 100 8 x 4	219.1 x 114.3 8.625 x 4.500	3.45 500	175.0 6.89	175.0 6.89
200 x 125 8 x 5	219.1 x 133.0 8.625 x 5.250	3.45 500	175.0 6.89	175.0 6.89
200 x 125 8 x 5	219.1 x 139.7 8.625 x 5.500	3.45 500	175.0 6.89	175.0 6.89
200 x 150 8 x 6	219.1 x 159.0 8.625 x 6.250	3.45 500	175.0 6.89	175.0 6.89
200 x 150 8 x 6	219.1 x 165.1 8.625 x 6.500	3.45 500	175.0 6.89	175.0 6.89
200 x 150 8 x 6	219.1 x 168.3 8.625 x 6.625	3.45 500	175.0 6.89	175.0 6.89
250 x 150 10 x 6	273.0 x 165.1 10.750 x 6.500	3.45 500	229.0 9.00	229.0 9.00
250 x 150 10 x 6	273.0 x 168.3 10.750 x 6.625	3.45 500	229.0 9.00	229.0 9.00
250 x 200 10 x 8	273.0 x 219.1 10.750 x 8.625	3.45 500	229.0 9.00	229.0 9.00
300 x 150 12 x 6	323.9 x 165.1 12.750 x 6.500	3.45 500	254.0 10.00	254.0 10.00
300 x 200 12 x 8	323.9 x 219.1 12.750 x 8.625	3.45 500	254.0 10.00	254.0 10.00
300 x 250 12 x 10	323.9 x 273.0 12.750 x 10.750	3.45 500	254.0 10.00	254.0 10.00

8068

Cross

Gr8LOK by **GRUVLOK**



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

Rust inhibiting paint – Color: Red (standard)

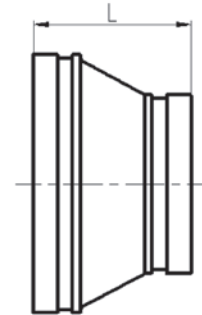
Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)
For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimensions L mm/in
32 1 ¹ / ₄	42.4 1.669	3.45 500	70.0 2.75
40 1 ¹ / ₂	48.3 1.900	3.45 500	70.0 2.75
50 2	60.3 2.375	3.45 500	70.0 2.75
65 2 ¹ / ₂	73.0 2.875	3.45 500	76.0 3.00
65 2 ¹ / ₂	76.1 3.000	3.45 500	76.0 3.00
80 3	88.9 3.500	3.45 500	85.5 3.37
100 4	108.0 4.250	3.45 500	101.0 3.98
100 4	114.3 4.500	3.45 500	101.0 3.98
125 5	139.7 5.500	3.45 500	124.0 4.88
125 5	141.3 5.563	3.45 500	124.0 4.88
150 6	159.0 6.250	3.45 500	140.0 5.50
150 6	165.1 6.500	3.45 500	140.0 5.50
150 6	168.3 6.625	3.45 500	140.0 5.50
200 8	219.1 8.625	3.45 500	175.0 6.89
250 10	273.0 10.750	3.45 500	229.0 9.00
300 12	323.9 12.750	3.45 500	254.0 10.00

8072

Grooved Concentric Reducer

Gr8LOK by GRUVLOK®



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)

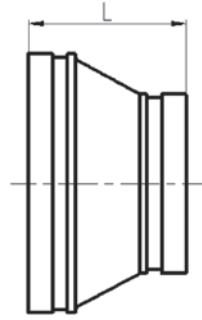
For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimension
			L mm/in
32 x 25 1 ¹ / ₄ x 1	42.4 x 33.7 1.669 x 1.327	3.45 500	64 2.50
40 x 25 1 ¹ / ₂ x 1	48.3 x 33.7 1.900 x 1.327	3.45 500	64 2.50
40 x 32 1 ¹ / ₂ x 1 ¹ / ₄	48.3 x 42.4 1.900 x 1.669	3.45 500	64 2.50
50 x 25 2 x 1	60.3 x 33.7 2.375 x 1.327	3.45 500	64 2.50
50 x 32 2 x 1 ¹ / ₄	60.3 x 42.4 2.375 x 1.669	3.45 500	64 2.50
50 x 40 2 x 1 ¹ / ₂	60.3 x 48.3 2.375 x 1.900	3.45 500	64 2.50
65 x 32 2 ¹ / ₂ x 1 ¹ / ₄	73.0 x 42.4 2.875 x 1.669	3.45 500	64 2.50
65 x 40 2 ¹ / ₂ x 1 ¹ / ₂	73.0 x 48.3 2.875 x 1.900	3.45 500	64 2.50
65 x 50 2 ¹ / ₂ x 2	73.0 x 60.3 2.875 x 2.375	3.45 500	64 2.50
65 x 25 2 ¹ / ₂ x 1	76.1 x 33.7 3.000 x 1.327	3.45 500	64 2.50
65 x 32 2 ¹ / ₂ x 1 ¹ / ₄	76.1 x 42.4 3.000 x 1.669	3.45 500	64 2.50
65 x 40 2 ¹ / ₂ x 1 ¹ / ₂	76.1 x 48.3 3.000 x 1.900	3.45 500	64 2.50
65 x 50 2 ¹ / ₂ x 2	76.1 x 60.3 3.000 x 2.375	3.45 500	64 2.50
80 x 25 3 x 1	88.9 x 33.7 3.500 x 1.327	3.45 500	64 2.50
80 x 40 3 x 1 ¹ / ₂	88.9 x 48.3 3.500 x 1.900	3.45 500	64 2.50
80 x 50 3 x 2	88.9 x 60.3 3.500 x 2.375	3.45 500	64 2.50
80 x 65 3 x 2 ¹ / ₂	88.9 x 73.0 3.500 x 2.875	3.45 500	64 2.50
80 x 65 3 x 2 ¹ / ₂	88.9 x 76.1 3.500 x 3.000	3.45 500	64 2.50
100 x 50 4 x 2	108.0 x 60.3 4.250 x 2.375	3.45 500	76 3.00
100 x 65 4 x 2 ¹ / ₂	108.0 x 73.0 4.250 x 2.875	3.45 500	76 3.00
100 x 80 4 x 3	108.0 x 88.9 4.250 x 3.500	3.45 500	76 3.00
100 x 32 4 x 1 ¹ / ₄	114.3 x 42.4 4.500 x 1.660	3.45 500	76 3.00

8072

Grooved Concentric Reducer

Gr8LOK by GRUVLOK®



Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimension	
			L1mm/in	
100 x 40 4 x 1½	114.3 x 48.3 4.500 x 1.900	3.45 500	76 3.00	
100 x 50 4 x 2	114.3 x 60.3 4.500 x 2.375	3.45 500	76 3.00	
100 x 65 4 x 2½	114.3 x 73.0 4.500 x 2.875	3.45 500	76 3.00	
100 x 65 4 x 2½	114.3 x 76.1 4.500 x 3.000	3.45 500	76 3.00	
100 x 80 4 x 3	114.3 x 88.9 4.500 x 3.500	3.45 500	76 3.00	
125 x 100 5 x 4	133.0 x 108.0 5.250 x 4.250	3.45 500	89 3.50	
125 x 100 5 x 4	133.0 x 114.3 5.250 x 4.500	3.45 500	89 3.50	
125 x 50 5 x 2	139.7 x 60.3 5.500 x 2.375	3.45 500	89 3.50	
125 x 65 5 x 2½	139.7 x 76.1 5.500 x 3.000	3.45 500	89 3.50	
125 x 80 5 x 3	139.7 x 88.9 5.500 x 3.500	3.45 500	89 3.50	
125 x 100 5 x 4	139.7 x 114.3 5.500 x 4.500	3.45 500	89 3.50	
125 x 65 5 x 2½	141.3 x 73.0 5.563 x 2.875	3.45 500	89 3.50	
125 x 80 5 x 3	141.3 x 88.9 5.563 x 3.500	3.45 500	89 3.50	
125 x 100 5 x 4	141.3 x 114.3 5.563 x 4.500	3.45 500	89 3.50	
150 x 50 6 x 2	159.0 x 60.3 6.250 x 2.375	3.45 500	102 4.00	
150 x 65 6 x 2½	159.0 x 76.1 6.250 x 3.000	3.45 500	102 4.00	
150 x 80 6 x 3	159.0 x 88.9 6.250 x 3.500	3.45 500	102 4.00	
150 x 100 6 x 4	159.0 x 108.0 6.250 x 4.250	3.45 500	102 4.00	
150 x 100 6 x 4	159.0 x 114.3 6.250 x 4.500	3.45 500	102 4.00	
150 x 125 6 x 5	159.0 x 133.0 6.250 x 5.250	3.45 500	102 4.00	
150 x 50 6 x 2	165.1 x 60.3 6.500 x 2.375	3.45 500	102 4.00	
150 x 65 6 x 2½	165.1 x 76.1 6.500 x 3.000	3.45 500	102 4.00	
150 x 80 6 x 3	165.1 x 88.9 6.500 x 3.500	3.45 500	102 4.00	
150 x 100 6 x 4	165.1 x 114.3 6.500 x 4.500	3.45 500	102 4.00	

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimension	
			L mm/in	
150 x 125 6 x 5	165.1 x 139.7 6.500 x 5.500	3.45 500	102 4.00	
150 x 50 6 x 2	168.3 x 60.3 6.625 x 2.375	3.45 500	102 4.00	
150 x 65 6 x 2½	168.3 x 73.0 6.625 x 2.875	3.45 500	102 4.00	
150 x 65 6 x 2½	168.3 x 76.1 6.625 x 3.000	3.45 500	102 4.00	
150 x 80 6 x 3	168.3 x 88.9 6.625 x 3.500	3.45 500	102 4.00	
150 x 100 6 x 4	168.3 x 114.3 6.625 x 4.500	3.45 500	102 4.00	
150 x 125 6 x 5	168.3 x 139.7 6.625 x 5.500	3.45 500	102 4.00	
150 x 125 6 x 5	168.3 x 141.3 6.625 x 5.563	3.45 500	102 4.00	
200 x 100 8 x 4	216.3 x 114.3 8.516 x 4.500	3.45 500	127 5.00	
200 x 150 8 x 6	216.3 x 165.1 8.516 x 6.500	3.45 500	127 5.00	
200 x 65 8 x 2½	219.1 x 73.0 8.625 x 2.875	3.45 500	127 5.00	
200 x 80 8 x 3	219.1 x 88.9 8.625 x 3.500	3.45 500	127 5.00	
200 x 100 8 x 4	219.1 x 114.3 8.625 x 4.500	3.45 500	127 5.00	
200 x 125 8 x 5	219.1 x 139.7 8.625 x 5.500	3.45 500	127 5.00	
200 x 125 8 x 5	219.1 x 141.3 8.625 x 5.563	3.45 500	127 5.00	
200 x 150 8 x 6	219.1 x 159.0 8.625 x 6.250	3.45 500	127 5.00	
200 x 150 8 x 6	219.1 x 165.1 8.625 x 6.500	3.45 500	127 5.00	
200 x 150 8 x 6	219.1 x 168.3 8.625 x 6.625	3.45 500	127 5.00	
250 x 150 10 x 6	273.0 x 159.0 10.750 x 6.250	3.45 500	127 5.00	
250 x 150 10 x 6	273.0 x 165.1 10.750 x 6.500	3.45 500	152 6.00	
250 x 150 10 x 6	273.0 x 168.3 10.750 x 6.625	3.45 500	152 6.00	
250 x 200 10 x 8	273.0 x 219.1 10.750 x 8.625	3.45 500	152 6.00	
300 x 200 12 x 8	323.9 x 219.1 12.750 x 8.625	3.45 500	178 7.00	
300 x 250 12 x 10	323.9 x 273.0 12.750 x 10.750	3.45 500	178 7.00	

8074

Grooved Cap



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

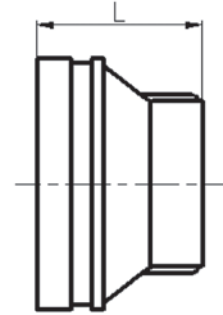
FINISH:

Rust inhibiting paint – Color: Red (standard)
 Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)
 For other coating requirements contact an Anvil Representative.

Nominal Size mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimension L mm/in
25 1	33.7 1.327	3.45 500	22.5 0.88
32 1¼	42.4 1.669	3.45 500	23.5 0.93
40 1½	48.3 1.900	3.45 500	23.5 0.93
50 2	60.3 2.375	3.45 500	23.5 0.93
65 2½	73.0 2.875	3.45 500	23.5 0.93
65 2½	76.1 3.000	3.45 500	24.0 0.94
80 3	88.9 3.500	3.45 500	24.0 0.94
100 4	108.0 4.250	3.45 500	27.0 1.06
100 4	114.3 4.500	3.45 500	27.0 1.06
125 5	133.0 5.250	3.45 500	25.5 1.00
125 5	139.7 5.500	3.45 500	25.5 1.00
125 5	141.3 5.563	3.45 500	25.5 1.00
150 6	159.0 6.250	2.07 300	25.5 1.00
150 6	165.1 6.500	2.07 300	26.0 1.02
150 6	168.3 6.625	2.07 300	24.5 0.97
200 8	219.1 8.625	2.07 300	30.0 1.18
250 10	273.0 10.750	2.07 300	32 1.26
300 12	323.9 12.750	2.07 300	32 1.26

8087

Grooved Concentric Reducer with Female Thread



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

Rust inhibiting paint – Color: Red (standard)

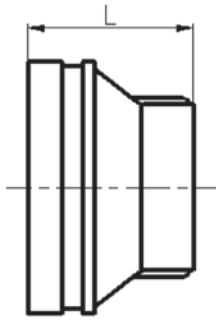
Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)

For other coating requirements contact an Anvil Representative.

Nominal Size Grooved x Thread mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimension
			L mm/in
50 x 15 2 x 1/2	60.3 x 21.3 2.375 x 0.825	3.45 500	64 2.50
50 x 20 2 x 3/4	60.3 x 26.9 2.375 x 1.059	3.45 500	64 2.50
50 x 25 2 x 1	60.3 x 33.7 2.375 x 1.327	3.45 500	64 2.50
50 x 32 2 x 1 1/4	60.3 x 42.4 2.375 x 1.669	3.45 500	64 2.50
50 x 40 2 x 1 1/2	60.3 x 48.3 2.375 x 1.900	3.45 500	64 2.50
65 x 25 2 1/2 x 1	73.0 x 33.7 2.875 x 1.327	3.45 500	64 2.50
65 x 32 2 1/2 x 1 1/4	73.0 x 42.4 2.875 x 1.669	3.45 500	64 2.50
65 x 40 2 1/2 x 1 1/2	73.0 x 48.3 2.875 x 1.900	3.45 500	64 2.50
65 x 50 2 1/2 x 2	73.0 x 60.3 2.875 x 2.375	3.45 500	64 2.50
65 x 15 2 1/2 x 1/2	76.1 x 21.3 3.000 x 0.825	3.45 500	64 2.50
65 x 20 2 1/2 x 3/4	76.1 x 26.9 3.000 x 1.059	3.45 500	64 2.50
65 x 25 2 1/2 x 1	76.1 x 33.7 3.000 x 1.327	3.45 500	64 2.50
65 x 32 2 1/2 x 1 1/4	76.1 x 42.4 3.000 x 1.669	3.45 500	64 2.50
65 x 40 2 1/2 x 1 1/2	76.1 x 48.3 3.000 x 1.900	3.45 500	64 2.50
65 x 50 2 1/2 x 2	76.1 x 60.3 3.000 x 2.375	3.45 500	64 2.50
80 x 15 3 x 1/2	88.9 x 21.3 3.500 x 0.825	3.45 500	64 2.50
80 x 20 3 x 3/4	88.9 x 26.9 3.500 x 1.059	3.45 500	64 2.50
80 x 25 3 x 1	88.9 x 33.7 3.500 x 1.327	3.45 500	64 2.50
80 x 32 3 x 1 1/4	88.9 x 42.4 3.500 x 1.669	3.45 500	64 2.50
80 x 40 3 x 1 1/2	88.9 x 48.3 3.500 x 1.900	3.45 500	64 2.50
80 x 50 3 x 2	88.9 x 60.3 3.500 x 2.375	3.45 500	64 2.50
80 x 65 3 x 2 1/2	88.9 x 73.0 3.500 x 2.875	3.45 500	64 2.50
80 x 65 3 x 2 1/2	88.9 x 76.1 3.500 x 3.000	3.45 500	64 2.50
100 x 25 4 x 1	108.0 x 33.7 4.250 x 1.327	3.45 500	76 3.00

8087

Grooved Concentric Reducer with Female Thread

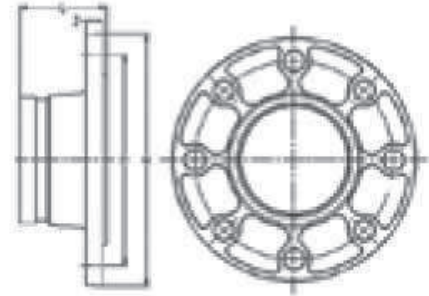


Nominal Size Grooved x Thread mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimension	
			L mm/in	
100 x 32 4 x 1/4	108.0 x 42.4 4.250 x 1.669	3.45 500	76 3.00	
100 x 40 4 x 1/2	108.0 x 48.3 4.250 x 1.900	3.45 500	76 3.00	
100 x 50 4 x 2	108.0 x 60.3 4.250 x 2.375	3.45 500	76 3.00	
100 x 65 4 x 2 1/2	108.0 x 76.1 4.250 x 3.000	3.45 500	76 3.00	
100 x 80 4 x 3	108.0 x 88.9 4.250 x 3.500	3.45 500	76 3.00	
100 x 15 4 x 1/2	114.3 x 21.3 4.500 x 0.825	3.45 500	76 3.00	
100 x 20 4 x 3/4	114.3 x 26.9 4.500 x 1.059	3.45 500	76 3.00	
100 x 25 4 x 1	114.3 x 33.7 4.500 x 1.327	3.45 500	76 3.00	
100 x 32 4 x 1/4	114.3 x 42.4 4.500 x 1.669	3.45 500	76 3.00	
100 x 40 4 x 1/2	114.3 x 48.3 4.500 x 1.900	3.45 500	76 3.00	
100 x 50 4 x 2	114.3 x 60.3 4.500 x 2.375	3.45 500	76 3.00	
100 x 65 4 x 2 1/2	114.3 x 73.0 4.500 x 2.875	3.45 500	76 3.00	
100 x 65 4 x 2 1/2	114.3 x 76.1 4.500 x 3.000	3.45 500	76 3.00	
100 x 80 4 x 3	114.3 x 88.9 4.500 x 3.500	3.45 500	76 3.00	
125 x 40 5 x 1/2	133.0 x 48.3 5.250 x 1.900	3.45 500	89 3.50	
125 x 50 5 x 2	133.0 x 60.3 5.250 x 2.375	3.45 500	89 3.50	
125 x 65 5 x 2 1/2	133.0 x 76.1 5.250 x 3.000	3.45 500	89 3.50	
125 x 80 5 x 3	133.0 x 88.9 5.250 x 3.500	3.45 500	89 3.50	
125 x 25 5 x 1	139.7 x 33.7 5.500 x 1.327	3.45 500	89 3.50	
125 x 32 5 x 1/4	139.7 x 42.4 5.500 x 1.669	3.45 500	89 3.50	
125 x 40 5 x 1/2	139.7 x 48.3 5.500 x 1.900	3.45 500	89 3.50	
125 x 50 5 x 2	139.7 x 60.3 5.500 x 2.375	3.45 500	89 3.50	
125 x 65 5 x 2 1/2	139.7 x 76.1 5.500 x 3.000	3.45 500	89 3.50	
125 x 80 5 x 3	139.7 x 88.9 5.500 x 3.500	3.45 500	89 3.50	
125 x 100 5 x 4	139.7 x 114.3 5.500 x 4.500	3.45 500	89 3.50	

Nominal Size Grooved x Thread mm/in	Pipe O.D. mm/in	Max. Working Pressure MPa/PSI	Dimension	
			L mm/in	
125 x 100 5 x 4	141.3 x 114.3 5.563 x 4.500	3.45 500	89 3.50	
150 x 20 6 x 3/4	159.0 x 26.9 6.250 x 1.059	3.45 500	102 4.00	
150 x 25 6 x 1	159.0 x 33.7 6.250 x 1.327	3.45 500	102 4.00	
150 x 32 6 x 1/4	159.0 x 42.4 6.250 x 1.669	3.45 500	102 4.00	
150 x 40 6 x 1/2	159.0 x 48.3 6.250 x 1.900	3.45 500	102 4.00	
150 x 50 6 x 2	159.0 x 60.3 6.250 x 2.375	3.45 500	102 4.00	
150 x 65 6 x 2 1/2	159.0 x 76.1 6.250 x 3.000	3.45 500	102 4.00	
150 x 80 6 x 3	159.0 x 88.9 6.250 x 3.500	3.45 500	102 4.00	
150 x 100 6 x 4	159.0 x 114.3 6.250 x 4.500	3.45 500	102 4.00	
150 x 15 6 x 1/2	165.1 x 21.3 6.500 x 0.825	3.45 500	102 4.00	
150 x 20 6 x 3/4	165.1 x 26.9 6.500 x 1.059	3.45 500	102 4.00	
150 x 25 6 x 1	165.1 x 33.7 6.500 x 1.327	3.45 500	102 4.00	
150 x 32 6 x 1/4	165.1 x 42.4 6.500 x 1.669	3.45 500	102 4.00	
150 x 40 6 x 1/2	165.1 x 48.3 6.500 x 1.900	3.45 500	102 4.00	
150 x 50 6 x 2	165.1 x 60.3 6.500 x 2.375	3.45 500	102 4.00	
150 x 65 6 x 2 1/2	165.1 x 76.1 6.500 x 3.000	3.45 500	102 4.00	
150 x 80 6 x 3	165.1 x 88.9 6.500 x 3.500	3.45 500	102 4.00	
150 x 100 6 x 4	165.1 x 114.3 6.500 x 4.500	3.45 500	102 4.00	
150 x 25 6 x 1	168.3 x 33.7 6.625 x 1.327	3.45 500	102 4.00	
150 x 50 6 x 2	168.3 x 60.3 6.625 x 2.375	3.45 500	102 4.00	
200 x 40 8 x 1/2	219.1 x 48.3 8.625 x 1.900	3.45 500	127 5.00	
200 x 50 8 x 1/2	219.1 x 60.3 8.625 x 2.375	3.45 500	127 5.00	
200 x 65 8 x 2 1/2	216.3 x 73.0 8.516 x 2.875	3.45 500	127 5.00	
200 x 65 8 x 2 1/2	219.1 x 76.1 8.625 x 3.000	3.45 500	127 5.00	
200 x 80 8 x 3	219.1 x 88.9 8.625 x 3.500	3.45 500	127 5.00	

8084

Grooved Flange Adapter



MATERIAL SPECIFICATIONS

CAST FITTINGS:

Ductile Iron conforming to ASTM A-536

FINISH:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized conforming to ASTM A-153 (optional)
For other coating requirements contact an Anvil Representative.

SPECIFIED BOLT TORQUE

Metric Bolts

Bolt Size Inch	Specified Bolt Torque	
	ft-lb	N-M
M10	30-45	40-60
M12	80-100	110-135
M16	100-130	135-175
M20	130-180	175-245
M24	300-400	400-550

Nominal Size mm/in	Pipe O.D. mm/in	Working Pressure MPa/PSI	Dimensions				Bolt/Nut No.-Size mm
			L mm/in	X mm/in	Y mm/in	Z mm/in	
25 1	33.7 1.327	1.6 225	60.5 2.382	115 4.53	85 3.35	16 0.63	4 - M12
32 1 1/4	42.4 1.669	1.6 225	60.5 2.382	140 5.51	100 3.94	16 0.63	4 - M16
40 1 1/2	48.3 1.900	1.6 225	60.5 2.382	150 5.91	110 4.33	16 0.63	4 - M16
50 2	60.3 2.375	1.6 225	64.0 2.52	165 6.50	125 4.92	15 0.59	4 - M16
65 2 1/2	76.1 3.000	1.6 225	65.0 2.56	185 7.28	145 5.71	15 0.59	4 - M16
80 3	88.9 3.500	1.6 225	65.0 2.56	200 7.87	160 6.30	15 0.59	8 - M16
100 4	108.0 4.250	1.6 225	70.0 2.76	220 8.66	180 7.09	15 0.59	8 - M16
100 4	114.3 4.500	1.6 225	70.0 2.76	220 8.66	180 7.09	15 0.59	8 - M16
125 5	133.0 5.250	1.6 225	70.0 2.76	250 9.84	210 8.27	17 0.70	8 - M16
125 5	139.7 5.500	1.6 225	69.0 2.71	250 9.84	210 8.27	17 0.70	8 - M16
150 6	159.0 6.250	1.6 225	70.0 2.76	282 11.10	240 9.45	17 0.70	8 - M20
150 6	165.1 6.500	1.6 225	70.0 2.76	282 11.10	240 9.45	17 0.70	8 - M20
150 6	168.3 6.625	1.6 225	70.0 2.76	284 11.18	240 9.45	17 0.70	8 - M20
200 8	219.1 8.625	1.6 225	80.0 3.150	340 13.39	295 11.61	18 0.71	12 - M20
250 10	273.0 10.750	1.6 225	85.0 3.350	403 15.87	355 13.98	21 0.83	12 - M24
300 12	323.9 12.750	1.6 225	90.0 3.54	458 18.03	410 16.14	23 0.91	12 - M24
350 14	377.0 12.843	1.6 225	100.0 3.937	520 20.47	470 18.50	25 1.00	16 - M24
400 16	426.0 16.772	1.6 225	110.0 4.331	580 22.83	525 20.67	27 1.06	16 - M27

8012

Grooved Flange

Gr8LOK by **GRUVLOK**

The Model 8012 Grooved Flange makes it possible for a direct connection of flanged components to a grooved piping system. The two interlocking halves of the Gr8LOK Grooved Flange are hinged for ease of handling, and are drawn together by a latch bolt which eases assembly on the pipe.

For the latest UL/ULC listed, LPCB, VdS and FM Approved pressure ratings versus pipe schedule, contact your local Anvil Representative.



MATERIAL SPECIFICATIONS

HOUSING:

Ductile Iron conforming to ASTM A-536, Grade 65-45-12

ANSI BOLTS & HEAVY HEX NUTS:

Heat treated, oval-neck track head bolts conforming to SAE J429 Grade 5 with a minimum tensile strength of 120,000 psi and heavy hex nuts of carbon steel conforming to ASTM A-563 Grade A or B, or SAE J995 Grade 2. Bolts and nuts are provided zinc electroplated as standard.

METRIC BOLTS & HEAVY HEX NUTS:

Heat treated, zinc electroplated oval-neck track head bolts made of carbon steel with mechanical properties per ISO 898-1 Class 8.8. Hex nuts and bolts are zinc electroplated followed by a yellow chromate dip.

COATINGS:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized (optional)

For other coating requirements contact an Anvil Representative.

GASKETS

Properties as designated in accordance with ASTM D-2000

GRADE "E" EPDM (Green Stripe)

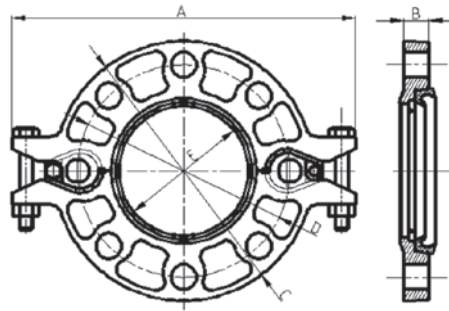
Working Temperature Range is -30°F to 230°F (-34°C to 110°C)
Recommended for water service, diluted acids, alkalis solutions, oil-free air and many chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS OR WITH HYDROCARBONS.

8012

Grooved Flange

Gr8LOK by **GRUVLOK**



Nominal Size mm/in	Pipe O.D. mm/in	Working Pressure MPa/PSI	Dimensions					Latch Bolt	Mating Flange Bolt
			A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	No.-Size mm	No.-Size mm
40 1 1/2	48.3 1.900	1.6 225	195.0 7.68	18.5 0.73	150.0 5.91	110.0 4.33	45.4 1.79	2 - M10 x 50	4 - M16
50 2	60.3 2.375	1.6 225	220.0 8.66	18.5 0.73	165.0 6.50	125.0 4.92	57.5 2.26	2 - M10 x 50	4 - M16
65 2 1/2	76.1 3.000	1.6 225	235.0 9.25	18.5 0.73	185.0 7.28	145.0 5.71	72.7 2.86	2 - M10 x 50	4 - M16
80 3	88.9 3.500	1.6 225	255.0 10.04	18.5 0.73	195.0 7.68	160.0 6.30	85.5 3.37	2 - M10 x 50	8 - M16
100 4	108.0 4.250	1.6 225	279.0 10.98	18.5 0.73	220.0 8.66	180.0 7.09	104.5 4.11	2 - M10 x 50	8 - M16
100 4	114.3 4.500	1.6 225	279.0 10.98	18.5 0.73	224.0 8.82	180.0 7.09	110.5 4.35	2 - M10 x 50	8 - M16
125 5	133.0 5.250	1.6 225	312.0 12.28	21.5 0.85	250.0 9.84	210.0 8.27	129.2 5.09	2 - M12 x 65	8 - M16
125 5	139.7 5.500	1.6 225	320.0 12.60	23.0 0.91	250.0 9.84	210.0 8.27	135.5 5.33	2 - M12 x 65	8 - M16
150 6	159.0 6.250	1.6 225	346.0 13.62	21.5 0.85	280.0 11.02	240.0 9.45	154.8 6.09	2 - M12 x 65	8 - M20
150 6	165.1 6.500	1.6 225	346.0 13.62	21.5 0.85	280.0 11.02	240.0 9.45	160.8 6.33	2 - M12 x 65	8 - M20
150 6	168.3 6.625	1.6 225	346.0 13.62	24.0 0.94	280.0 11.02	240.0 9.45	164.3 6.47	2 - M12 x 65	8 - M20
200 8	219.1 8.625	1.6 225	414.3 16.31	30.0 1.18	340.0 13.39	295.0 11.61	214.9 8.46	2 - M10 x 70	12 - M20
250 10	273.0 10.750	1.6 225	480.0 18.90	25.5 1.00	405.0 15.94	355.0 13.98	268.9 10.59	2 - M10 x 70	12 - M24
300 12	323.9 12.750	1.6 225	530.5 20.89	25.5 1.00	460.0 18.11	410.0 16.14	318.9 12.56	2 - M10 x 70	12 - M24

Installation Instructions for Grooved Flange



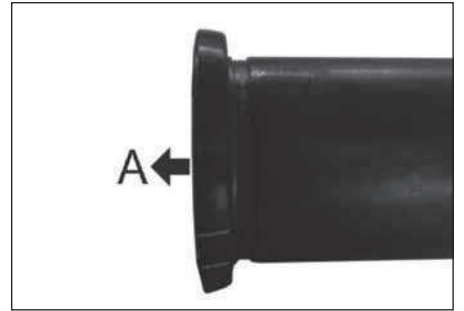
1. Pipe Preparation

Check pipe end for proper groove dimensions and to assure that pipe end is free of indentations and projections that would prevent proper sealing.



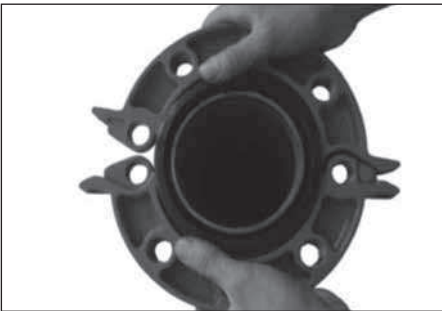
2. Lubricate Gasket

Check gasket to be sure it is compatible for the intended service. Apply thin lubricant to the outside and sealing lips of the gasket.



3. Gasket Installation

Slip the gasket over pipe end, with the gasket opening side towards "A". Make sure the gasket sealing lip is even with pipe end.



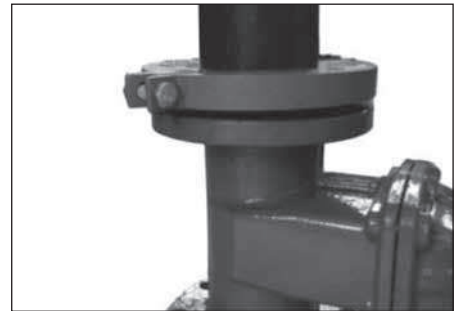
4. Housing Installation

Remove bolts and nuts, place two housings over the gasket, making sure the housing keys fit into the pipe grooves. Re-insert the bolts and hand tighten the nuts.



5. Tighten Nuts

Securely tighten nuts alternatively and equally to the specified bolt torque by using spanner.



6. Connect Mating Flange

Align flange bolt holes with mating flange (or valve) bolt holes. Insert a standard flange bolt through bolt hole and hand tighten a nut. Insert another bolt opposite the first and hand tighten a nut. Continue this until all bolt holes are fitted. Tighten nuts evenly to specified bolt torque, so flange faces remain parallel. Assembly completed.

CAUTION

Proper torquing of bolts is required to obtain specified performance.

and/or casting which could result in pipe joint separation.

capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

SPECIFIED BOLT TORQUE

Metric Bolts

Bolt Size Inch	Specified Bolt Torque	
	ft-lb	N-M
M10	30-45	40-60
M12	80-100	110-135
M16	100-130	135-175
M20	130-180	175-245
M24	300-400	400-550

8045

Threaded Mechanical Branch Tee

Gr8LOK by **GRUVLOK**

Mechanical branch connections for reducing branch outlets without welding. The 8045 is a bolted saddle type fitting with BSP female threaded outlets. Design assures superior sealing, full pipe support, excellent stability and easy installation.

For the latest UL/ULC listed, LPCB, VdS and FM Approved pressure ratings versus pipe schedule, contact your local Anvil Representative.



MATERIAL SPECIFICATIONS

HOUSING:

Ductile Iron conforming to ASTM A-536, Grade 65-45-12

ANSI BOLTS & HEAVY HEX NUTS:

Heat treated, oval-neck track head bolts conforming to SAE J429 Grade 5 with a minimum tensile strength of 120,000 psi and heavy hex nuts of carbon steel conforming to ASTM A-563 Grade A or B, or SAE J995 Grade 2. Bolts and nuts are provided zinc electroplated as standard.

METRIC BOLTS & HEAVY HEX NUTS:

Heat treated, zinc electroplated oval-neck track head bolts made of carbon steel with mechanical properties per ISO 898-1 Class 8.8. Hex nuts and bolts are zinc electroplated followed by a yellow chromate dip.

COATINGS:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized (optional)

For other coating requirements contact an Anvil Representative.

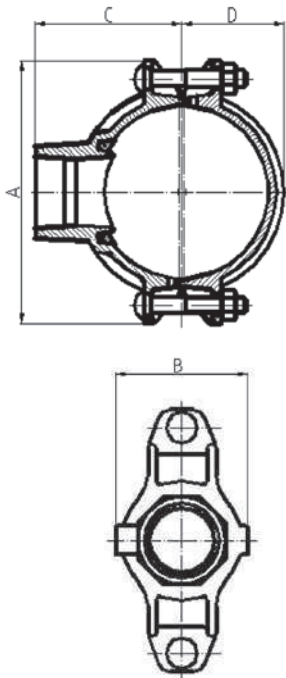
GASKETS

Properties as designated in accordance with ASTM D-2000

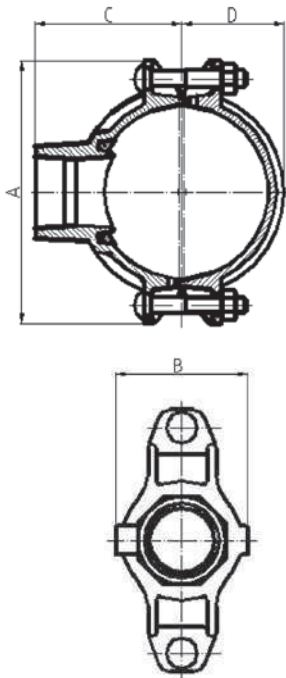
GRADE "E" EPDM (Green Stripe)

Working Temperature Range is -30°F to 230°F (-34°C to 110°C)
Recommended for water service, diluted acids, alkalies solutions, oil-free air and many chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS OR WITH HYDROCARBONS.

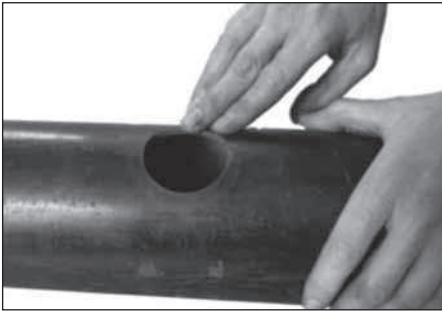


Nominal Size mm/in	Pipe O.D. mm/in	Working Pressure MPa/PSI	Hole Dia. mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm
				A mm/in	B mm/in	C mm/in	D mm/in	
50 x 15 2 x 1/2	60.3 x 21.3 2.375 x 0.825	2.07 300	38 1.5	116 4.57	68 2.68	60 2.36	39 1.54	M10 x 57
50 x 20 2 x 3/4	60.3 x 26.9 2.375 x 1.059	2.07 300	38 1.5	116 4.57	68 2.68	60 2.36	39 1.54	M10 x 57
50 x 25 2 x 1	60.3 x 33.7 2.375 x 1.327	2.07 300	38 1.5	116 4.57	68 2.68	60 2.36	39 1.54	M10 x 57
50 x 32 2 x 1 1/4	60.3 x 42.4 2.375 x 1.669	2.07 300	45 1.77	116 4.57	76 2.99	65 2.56	39 1.54	M10 x 57
50 x 40 2 x 1 1/2	60.3 x 48.3 2.375 x 1.900	2.07 300	45 1.77	116 4.57	76 2.99	65 2.56	39 1.54	M10 x 57
65 x 15 2 1/2 x 1/2	76.1 x 21.3 3.000 x 0.825	2.07 300	38 1.5	137 5.39	71 2.8	61.5 2.42	49.5 1.95	M12 x 70
65 x 20 2 1/2 x 3/4	76.1 x 26.9 3.000 x 1.059	2.07 300	38 1.5	137 5.39	71 2.8	75 2.95	49.5 1.95	M12 x 70
65 x 25 2 1/2 x 1	76.1 x 33.7 3.000 x 1.327	2.07 300	38 1.5	137 5.39	71 2.8	75 2.95	49.5 1.95	M12 x 70
65 x 32 2 1/2 x 1 1/4	76.1 x 42.4 3.000 x 1.669	2.07 300	51 2	137 5.39	84.5 3.33	75 2.95	49.5 1.95	M12 x 70
65 x 40 2 1/2 x 1 1/2	76.1 x 48.3 3.000 x 1.900	2.07 300	51 2	137 5.39	84.5 3.33	75 2.95	49.5 1.95	M12 x 70
80 x 15 3 x 1/2	88.9 x 21.3 3.500 x 0.825	2.07 300	38 1.5	152 5.98	72.5 2.85	71.5 2.81	56.5 2.22	M12 x 76
80 x 20 3 x 3/4	88.9 x 26.9 3.500 x 1.059	2.07 300	38 1.5	152 5.98	72.5 2.85	71.5 2.81	56.5 2.22	M12 x 76
80 x 25 3 x 1	88.9 x 33.7 3.500 x 1.327	2.07 300	38 1.5	152 5.98	72.5 2.85	80 3.15	56.5 2.22	M12 x 76
80 x 32 3 x 1 1/4	88.9 x 42.4 3.500 x 1.669	2.07 300	51 2	152 5.98	85.5 3.37	80 3.15	56.5 2.22	M12 x 76
80 x 40 3 x 1 1/2	88.9 x 48.3 3.500 x 1.900	2.07 300	51 2	152 5.98	85.5 3.37	80 3.15	56.5 2.22	M12 x 76
80 x 50 3 x 2	88.9 x 60.3 3.500 x 2.375	2.07 300	64 2.5	152 5.98	98 3.86	80 3.15	56.5 2.22	M12 x 76
100 x 15 4 x 1/2	114.3 x 21.3 4.500 x 0.825	2.07 300	38 1.5	188 7.4	78.5 3.09	90 3.54	70 2.76	M12 x 76
100 x 20 4 x 3/4	114.3 x 26.9 4.500 x 1.059	2.07 300	38 1.5	188 7.4	78.5 3.09	90 3.54	70 2.76	M12 x 76
100 x 25 4 x 1	114.3 x 33.7 4.500 x 1.327	2.07 300	38 1.5	188 7.4	78.5 3.09	93 3.66	70 2.76	M12 x 76
100 x 32 4 x 1 1/4	114.3 x 42.4 4.500 x 1.669	2.07 300	51 2	188 7.4	89 3.5	95 3.74	70 2.76	M12 x 76
100 x 40 4 x 1 1/2	114.3 x 48.3 4.500 x 1.900	2.07 300	51 2	188 7.4	89 3.5	97 3.82	70 2.76	M12 x 76
100 x 50 4 x 2	114.3 x 60.3 4.500 x 2.375	2.07 300	64 2.5	188 7.4	104.5 4.11	100 3.94	70 2.76	M12 x 76
100 x 65 4 x 2 1/2	114.3 x 73.0 4.500 x 2.875	2.07 300	70 2.75	188 7.4	104.5 4.11	102 4.02	70 2.76	M12 x 76
100 x 65 4 x 2 1/2	114.3 x 76.1 4.500 x 3.000	2.07 300	70 2.75	188 7.4	104.5 4.11	102 4.02	70 2.76	M12 x 76
100 x 80 4 x 3	114.3 x 88.9 4.500 x 3.500	2.07 300	89 3.5	188 7.4	124 4.88	102 4.02	70 2.76	M12 x 76
125 x 25 5 x 1	139.7 x 33.7 5.500 x 1.327	2.07 300	38 1.5	221.5 8.72	78 3.07	110 4.33	84 3.31	M16 x 85
125 x 32 5 x 1 1/4	139.7 x 42.4 5.500 x 1.669	2.07 300	51 2	221.5 8.72	95 3.74	112 4.41	84 3.31	M16 x 85
125 x 40 5 x 1 1/2	139.7 x 48.3 5.500 x 1.900	2.07 300	51 2	221.5 8.72	95 3.74	112 4.41	84 3.31	M16 x 85
125 x 50 5 x 2	139.7 x 60.3 5.500 x 2.375	2.07 300	64 2.5	221.5 8.72	112.5 4.43	115 4.53	84 3.31	M16 x 85
125 x 65 5 x 2 1/2	139.7 x 76.1 5.500 x 3.000	2.07 300	70 2.75	221.5 8.72	112.5 4.43	115 4.53	84 3.31	M16 x 85



Nominal Size mm/in	Pipe O.D. mm/in	Working Pressure MPa/PSI	Hole Dia. mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm
				A mm/in	B mm/in	C mm/in	D mm/in	
125 x 80 5 x 3	139.7 x 88.9 5.500 x 3.500	2.07 300	89 3.5	221.5 8.72	132 5.2	120 4.72	84 3.31	M16 x 85
125 x 100 5 x 4	139.7 x 114.3 5.500 x 4.500	2.07 300	114 4.5	221.5 8.72	156 6.1	125 4.92	84 3.31	M16 x 85
150 x 15 6 x 1/2	165.1 x 21.3 6.500 x 0.825	2.07 300	38 1.5	244 9.6	78 3.07	110 4.33	97.5 3.84	M16 x 108
150 x 20 6 x 3/4	165.1 x 26.9 6.500 x 1.059	2.07 300	38 1.5	244 9.6	78 3.07	110 4.33	97.5 3.84	M16 x 108
150 x 25 6 x 1	165.1 x 33.7 6.500 x 1.327	2.07 300	38 1.5	244 9.6	78 3.07	118 4.65	97.5 3.84	M16 x 108
150 x 32 6 x 1 1/4	165.1 x 42.4 6.500 x 1.669	2.07 300	51 2	244 9.6	93 3.66	118 4.65	97.5 3.84	M16 x 108
150 x 40 6 x 1 1/2	165.1 x 48.3 6.500 x 1.900	2.07 300	51 2	244 9.6	93 3.66	118 4.65	97.5 3.84	M16 x 108
150 x 50 6 x 2	165.1 x 60.3 6.500 x 2.375	2.07 300	64 2.5	244 9.6	112.5 4.43	128.5 5.06	97.5 3.84	M16 x 108
150 x 65 6 x 2 1/2	165.1 x 76.1 6.500 x 3.000	2.07 300	70 2.75	244 9.6	112.5 4.43	128.5 5.06	97.5 3.84	M16 x 108
150 x 80 6 x 3	165.1 x 88.9 6.500 x 3.500	2.07 300	89 3.5	244 9.6	132 5.2	128.5 5.06	97.5 3.84	M16 x 108
150 x 100 6 x 4	165.1 x 114.3 6.500 x 4.500	2.07 300	114 4.5	244 9.6	154 6.06	135 5.32	97.5 3.84	M16 x 108
150 x 32 6 x 1 1/4	168.3 x 42.4 6.625 x 1.669	2.07 300	51 2	247 9.72	95 3.74	130 5.12	98.5 3.88	M16 x 108
150 x 40 6 x 1 1/2	168.3 x 48.3 6.625 x 1.900	2.07 300	51 2	247 9.72	95 3.74	122 4.8	98.5 3.88	M16 x 108
150 x 50 6 x 2	168.3 x 60.3 6.625 x 2.375	2.07 300	64 2.5	247 9.72	112.5 4.43	132 5.2	98.5 3.88	M16 x 108
150 x 65 6 x 2 1/2	168.3 x 73.0 6.625 x 2.875	2.07 300	70 2.75	247 9.72	112.5 4.43	132 5.2	98.5 3.88	M16 x 108
150 x 80 6 x 3	168.3 x 88.9 6.625 x 3.500	2.07 300	89 3.5	247 9.72	132 5.2	140 5.51	98.5 3.88	M16 x 108
150 x 100 6 x 4	168.3 x 114.3 6.625 x 4.500	2.07 300	114 4.5	247 9.72	156.5 6.16	140 5.51	98.5 3.88	M16 x 108
200 x 25 8 x 1	219.1 x 33.7 8.625 x 1.327	2.07 300	38 1.5	322 12.68	79.5 3.13	150 5.91	125 4.92	M20 x 115
200 x 32 8 x 1 1/4	219.1 x 42.4 8.625 x 1.669	2.07 300	51 2	320 12.60	96.5 3.8	150 5.91	125 4.92	M20 x 115
200 x 40 8 x 1 1/2	219.1 x 48.3 8.625 x 1.900	2.07 300	51 2	320 12.60	96.5 3.8	150 5.91	125 4.92	M20 x 115
200 x 50 8 x 2	219.1 x 60.3 8.625 x 2.375	2.07 300	64 2.5	322 12.68	117 4.61	160 6.3	125 4.92	M20 x 115
200 x 65 8 x 2 1/2	219.1 x 76.1 8.625 x 3.000	2.07 300	70 2.75	322 12.68	118 4.65	158.5 6.24	125 4.92	M20 x 115
200 x 80 8 x 3	219.1 x 88.9 8.625 x 3.500	2.07 300	89 3.5	322 12.68	136.5 5.37	160 6.3	125 4.92	M20 x 115
200 x 100 8 x 4	219.1 x 114.3 8.625 x 4.500	2.07 300	114 4.5	322 12.68	164 6.46	160 6.3	125 4.92	M20 x 115
250 x 40 10 x 1 1/2	273.0 x 48.3 10.750 x 1.900	2.07 300	51 2	376 14.8	95.5 3.76	180 7.09	155 6.1	M20 x 115
250 x 50 10 x 2	273.0 x 60.3 10.750 x 2.375	2.07 300	64 2.5	376 14.8	118 4.65	185 7.28	155 6.1	M20 x 115
250 x 65 10 x 2 1/2	273.0 x 76.1 10.750 x 3.000	2.07 300	70 2.75	376 14.8	118 4.65	190 7.48	155 6.1	M20 x 115
250 x 80 10 x 3	273.0 x 88.9 10.750 x 3.500	2.07 300	89 3.5	376 14.8	136.5 5.37	190 7.48	155 6.1	M20 x 115
250 x 100 10 x 4	273.0 x 114.3 10.750 x 4.500	2.07 300	114 4.5	376 14.8	164 6.46	190 7.48	155 6.1	M20 x 115

Installation Instructions for Threaded Mechanical Tees



1. Pipe Preparation

Cut the appropriate size hole in the pipe and remove any burrs. Be sure to remove the slug from inside the pipe. Clean the gasket sealing surface within 16 mm of the hole and visually inspect the sealing surface for defects that may prevent proper sealing of the gasket.



2. Check & Lubricate Gasket

Check the gasket to be sure it is compatible for the intended service. Apply a thin layer of Gruvlok lubricant to the back surface of the gasket. Be careful that foreign particles do not adhere to the lubricated surfaces. Insert the gasket back into the outlet housing making sure the tabs in the gasket line up with the tab recesses in the housing.



3. Gasket Installation

Lubricate the exposed surface of the gasket. Align the outlet housing over the pipe hole making sure that the locating collar is in the pipe hole.



4. Alignment

Align the strap around the pipe, insert the bolts and tighten the nuts finger tight.



5. Tighten Nuts

Alternately and evenly tighten the nuts to the specified bolt torque.



6. Assembly Completed

There should be even gaps on two sides between upper and lower housing.

CAUTION

Proper torquing of bolts is required to obtain specified performance.

torque output can vary significantly due to many variables including air pressure supply, battery strength and operational variations.

and/or casting which could result in pipe joint separation.

retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

SPECIFIED BOLT TORQUE

ANSI Bolts

Bolt Size Inch	Specified Bolt Torque	
	ft-lb	N-M
3/8	30-45	40-60
1/2	80-100	110-135
5/8	100-130	135-175
3/4	—	—
7/8	—	—

8046

Mechanical Tee with Grooved Outlet

Gr8LOK by **GRUVLOK**

Mechanical branch connections for reducing branch outlets without welding. The 8046 is a bolted saddle type fitting with grooved outlets. Design assures superior sealing, full pipe support, excellent stability and easy installation.

For the latest UL/ULC listed, LPCB, VdS and FM Approved pressure ratings versus pipe schedule, contact your local Anvil Representative.



MATERIAL SPECIFICATIONS

HOUSING:

Ductile Iron conforming to ASTM A-536, Grade 65-45-12

ANSI BOLTS & HEAVY HEX NUTS:

Heat treated, oval-neck track head bolts conforming to SAE J429 Grade 5 with a minimum tensile strength of 120,000 psi and heavy hex nuts of carbon steel conforming to ASTM A-563 Grade A or Grade B, or SAE J995 Grade 2. Bolts and nuts are provided zinc electroplated as standard.

METRIC BOLTS & HEAVY HEX NUTS:

Heat treated, zinc electroplated oval-neck track head bolts made of carbon steel with mechanical properties per ISO 898-1 Class 8.8. Hex nuts and bolts are zinc electroplated followed by a yellow chromate dip.

COATINGS:

Rust inhibiting paint – Color: Red (standard)

Hot Dipped Zinc Galvanized (optional)

For other coating requirements contact an Anvil Representative.

GASKETS

Properties as designated in accordance with ASTM D-2000

GRADE "E" EPDM (Green Stripe)

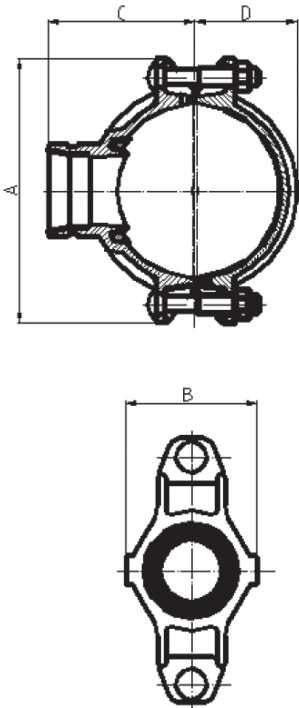
Working Temperature Range is -30°F to 230°F (-34°C to 110°C)
Recommended for water service, diluted acids, alkalies solutions, oil-free air and many chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS OR WITH HYDROCARBONS.

8046

Mechanical Tee with Grooved Outlet

Gr8LOK by **GRUVLOK**

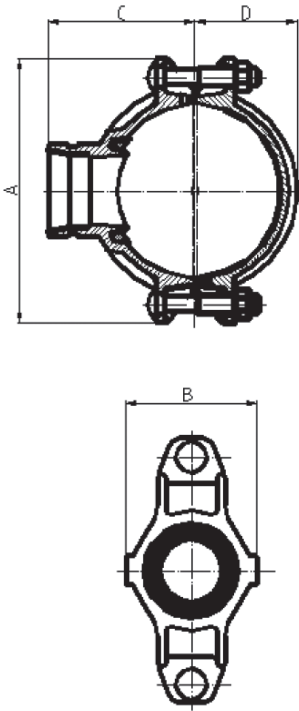


Nominal Size mm/in	Pipe O.D. mm/in	Working Pressure MPa/PSI	Hole Dia. mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm
				A mm/in	B mm/in	C mm/in	D mm/in	
50 x 32 2 x 1¼	60.3 x 42.4 2.375 x 1.669	2.07 300	45 1.75	116 4.57	76 2.99	69.5 2.74	39 1.54	M10 x 57
50 x 40 2 x 1½	60.3 x 48.3 2.375 x 1.900	2.07 300	45 1.75	116 4.57	76 2.99	69.5 2.74	39 1.54	M10 x 57
65 x 32 2½ x 1¼	73.0 x 42.4 2.875 x 1.669	2.07 300	51 2.00	144 5.67	84.5 3.33	75 2.95	49 1.93	M12 x 70
65 x 25 2½ x 1	76.1 x 33.7 3.000 x 1.327	2.07 300	38 1.50	137 5.39	71 2.80	78 3.07	49.5 1.95	M12 x 70
65 x 32 2½ x 1¼	76.1 x 42.4 3.000 x 1.669	2.07 300	51 2.00	137 5.39	84.5 3.33	78 3.07	49.5 1.95	M12 x 70
65 x 40 2½ x 1½	76.1 x 48.3 3.000 x 1.900	2.07 300	51 2.00	137 5.39	84.5 3.33	78 3.07	49.5 1.95	M12 x 70
80 x 25 3 x 1	88.9 x 33.7 3.500 x 1.327	2.07 300	38 1.5	152 5.98	72.5 2.85	84.5 3.33	56.5 2.22	M12 x 76
80 x 32 3 x 1¼	88.9 x 42.4 3.500 x 1.669	2.07 300	51 2.00	152 5.98	85.5 3.37	84.5 3.33	56.5 2.22	M12 x 76
80 x 40 3 x 1½	88.9 x 48.3 3.500 x 1.900	2.07 300	51 2.00	152 5.98	85.5 3.37	84.5 3.33	56.5 2.22	M12 x 76
80 x 50 3 x 2	88.9 x 60.3 3.500 x 2.375	2.07 300	64 2.50	152 5.98	98 3.86	84.5 3.33	56.5 2.22	M12 x 76
100 x 25 4 x 1	114.3 x 33.7 4.500 x 1.327	2.07 300	38 1.50	188 7.40	78.4 3.09	102 4.02	70 2.76	M12 x 76
100 x 40 4 x 1½	114.3 x 48.3 4.500 x 1.900	2.07 300	51 2.00	188 7.40	89 3.50	102 4.02	70 2.76	M12 x 76
100 x 50 4 x 2	114.3 x 60.3 4.500 x 2.375	2.07 300	64 2.50	188 7.40	104.5 4.11	102 4.02	70 2.76	M12 x 76
100 x 65 4 x 2½	114.3 x 73.0 4.500 x 2.875	2.07 300	70 2.75	188 7.40	104.5 4.11	102 4.02	70 2.76	M12 x 76
100 x 65 4 x 2½	114.3 x 76.1 4.500 x 3.000	2.07 300	70 2.75	188 7.40	104.5 4.11	102 4.02	70 2.76	M12 x 76
100 x 80 4 x 3	114.3 x 88.9 4.500 x 3.500	2.07 300	89 3.50	188 7.40	124 4.88	102 4.02	70 2.76	M12 x 76
125 x 80 5 x 3	133.0 x 88.9 5.250 x 3.500	2.07 300	89 3.50	209 8.23	132 5.20	109.5 4.31	77 3.03	M16 x 85
125 x 50 5 x 2	139.7 x 60.3 5.500 x 2.375	2.07 300	64 2.50	221.5 8.72	112.5 4.43	118 4.65	84 3.31	M16 x 85
125 x 65 5 x 2½	139.7 x 76.1 5.500 x 3.000	2.07 300	70 2.75	221.5 8.72	112.5 4.43	118 4.65	84 3.31	M16 x 85
125 x 80 5 x 3	139.7 x 88.9 5.500 x 3.500	2.07 300	89 3.50	221.5 8.72	136 5.35	122 4.80	84 3.31	M16 x 85
125 x 100 5 x 4	139.7 x 114.3 5.500 x 4.500	2.07 300	114 4.50	221.5 8.72	160 6.30	125 4.92	84 3.31	M16 x 85
150 x 100 6 x 4	159.1 x 108.0 6.250 x 4.250	2.07 300	114 4.50	244 9.60	154 6.06	133 5.24	94 3.70	M16 x 108
150 x 100 6 x 4	159.1 x 114.3 6.250 x 4.500	2.07 300	114 4.50	244 9.60	159 6.26	125 4.92	94 3.70	M16 x 108

8046

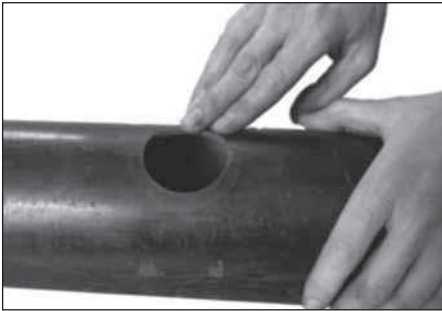
Mechanical Tee with Grooved Outlet

Gr8LOK by **GRUVLOK**



Nominal Size mm/in	Pipe O.D. mm/in	Working Pressure MPa/PSI	Hole Dia. mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm
				A mm/in	B mm/in	C mm/in	D mm/in	
150 x 50 6 x 2	165.1 x 60.3 6.500 x 2.375	2.07 300	64 2.50	244 9.60	112.5 4.43	127 5.00	97.5 3.84	M16 x 108
150 x 65 6 x 2½	165.1 x 76.1 6.500 x 3.000	2.07 300	70 2.75	244 9.60	112.5 4.43	127 5.00	97.5 3.84	M16 x 108
150 x 80 6 x 3	165.1 x 88.9 6.500 x 3.500	2.07 300	89 3.50	244 9.60	132 5.20	141 5.55	97.5 3.84	M16 x 108
150 x 100 6 x 4	165.1 x 114.3 6.500 x 4.500	2.07 300	114 4.50	244 9.60	154 6.06	135 5.32	97.5 3.84	M16 x 108
150 x 40 6 x 1½	168.3 x 48.3 6.625 x 1.900	2.07 300	51 2.00	247 9.72	95 3.74	128 5.04	98.5 3.88	M16 x 108
150 x 50 6 x 2	168.3 x 60.3 6.625 x 2.375	2.07 300	64 2.50	247 9.72	114 4.49	134 5.28	98.5 3.88	M16 x 108
150 x 65 6 x 2½	168.3 x 73.0 6.625 x 2.875	2.07 300	70 2.75	247 9.72	115 4.53	134 5.28	98.5 3.88	M16 x 108
150 x 80 6 x 3	168.3 x 88.9 6.625 x 3.500	2.07 300	89 3.50	247 9.72	132 5.20	141 5.55	98.5 3.88	M16 x 108
150 x 100 6 x 4	168.3 x 114.3 6.625 x 4.500	2.07 300	114 4.50	247 9.72	156.5 6.16	138 5.43	98.5 3.88	M16 x 108
200 x 50 8 x 2	219.1 x 60.3 8.625 x 2.375	2.07 300	64 2.50	322 12.68	118 4.65	158 6.22	125 4.92	M20 x 115
200 x 65 8 x 2½	219.1 x 76.1 8.625 x 3.000	2.07 300	70 2.75	322 12.68	118 4.65	158 6.22	125 4.92	M20 x 115
200 x 80 8 x 3	219.1 x 88.9 8.625 x 3.500	2.07 300	89 3.50	322 12.68	136.5 5.37	161 6.34	125 4.92	M20 x 115
200 x 100 8 x 4	219.1 x 114.3 8.625 x 4.500	2.07 300	114 4.50	322 12.68	164 6.46	161 6.34	125 4.92	M20 x 115
250 x 100 10 x 4	273.0 x 114.3 10.750 x 4.500	2.07 300	114 4.50	376 14.80	164 6.46	189 7.44	155 6.10	M20 x 115

Installation Instructions for Grooved Mechanical Tees



1. Pipe Preparation

Cut the appropriate size hole in the pipe and remove any burrs. Be sure to remove the slug from inside the pipe. Clean the gasket sealing surface within 16 mm of the hole and visually inspect the sealing surface for defects that may prevent proper sealing of the gasket.



2. Check & Lubricate Gasket

Check the gasket to be sure it is compatible for the intended service. Apply a thin layer of Gruvlok lubricant to the back surface of the gasket. Be careful that foreign particles do not adhere to the lubricated surfaces. Insert the gasket back into the outlet housing making sure the tabs in the gasket line up with the tab recesses in the housing.



3. Gasket Installation

Lubricate the exposed surface of the gasket. Align the outlet housing over the pipe hole making sure that the locating collar is in the pipe hole.



4. Alignment

Align the strap around the pipe, insert the bolts and tighten the nuts finger tight.



5. Tighten Nuts

Alternately and evenly tighten the nuts to the specified bolt torque.



6. Assembly Completed

There should be even gaps on two sides between upper and lower housing.

CAUTION

Proper torquing of bolts is required to obtain specified performance.

torque output can vary significantly due to many variables including air pressure supply, battery strength and operational variations.

and/or casting which could result in pipe joint separation.

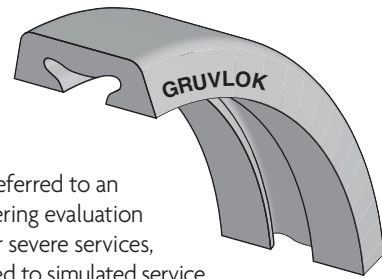
retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

SPECIFIED BOLT TORQUE

ANSI Bolts

Bolt Size Inch	Specified Bolt Torque	
	ft-lb	N-M
3/8	30-45	40-60
1/2	80-100	110-135
5/8	100-130	135-175
3/4	—	—
7/8	—	—

GASKET GRADE INDEX & GASKET RECOMMENDATION



The lists are provided as an aid in selecting the optimum gasket grade for a specific application to assure the maximum service life.

The recommendations have been developed from current information supplied by manufacturers of the elastomers, technical publications, and industry applications. The information supplied should be considered as a basis for evaluation but not as a guarantee.

Selection of the optimum gasket grade for a specific service requires the consideration of many factors; primarily temperature, fluid concentration, and continuity of service. Unless otherwise noted, all gasket recommendations are based on 100°F (38°C) maximum temperature service condition. Where more than one gasket grade is shown, the preferred grade is listed first.

Combinations of fluids should be referred to an Anvil Representative for an engineering evaluation and recommendation. In unusual or severe services, gasket materials should be subjected to simulated service conditions to determine the most suitable gasket grade.

Gasket recommendations apply only to Gruvlok gaskets. Contact an Anvil Representative for recommendations for services not listed. These listings do not apply to Gruvlok Butterfly Valves.

All Gruvlok products marked with UL/ULC Listed, FM approved VdS and/or LPC symbols are Listed/Approved with EPDM material. For other Listed/Approved materials, please contact an Anvil Representative for more information.

GASKET GRADE INDEX

STANDARD GASKETS				
Grade	Temp. Range	Compound	Color Code	General Service Applications
E	-40°F to +230°F (110°C)	EPDM	Green	Water, dilute acids, alkalis, salts, and many chemical services not involving hydrocarbons, oils, or gases. Excellent oxidation resistance. NOT FOR USE WITH HYDROCARBONS
EP	-40°F to +250°F (121°C)	EPDM	Green and Red	Water, dilute acids, alkalis, salts, and many chemical services not involving hydrocarbons, oils, or gases. Excellent oxidation resistance. NOT FOR USE WITH HYDROCARBONS
T	-20°F to +180°F (82°C)	Nitrile		Petroleum products, vegetable oils, mineral oils, and air contaminated with petroleum oils. NOT FOR USE IN HOT WATER SERVICES

SPECIAL GASKETS				
Grade	Temp. Range	Compound	Color Code	General Service Applications
O	+20°F to +300°F (149°C)	Fluoro Elastomer	Blue	High temperature resistance to oxidizing acids, petroleum oils, hydraulic fluids, halogenated, hydrocarbons and lubricants
L	-40°F to +350°F (177°C)	Silicone	Red Gasket	Dry, hot air and some high temperature chemical services.
E Type A	-40°F to +150°F (66°C)	Pre-Lubricated	Violet	Systems. For dry pipe systems, Gruvlok Xtreme™ Temperature Lubricant is required.

GASKET RECOMMENDATION LISTING

WATER & AIR	
Service	Gasket Grade
	E/EP
	L
	T
	E/EP/T
	E
Water, Acid Mine	E/T
Water, Chlorine	
Water, Deionized	E/EP/T
Water, Seawater	E/EP/T
Water, Waste	E/EP/T
Water, Lime	E/EP/T

Where more than one gasket grade is shown the preferred gasket grade is listed first. Where the gasket grade is shown in parentheses, Contact an Anvil Representative for an engineering evaluation and recommendation. Specify gasket grade when ordering. Use Gruvlok lubricant on gasket. Check gasket color code to be certain it is recommended for the service intended.

PETROLEUM PRODUCTS	
Service	Gasket Grade
	T
	T
	T
Gasoline, Leaded	T
Gasoline, Unleaded*	T
	T
JP-3, JP-4 and JP-5	
Kerosene	T
	T
	T
	T
Transmission Fluid —Type A	

service conditions.

For services not listed, contact an Anvil Representative for recommendation.

*Contact an Anvil Representative for service evaluation.

VACUUM SERVICE

VACUUM SERVICE		
Size	Vacuum Level	Gasket Recommendation
	0" - 10" Hg	Standard or Flush Gap
1½	10" - 29.9" Hg	Flush Gap

LARGER SIZES: Contact an Anvil Representative for more information.

Installation Instructions for Couplings



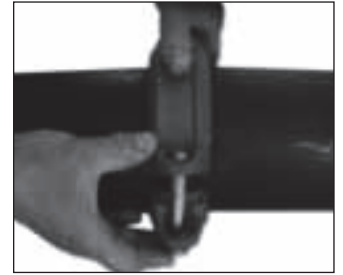
1. Check & Lubricate Gasket
Check gasket to be sure it is compatible for the intended service. Apply a thin coating of Gruvlok lubricant to the exterior surface and sealing lips of the gasket. Be careful that foreign particles do not adhere to lubricated surfaces.



2. Gasket Installation
Slip the gasket over the pipe end, making sure the gasket lip does not overhang the pipe end.



3. Alignment
After aligning the two pipe ends together, pull the gasket into position, centering it between the grooves on each pipe. Gasket should not extend into groove on either pipe.



4. Housings
With one nut unthreaded to the end of the bolt, unthread the other nut completely and swing the coupling housing halves over the gasket, making sure the housing keys engage the grooves. Insert the bolt and turn the nuts finger tight.



5. Tighten Nuts
Tighten the nuts alternately and equally to the specified bolt torque. The housing bolt pads must make metal-to-metal contact.

Caution: Uneven tightening may cause gasket to pinch.



6. Assembly is Complete
Visually inspect the pipe joint to assure the coupling keys are fully engaged in the pipe grooves and the bolt pads are in firm even metal-to-metal contact on both sides of the coupling.

SPECIFIED BOLT TORQUE

ANSI Bolts

Bolt Size Inch	Specified Bolt Torque	
	ft-lb	N-M
3/8 or M10	30-45	40-60
1/2 or M12	80-100	110-135
5/8 or M16	100-130	135-175
3/4 or M20	130-180	175-245
7/8 or M22	180-220	245-300

CAUTION

Proper torquing of bolts is required to obtain specified performance.

- Use of an impact wrench is not recommended because the torque output can vary significantly due to many variables including air pressure supply, battery strength and operational variations.
- Over torquing the bolts may result in damage to the bolt and/or casting which could result in pipe joint separation.
- Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

Installation Instructions for Grooved Flange



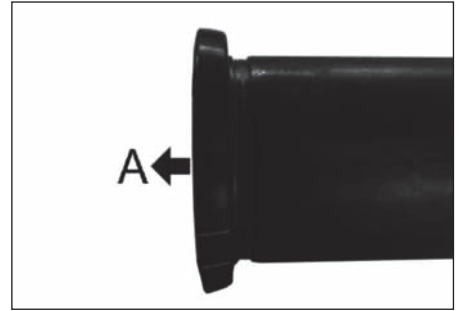
1. Pipe Preparation

Check pipe end for proper groove dimensions and to assure that pipe end is free of indentations and projections that would prevent proper sealing.



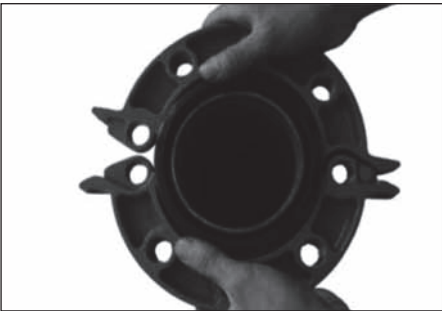
2. Lubricate Gasket

Check gasket to be sure it is compatible for the intended service. Apply thin lubricant to the outside and sealing lips of the gasket.



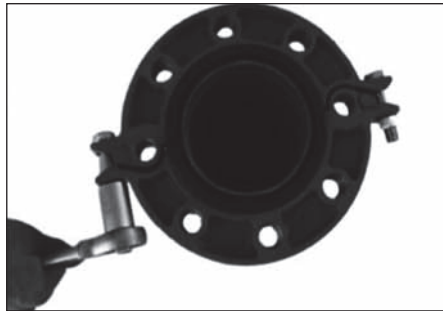
3. Gasket Installation

Slip the gasket over pipe end, with the gasket opening side towards "A". Make sure the gasket sealing lip is even with pipe end.



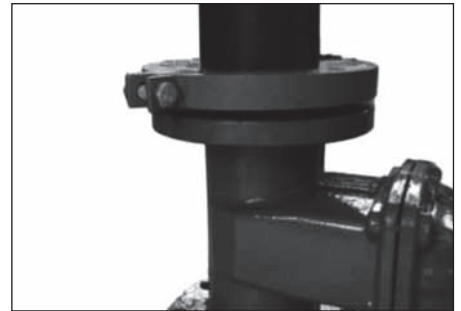
4. Housing Installation

Remove bolts and nuts, place two housings over the gasket, making sure the housing keys fit into the pipe grooves. Re-insert the bolts and hand tighten the nuts.



5. Tighten Nuts

Securely tighten nuts alternatively and equally to the specified bolt torque by using spanner.



6. Connect Mating Flange

Align flange bolt holes with mating flange (or valve) bolt holes. Insert a standard flange bolt through bolt hole and hand tighten a nut. Insert another bolt opposite the first and hand tighten a nut. Continue this until all bolt holes are fitted. Tighten nuts evenly to specified bolt torque, so flange faces remain parallel. Assembly completed.

CAUTION

Proper torquing of bolts is required to obtain specified performance.

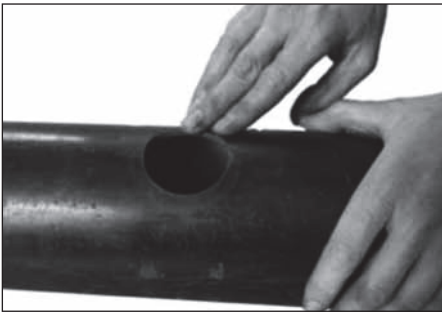
- Over torquing the bolts may result in damage to the bolt and/or casting which could result in pipe joint separation.
- Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

SPECIFIED BOLT TORQUE

Metric Bolts

Bolt Size Inch	Specified Bolt Torque	
	ft-lb	N-M
M10	30-45	40-60
M12	80-100	110-135
M16	100-130	135-175
M20	130-180	175-245
M24	300-400	400-550

Installation Instructions for Mechanical Tees



1. Pipe Preparation

Cut the appropriate size hole in the pipe and remove any burrs. Be sure to remove the slug from inside the pipe. Clean the gasket sealing surface within 16 mm of the hole and visually inspect the sealing surface for defects that may prevent proper sealing of the gasket.



2. Check & Lubricate Gasket

Check the gasket to be sure it is compatible for the intended service. Apply a thin layer of Gruvlok lubricant to the back surface of the gasket. Be careful that foreign particles do not adhere to the lubricated surfaces. Insert the gasket back into the outlet housing making sure the tabs in the gasket line up with the tab recesses in the housing.



3. Gasket Installation

Lubricate the exposed surface of the gasket. Align the outlet housing over the pipe hole making sure that the locating collar is in the pipe hole.



4. Alignment

Align the strap around the pipe, insert the bolts and tighten the nuts finger tight.



5. Tighten Nuts

Alternately and evenly tighten the nuts to the specified bolt torque.



6. Assembly Completed

There should be even gaps on two sides between upper and lower housing.

CAUTION

Proper torquing of bolts is required to obtain specified performance.

- Use of an impact wrench is not recommended because the torque output can vary significantly due to many variables including air pressure supply, battery strength and operational variations.
- Over torquing the bolts may result in damage to the bolt and/or casting which could result in pipe joint separation.
- Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

SPECIFIED BOLT TORQUE

Bolt Size Inch	ANSI Bolts Specified Bolt Torque	
	ft-lb	N-M
3/8	30-45	40-60
1/2	80-100	110-135
5/8	100-130	135-175
3/4	—	—
7/8	—	—

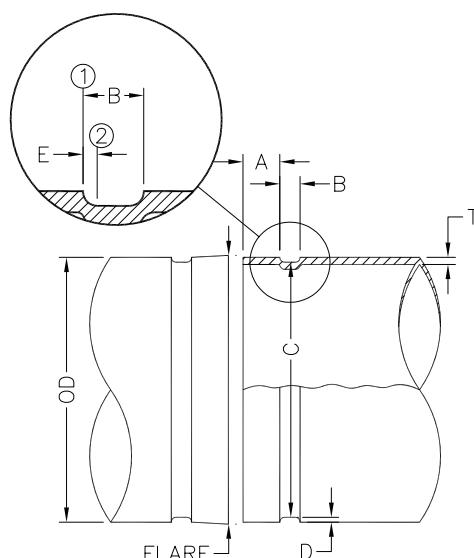


TABLE 1: GR8LOK STANDARD ROLL GROOVE SPECIFICATION FOR VDS - APPROVED PRODUCT APPLICATIONS

-1-	-2-	-3-		-4-	-5-		-6-	-7-	-8-	-9-	
Nominal IPS Pipe Size	Pipe OD Actual	Tolerance	Gasket Seat "A" ±0.76	Groove Width "B" ±0.76	Groove Diameter "C" Actual	"C" Tol. +0.000	Actual Groove Depth "D" (Ref. Only)	Groove Corner "E" (max)	Min. Allow. Wall Thick. "T"	Max. Flare Dia.	
DN(mm)	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
25 (1 in.)	33.7	+0.41	-0.68	15.88	7.14	30.23	-0.38	1.60	1.5	1.8	34.5
32 (1 1/4 in.)	42.4	+0.54	-0.61	15.88	7.14	38.99	-0.38	1.60	1.5	1.8	43.3
40 (1 1/2 in.)	48.3	+0.48	-0.48	15.88	7.14	45.09	-0.38	1.60	1.5	1.8	49.4
50 (2 in.)	60.3	+0.61	-0.61	15.88	8.74	57.15	-0.38	1.60	2.0	1.8	62.2
65 (3 in. OD)	76.1	+0.76	-0.76	15.88	8.74	72.26	-0.46	1.93	2.0	2.3	77.7
80 (3 in.)	88.9	+0.89	-0.79	15.88	8.74	84.94	-0.46	1.98	2.0	2.3	90.6
100 (4 in.)	114.3	+1.14	-0.79	15.88	8.74	110.08	-0.51	2.11	2.0	2.3	116.2
125 (5 1/2 in. OD)	139.7	+1.40	-0.79	15.88	8.74	135.48	-0.51	2.11	2.0	2.9	141.7
150 (6 in.)	165.1	+1.60	-0.79	15.88	8.74	160.88	-0.56	2.16	2.0	2.9	167.6
200 (8 in.)	219.1	+1.60	-0.79	19.05	11.91	214.40	-0.64	2.34	2.5	2.9	221.5
250 (10 in.)	273.1	+1.60	-0.79	19.05	11.91	268.27	-0.69	2.39	2.5	3.6	275.4
300 (12 in.)	323.9	+1.60	-0.79	19.05	11.91	318.29	-0.76	2.77	2.5	4.0	326.2

NOTES

Out of roundness: Difference between maximum OD and minimum OD measured at 90° must not exceed total OD tolerance listed.

Square cut ends: the maximum allowable tolerance from square cut ends is 0.76 mm for sizes 25mm-80mm; 1.15mm for sizes 100mm-150mm; and 1.52mm for sizes 200mm and above, measured from a true square line.

Beveled End Pipe in conformance with ANSI B16.25 (371/2°) is acceptable, however square cut is preferred.

Weld Seams must be ground flush with the pipe OD and ID prior to roll grooving. Failure to do so may result in damage to the roll grooving machine and unacceptable roll grooves may be produced.

COLUMN 1

Nominal IPS Pipe Size.

COLUMN 2

IPS outside diameter.

COLUMN 3

Gasket seat must be free from scores, seams, chips, rust or scale which may interfere with proper sealing of the gasket. Gasket seat width is to be measured from the pipe end to the vertical flank in the groove wall.

COLUMN 4

Groove width is to be measured between vertical flank of the groove size walls.

COLUMN 5

The groove must be uniform depth around the entire pipe circumference. (See column 6).

COLUMN 6

Groove depth: for reference only. Groove must conform to the groove diameter "C" listed in column 5.

COLUMN 7

Groove Corner "E": the distance between points (1) and (2) as indicated in the illustration above. Dimension "E" starts at the reduction of pipe outside diameter (O.D.) (point 1) and ends at the bottom of the groove (point 2).

COLUMN 8

Minimum allowable wall thickness which may be roll grooved.

COLUMN 9

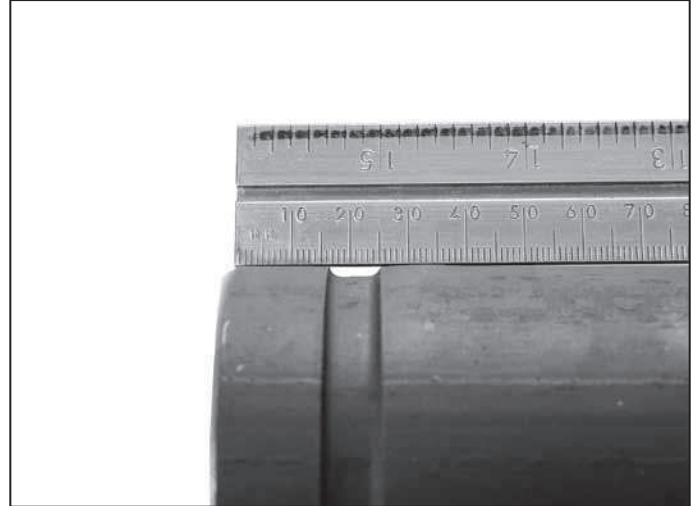
Maximum allowable pipe end flare diameter. Measured at the most extreme pipe end diameter of the gasket seat area.

STEPS TO VERIFYING A PROPER ROLL GROOVE



Step 1

Measure groove with a diameter tape or a circummeter to ensure that the Groove Diameter "C" is within the tolerance specified in column 5, Table 1.



Step 2

Using a ruler, measure the Gasket Seat length "A", Groove Width "B", and Groove Corner "E". The Gasket Seat length "A" and Groove Width "B" must be within the tolerance specified in Table 1. Groove Corner "E" must not exceed the dimension given in Table 1.