



Certificate of Compliance

This certificate is issued for the following:

PIPE FITTINGS

The following items are FM Approved for Jinan Meide Casting Co. Ltd. when manufactured at the plant listed on page 17:

Pipe Fittings \ Welded Pipe Outlets:

Product Designation	Fitting Description	Nominal Run Pipe Size, in.	Nominal Outlet Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
BNO	Welded Pipe Outlet Threaded	1, 1-1/4, 1-1/2, 2, 3, 4, 6	1/2	300 (2070)	a
		1, 1-1/2, 2, 2-1/2, 3, 4, 6	3/4		
		1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 6	1		
		1-1/2, 2, 2-1/2, 3, 4, 6	1-1/4		
		2, 2-1/2, 3, 4, 6	1-1/2		
		2-1/2, 3, 4, 6, 8	2		
		3, 4, 6, 8	2-1/2		
		4, 6, 8	3		
BNOG	Welded Pipe Outlet Grooved	1-1/2, 2, 2-1/2, 3, 4, 6	1-1/4	300 (2070)	a
		2, 2-1/2, 3, 4, 6	1-1/2		
		2-1/2, 3, 4, 6, 8	2		
		3, 4, 6, 8	2-1/2		
		4, 6, 8	3		
		6, 8	4		
		8	6		

Remarks:

- a. Outlet connection achieved by welding fitting to pipe. Requires precutting of hole in pipe.



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Pipe Fittings \ Pipe Fittings:

Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
1#	90° Bend	Male BSP X Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	300 (2070)	a
			6	300 (2070)	a
1A	90° Bend Short	Male BSP X Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 4	500 (3445)	a
2#	90° Bend	Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
2A	90° Bend Short	Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
3#	90° Bend	Male BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
40	45° Bend	Male BSP X Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
			6	300 (2070)	a
41	45° Bend	Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
85	Crossover	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
90	90° Elbow	Grooved	76 mm	500 (3445)	b
		BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
			5, 6	300 (2070)	a
90R	90° Reducing Elbow	BSP	1/2×1/4, 3/8, 3/4×1/4, 3/8, 1/2, 1×1/4, 3/8, 1/2, 3/4, 1-1/4×3/8, 1/2, 3/4, 1, 1-1/2×1/2, 3/4, 1, 1-1/4, 2×1/2, 3/4, 1, 1-1/4, 1-1/2, 2-1/2×1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 3×1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 4×1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	500 (3445)	a
			6×4	300 (2070)	a
90S	90° Short Radius Elbow	Grooved	114, 165 mm	365 (2510)	b
92	90° Street Elbow	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
			6	300 (2070)	a
92R	90° Reducing Street Elbow	BSP	3/4×1/2, 1×3/4	500 (3445)	a



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
95	Union Elbow, Flat Seat without gasket	Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
96	Union Elbow, Conical Joint Iron to Iron	Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
97	Union Elbow, Flat Seat without gasket	Male BSP X Female BSP	1-1/2	500 (3445)	a
98	Union Elbow, Conical Joint Iron to Iron	Male BSP X Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
110	22.5° Elbow	Grooved	73 mm	500 (3445)	b
120	45° Elbow	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
			5, 6	300 (2070)	a
121	45° Street Elbow	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
130	Equal Tee	Grooved	76 mm	500 (3445)	b



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
130	Equal Tee	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
			5, 6	300 (2070)	a
130R	Reducing Tee	Grooved	60 x 48 mm 88.9 x 48, 60, 73 mm 114.3 x 34, 60, 73, 88.9 mm 141 x 114.3 mm 168 x 60, 73, 89, 114, 141 mm	500 (3445)	b
			219.1 x 60, 89, 114.3, 141.3, 168 mm	300 (2070)	b
		BSP	1/2x1/4, 3/8 3/4x1/4, 3/8, 1/2 1x1/4, 3/8, 1/2, 3/4 1-1/4x3/8, 1/2, 3/4, 1 1-1/2x3/8, 1/2, 3/4, 1, 1-1/4 2x3/8, 1/2, 3/4, 1, 1-1/4, 1-1/2 2-1/2x3/4, 1/2, 1, 1-1/4, 1-1/2, 2 3x1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2 4x1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	500 (3445)	a



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
130R	Reducing Tee	BSP	1, 1-1/4, 1-1/2 x 3/4 x 3/4 1-1/4 x 1/2 x 1/2 1-1/4, 1-1/2, 2 x 1 x 1 1-1/2, 2 x 1-1/4 x 1-1/4 2 x 1-1/2 x 1-1/2 2-1/2, 3 x 2 x 2 3/4 x 1/2 x 3/4 1 x 1/2 x 1, 1 x 3/4 x 1, 1 x 1/4 x 1 1-1/4 x 1/2 x 1-1/4, 1-1/4 x 3/4 x 1-1/4, 1-1/4 x 1 x 1-1/4 1-1/2 x 1/2 x 1-1/2, 1-1/2 x 3/4 x 1-1/2, 1-1/2 x 1 x 1-1/2, 1-1/2 x 1-1/4 x 1-1/2 2 x 1/2 x 2, 2 x 3/4 x 2, 2 x 1 x 2, 2 x 1-1/4 x 2, 2 x 1-1/2 x 2 2-1/2 x 1-1/2 x 2-1/2, 2-1/2 x 2 x 2-1/2 3/4 x 1/2 x 1, 1 x 1/2 x 3/4, 1 x 3/4 x 1/2 1-1/4 x 1/2 x 3/4, 1 1-1/4 x 3/4 x 1/2, 1 1-1/4 x 1 x 1/2, 3/4 1-1/2 x 3/4 x 1, 1-1/4 1-1/2 x 1 x 1/2, 1-1/4 1-1/2 x 1-1/4 x 1/2, 3/4, 2 2 x 1 x 1-1/2 2 x 1-1/4 x 1, 1-1/2 2 x 1-1/2 x 3/4, 1, 1-1/4 2-1/2 x 2 x 1/2, 1, 1-1/4	500 (3445)	a
			6x2, 3, 4	300 (2070)	a



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
130S	Short Radius Tee	Grooved	114, 165 mm	365 (2510)	b
131	Equal Tee	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
134	Service Tee	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
134R	Service Tee Reducing	BSP	2×1-1/2 2-1/2×2 3×2-1/2	500 (3445)	a
165	Lateral Y Branch	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
180	Equal Cross	Grooved	60, 73, 76, 89, 114, 141, 165, 168 mm	500 (3450)	b
		BSP	219 mm	300 (2070)	b
180R	Reducing Cross	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
		BSP	3/4×1/2 1×1/2, 3/4 1-1/4×1/2, 3/4, 1 1-1/2×1/2, 3/4, 1, 1-1/4 2×3/4, 1, 1-1/4, 1-1/2 2-1/2×3/4, 1, 1-1/4, 1-1/2, 2 3×3/4, 1, 1-1/4, 1-1/2, 2 4×1, 1-1/4, 1-1/2, 2, 2-1/2, 3	500 (3445)	a
220	Coupling	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
		BSP	5, 6	300 (2070)	a



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
230	Eccentric Reducer	Grooved	219 x 168 mm 273 x 219 mm	365 (2510)	b
240	Reducing Socket	BSP	1/2x1/4, 3/8 3/4x1/4, 3/8, 1/2 1x1/4, 3/8, 1/2, 3/4 1-1/4x1/4, 3/8, 1/2, 3/4, 1 1-1/2x1/4, 3/8, 1/2, 3/4, 1, 1-1/4 2x1/2, 3/4, 1, 1-1/4, 1-1/2 2-1/2x1/2, 3/4, 1, 1-1/4, 1-1/2, 2 3x1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2	500 (3445)	a
240	Concentric Reducer	Grooved	89 x 42 mm 141 x 89, 114 mm	500 (3450)	b
240N	Concentric Reducer	Grooved x Female NPT	89 x 21 mm 141.3 x 89, 114 mm	500 (3450)	b
241	Bushing	BSP	1/2x1/4, 3/8 3/4x1/4, 3/8, 1/2 1x1/4, 3/8, 1/2, 3/4 1-1/4x1/4, 3/8, 1/2, 3/4, 1 1-1/2x1/4, 3/8, 1/2, 3/4, 1, 1-1/4 2x1/4, 3/8, 1, 1-1/4, 1-1/2 2-1/2x1/2, 3/4, 1-1/2, 2 3x2, 2-1/2 3-1/2x3 4x3/4, 1, 1-1/4, 1-1/2, 3	500 (3445)	a
			5x3, 4 6x2, 2-1/2, 5	300 (2070)	a
241D	Bushing	BSP	2x1/2, 3/4 2-1/2x1, 1-1/4 3x1/2, 3/4, 1, 1-1/4, 1-1/2 4x2, 2-1/2	500 (3445)	a



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
241D	Bushing	BSP	6×3, 4	300 (2070)	a
245	Hex Nipple Reducing	BSP	1/2×1/4, 3/8 3/4×1/4, 3/8, 1/2 1×1/2, 3/4 1-1/4×1/2, 3/4, 1 1-1/2×1/2, 3/4, 1, 1-1/4 2×1/2, 3/4, 1, 1-1/4, 1-1/2 2-1/2×1, 1-1/4, 1-1/2 3×1-1/2, 2, 2-1/2 4×2, 4×2-1/2, 4×3	500 (3445)	a
246	Extension Reducing	Male BSP X Female BSP	1/2×1/4, 3/8 3/4×3/8, 1/2 1×1/2, 3/4 1-1/4×1/2, 3/4, 1 1-1/2×3/4, 1, 1-1/4 2×1, 1-1/4, 1-1/2	500 (3445)	a
270	Socket	BSP Parallel Threads	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
			6	300 (2070)	a
271	Socket	BSP Right and Left Threads	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
280	Hex Nipple	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
			5, 6	300 (2070)	a



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
291	Plug, Sq. Hd.	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
			6	300 (2070)	a
291N	Plug, Sq. Socket	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	500 (3445)	a
291S	Plug, Solid Sq.	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
300	End Cap	Grooved	89, 114, 140, 165 mm	500 (3450)	b
		BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
			5, 6	300 (2070)	a
300PX	End Cap with BSP threaded outlet	Grooved x BSP	89 x 48, 60 mm 114 x 48, 60 mm 140 x 48, 60 mm 165 x 48 mm 168 x 48, 60 mm	500 (3445)	b
			219 x 48, 60 mm	300 (2070)	b
310	Locknut	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
312	Backnut	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 4	500 (3445)	a
321-4	Flange Adapter	Flanged x BSP	1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
321-4	Flange Adapter	Flanged x BSP	6	300 (2070)	a
321-6	Flange Adapter	Flanged x BSP	1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
			6	300 (2070)	a
321G	Flange Adapter	Flanged x Grooved	60, 73, 76.1, 89, 114 mm	365 (2510)	b
			139.7, 141.3, 165, 168, 219, 273, 324 mm	225 (1550)	b
321H	Flange Adapter	Flanged x BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3450)	a
321N	Flange Adapter	Flanged x BSP	2	500 (3450)	a
321P	Flange Adapter	Flanged x BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3450)	a
			5, 6	300 (2070)	a
321PW	Flange Adapter	Flanged x BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3450)	a
			5, 6	300 (2070)	a
321TD	Flange Adapter	Flanged x BSP	1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3450)	a
			6	300 (2070)	a
321W	Flange Adapter	Flanged x BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3450)	a



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
330	Union Flat Seat without gasket	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
331	Union Flat Seat without gasket	Male BSP X Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
340	Union Conical Joint Iron to Iron	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
340F	Union Nut	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
341	Union Conical Joint Iron to Iron	Male BSP X Female BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
342	Union Conical Joint Brass to Iron	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
526	Extension	BSP	1/2	500 (3445)	a
529A	Extension Long	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
529X	Extension Short	BSP	1/2	500 (3445)	a



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Product Designation	Fitting Description	End Connection	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
1090	90° Elbow Plain	BSP	1/2, 3/4, 1, 1-1/4, 2	500 (3445)	a
1130	Equal Tee Plain	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
1220	Socket Plain	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	500 (3445)	a
1221	Side Outlet Elbow	BSP	1/2, 3/4, 1, 1-1/4, 2	500 (3445)	a
1223	Side Outlet Tee	BSP	1/2, 3/4, 1	500 (3445)	a
Steel Merchant Socket	Socket	BSP	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	500 (3445)	d
			4, 5, 6	300 (2070)	d
		NPT	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	500 (3445)	d
			4, 5, 6	300 (2070)	d

- Remarks:
- a. Malleable Iron Fittings
 - b. Ductile Iron Fittings
 - c. Cast Iron Fittings
 - d. Steel Fittings



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Certificate of Compliance

Grooved Couplings or Fittings \ Grooved Couplings, Standard-Rigid:

<i>Product Designation</i>	<i>Nominal Pipe Size, in.</i>	<i>Pipe Ends</i>	<i>Remarks</i>	<i>Max Working Pressure, psi (kPa)</i>
1G	73 mm	Cut Groove Rolled Groove	c, d	300 (2070)
1GS	114 mm	Cut Groove Rolled Groove	c, d	300 (2070)

Remarks:

c. Approved when supplied with EPDM gasket.

d. Approved for use with GB/T3092 regular and extra heavy pipe, ISO 4200, and BS 1387 medium and heavy pipe.



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Pipe Fittings \ Fittings, Side Outlet, Rigid:

Product Designation	Fitting Description	Nominal Pipe Size, in.	Remarks	Max Rated Pressure, psi (kPa)
3GS	Mechanical Tee, Grooved Outlet	89 x 34, 42, 48, 60 mm	a, c	365 (2510)
		114 x 34, 42, 48, 60, 73, 76, 89 mm 133 x 89 mm 140 x 42, 48, 60, 76, 89 mm 159 x 108, 114 mm 165 x 42, 48, 60, 76, 89, 108, 114 mm 168 x 42, 48, 60, 73, 76, 89, 114 mm 219 x 60, 73, 76, 89, 108, 114 mm	a, c	300 (2070)
3JS	Mechanical Tee, Threaded Outlet	89 x 21, 27, 34, 42, 48, 60 mm	a, b, c, d	365 (2510)
		114 x 21, 27, 34, 42, 48, 60, 73, 76, 89 mm	a, b, c, d	300 (2070)
		168 x 34, 42, 48, 60, 73, 76, 89, 114 mm 219 x 34, 42, 48, 60, 73, 76, 89, 114 mm	a, b, c, d	300 (2070)
		108 x 21, 27, 34, 42, 48, 60, 76 mm 133 x 21, 27, 34, 42, 48, 60, 76, 89 mm 140 x 21, 27, 34, 42, 48, 60, 76, 89, 114 mm	a, c, d	300 (2070)
		159 x 21, 27, 34, 42, 48, 60, 76, 89, 114 mm 165 x 21, 27, 34, 42, 48, 60, 76, 89, 114 mm	a, c, d	300 (2070)

Remarks:

- a. For use on Schedule 10 and heavier steel sprinkler pipe.
- b. Approved when supplied with NPT female threads.
- c. Approved when supplied with EPDM gasket.
- d. Approved when supplied with BSP or DIN female threads.



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Grooved Couplings or Fittings \ Grooved Split Flanges-Flexible:

Product Designation	Fitting Description	Nominal Pipe Size, in.	Remarks	Max Rated Pressure, psi (kPa)
321S	Split Flange	48, 60, 76, 89, 108, 114 mm	a, b, c, d, e	365 (2510)
		133, 140, 159, 165, 168 mm	a, b, c, d, e	225 (1550)
321HS	Split Flange	108 mm	a, b, c, e, f	365 (2510)
		165 mm	a, b, c, e, f	225 (1550)

Remarks:

- a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller - Schedule 40; 8 in. NPS and larger - Schedule 30.
- b. Minimum schedule rolled groove pipe to be joined: 6 in. NPS and smaller - Schedule 10S; 8 in. NPS and larger 0.188 in. (5 mm) wall.
- c. Approved when supplied with EPDM gasket.
- d. Approved when supplied with an ISO PN10 bolt pattern.
- e. Approved when used with GB/T3092 regular and extra heavy pipe, ISO 4200, and BS 1387 Medium and Heavy pipe.
- f. Approved when supplied with an ISO PN25 bolt pattern



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A handwritten signature in dark ink, appearing to be 'RBA'.



Certificate of Compliance

Manufactured by:

Jinan Meide Casting Co., Ltd.
No. 3 Nanmen Road
Pingyin, Jinan 250400
P.R. China

FM Approvals Class: 1920

Approval Identification: 3038663 Approval Granted: March 4, 2011

Said Approval is subject to satisfactory field performance, continuing follow-up Facilities and Procedures Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

For more than 160 years FM Approvals has partnered with business and industry to reduce property losses.

A handwritten signature in dark ink, appearing to read 'Richard B. Dunne', is written over a horizontal line.

Richard B. Dunne
Group Manager – Hydraulics Group
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062



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March 4, 2011



Certificate of Compliance

RIGID AND FLEXIBLE PIPE COUPLINGS, PIPE FITTINGS, MECHANICAL TEES AND SPLIT FLANGES

The following products are FM Approved for Jinan Meide Casting Co. Ltd when manufactured at the plant below:

<i>Product Designation</i>	<i>Nominal Pipe Size, in.</i>	<i>Pipe Ends</i>	<i>Remarks</i>	<i>Max Working Pressure, psi (kPa)</i>
1G	1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8	Cut Groove Rolled Groove	a, b, c, d	300 (2070)
	10, 12 267.4, 318.5, 356, 377, 406, 426 mm	Cut Groove Rolled Groove	a, c	300 (2070)
	76.1, 108, 133, 139.7, 159, 165 mm	Cut Groove Rolled Groove	c, d	300 (2070)
1GS	2, 2 1/2, 3, 4, 5, 6, 8	Cut Groove Rolled Groove	a, b, c, d	300 (2070)
	76.1, 108, 139.7, 159, 165, 216.3 mm	Cut Groove Rolled Groove	c, d	300 (2070)

Remarks:

- a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller - Schedule 40; 8 in. NPS and larger - Schedule 30.
- b. Minimum schedule rolled groove pipe to be joined: 6 in. NPS and smaller - Schedule 10S; 8 in. NPS and larger 0.188 in. (5 mm) wall.
- c. Approved when supplied with EPDM gasket.
- d. Approved for use with GB/T3092 regular and extra heavy pipe, ISO 4200, and BS 1387 medium and heavy pipe.



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<i>Product Designation</i>	<i>Nominal Pipe Size, in.</i>	<i>Pipe Ends</i>	<i>Remarks</i>	<i>Max Working Pressure, psi (kPa)</i>
1N	1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12	Cut Groove Rolled Groove	a, b, c, d	300 (2070)
1N	76.1, 108, 133, 139.7, 159, 165 mm	Cut Groove Rolled Groove	c, d	300 (2070)
1NH	2, 2 1/2, 3, 4, 5, 6, 8	Cut Groove Rolled Groove	a, b, c, d	500 (3450)
1NH	76.1, 165.1 mm	Cut Groove Rolled Groove	c, d	500 (3450)

Remarks:

- a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller - Schedule 40; 8 in. NPS and larger - Schedule 30.
- b. Minimum schedule rolled groove pipe to be joined: 6 in. NPS and smaller - Schedule 10S; 8 in. NPS and larger 0.188 in. (5 mm) wall.
- c. Approved when supplied with EPDM gasket.
- d. Approved for use with GB/T3092 regular and extra heavy pipe, ISO 4200, and BS 1387 medium and heavy pipe.



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<i>Product Designation</i>	<i>Nominal Pipe Size, in.</i>	<i>Pipe Ends</i>	<i>Remarks</i>	<i>Max Working Pressure, psi (kPa)</i>
1N	2 x 1 1/2 2 1/2 x 1, 2 3 x 1, 2, 2 1/2 4 x 1, 2 4 x 2 1/2, 3 6 x 3, 4 8 x 6	Cut Groove Rolled Groove	a, b, c, d	300 (2070)
1N	76.1 x 33.7, 1 1/2, 2 3 x 76.1 4 x 76.1 165 x 4 8 x 165	Cut Groove Rolled Groove	a, b, c, d	300 (2070)

Remarks:

- a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller – Schedule 40; 8 in. NPS and larger – Schedule 30.
- b. Minimum schedule rolled groove pipe to be joined: 6 in. NPS and smaller – Schedule 10S; 8 in. NPS and larger 0.188 in. (5 mm) wall.
- c. Approved when supplied with EPDM gasket.
- d. Approved for use with GB/T3092 regular and extra heavy pipe, ISO 4200, and BS 1387 medium and heavy pipe.



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Product Designation	Fitting Description	Nominal Pipe Size, in.	Remarks	Max Rated Pressure, psi (kPa)
3G	Mechanical Tee, Grooved Outlet	2 x 1-1/4, 1-1/2 2-1/2 x 1-1/4, 1-1/2 76 x 1, 1-1/4, 1-1/2 3 x 1, 1-1/4, 1-1/2, 2 4 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3 133 x 3 139.7 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4 159 x 108, 4 5 x 1-1/4, 1-1/2, 2, 2-1/2, 3 165 x 2, 2-1/2, 3, 4 6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4 8 x 2, 2, 2-1/2, 76, 3, 108, 4 10 x 108, 4	a, c	300 (2070)
3L	Mechanical Tee, Grooved Outlet	1-1/4 x 1/2, 3/4, 1 1-1/2 x 1/2, 3/4, 1 2 x 1/2, 3/4, 1 2-1/2 x 1/2, 3/4, 1 76 x 1/2, 3/4, 1 3 x 1 4 x 1, 1-1/4, 1-1/2 6 x 1, 1-1/4, 1-1/2	a, c	300 (2070)
3J	Mechanical Tee, Grooved Outlet	2 x 1/2, 3/4 2-1/2 x 1/2, 3/4 3 x 1/2, 3/4 76 x 1/2, 3/4 4 x 1/2, 3/4 108 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 76 133 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 76, 3 139 x 1/2, 3/4, 4 159 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2 219 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 76, 3, 4 10 x 1-1/2, 2, 76, 3, 4	a, c	300 (2070)



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Remarks</i>	<i>Max Rated Pressure, psi (kPa)</i>
3J	Mechanical Tee, Threaded Outlet	2 x 1, 1-1/4, 1-1/2 2-1/2 x 1, 1-1/4, 1-1/2 76 x 1, 1-1/4, 1-1/2 3 x 1, 1-1/4, 1-1/2, 2 4 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3 139.7 x 1, 1-1/4, 1-1/2, 2 5 x 1-1/4, 1-1/2, 2, 2-1/2, 3 165 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3 6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	a, b, c	300 (2070)
4G	Mechanical Cross, Grooved Outlet	2 x 1-1/4, 1-1/2 2-1/2 x 1-1/4, 1-1/2 76 x 1-1/4, 1-1/2 3 x 1-1/4, 1-1/2, 2 4 x 1-1/4, 1-1/2, 2, 2-1/2, 3 139.7 x 2, 2-1/2, 3 5 x 1-1/4, 1-1/2, 2, 2-1/2, 3 165 x 2, 2-1/2, 3 6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	a, c	300 (2070)
4J	Mechanical Cross, Threaded Outlet	2 x 1, 1-1/4, 1-1/2 2-1/2 x 1, 1-1/4, 1-1/2 76 x 1, 1-1/4, 1-1/2 3 x 1, 1-1/4, 1-1/2, 2 4 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3 139.7 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3 5 x 1-1/4, 1-1/2, 2, 2-1/2, 3 165 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3 6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	a, b, c	300 (2070)
4JG	Mechanical Cross, Grooved x Threaded Outlet	2 x 1, 1-1/4, 1-1/2 2-1/2 x 1, 1-1/4, 1-1/2 76 x 1, 1-1/4, 1-1/2 3 x 1-1/4, 1-1/2, 2 4 x 1-1/4, 1-1/2, 2, 2-1/2, 3	a, b, c	300 (2070)



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Remarks</i>	<i>Max Rated Pressure, psi (kPa)</i>
4JG	Mechanical Cross, Grooved x Threaded Outlet	139.7 x 2, 2-1/2, 3 5 x 1-1/4, 1-1/2, 2, 2-1/2, 3 165 x 2, 2-1/2, 3 6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	a, b, c	300 (2070)

Remarks:

- a. For use on Schedule 10 and heavier steel sprinkler pipe.
- b. Approved when supplied with NPT female threads.
- c. Approved when supplied with EPDM gasket.

<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Remarks</i>	<i>Max Rated Pressure, psi (kPa)</i>
321	Split Flange	1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 108, 133, 139, 159, 165 mm	a, b, c, d, e	300 (2070)
321G	Adapter Flange	1 1/2, 1 1/4, 1 1/2, 4, 8, 10 108, 133, 139, 159, 165 mm		300 (2070)

Remarks:

- a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller - Schedule 40; 8 in. NPS and larger - Schedule 30.
- b. Minimum schedule rolled groove pipe to be joined: 6 in. NPS and smaller - Schedule 10S; 8 in. NPS and larger 0.188 in. (5 mm) wall.
- c. Approved when supplied with EPDM gasket.
- d. Approved when supplied with an ISO PN10 bolt pattern.
- e. Approved when used with GB/T3092 regular and extra heavy pipe, ISO 4200, and BS 1387 Medium and Heavy pipe.



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
90	90° Elbow Grooved	1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 5, 6, 8, 10, 12	500 (3450)	a
	90° Elbow Grooved	76, 139.7, 165 mm	500 (3445)	a
90S	90° Short Radius Elbow Grooved	2, 2-1/2, 3, 4, 6, 8 76, 139.7, 165 mm	300 (2070)	a
120	45° Elbow Grooved	1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 165 mm	500 (3450)	a
130	Equal Tee Grooved	1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 165 mm	500 (3450)	a
130S	Short Radius Tees Grooved Ends	2, 2-1/2, 3, 4, 6, 8 76, 139.7, 165 mm	300 (2070)	a
130R	Reducing Tee Grooved	2×1-1/2 3×1, 1-1/2, 2, 2-1/2 4×1, 2, 2-1/2, 3 5×2, 3, 4 6×2, 2-1/2, 3, 4, 5 8×2, 3, 4, 5, 6	500 (3450)	a
180	Equal Cross Grooved	1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 165 mm	500 (3450)	a
240	Concentric Reducer Grooved	2×3/4, 1, 1-1/4, 1-1/2 2-1/2×1, 1-1/4, 1-1/2, 2 3×3/4, 1, 1-1/2, 2, 2-1/2 4×1, 1-1/2, 2, 2-1/2, 3 5×3, 4 6×1, 2, 2-1/2, 3, 4, 5 8×2-1/2, 3, 4, 5, 6	500 (3450)	a



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
240N	Concentric Reducer Grooved × Female NPT	2×3/4, 1, 1-1/4, 1-1/2 2-1/2×1, 1-1/4, 1-1/2, 2 3×3/4, 1, 1-1/2, 2, 2-1/2 4×1, 1-1/2, 2, 2-1/2, 3 5×3, 4 6×2, 2-1/2, 3, 4, 5 8×2-1/2, 3, 4, 5, 6	500 (3450)	a
240W	Concentric Reducer Grooved × Male NPT	2×3/4, 1, 1-1/4, 1-1/2 2-1/2×1, 1-1/4, 1-1/2, 2 3×3/4, 1, 1-1/2, 2, 2-1/2 4×1, 1-1/2, 2, 2-1/2, 3 5×3, 4 6×2, 2-1/2, 3, 4, 5 8×2-1/2, 3, 4, 5, 6	500 (3450)	a
300	End Cap Grooved	1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 165 mm	500 (3450)	a
321G	Adapter Flanged × Grooved	2, 2-1/2, 3, 4, 5, 6, 8 76.1, 165 mm	500 (3450)	a
	Adapter Flanged × Grooved	10, 12, 139.7 mm	300 (2070)	a
35C	Cap Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2	500 (3450)	b
35CP	Straight Coupling Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2	500 (3450)	b
35E	90° Elbow Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3450)	b
35F	45° Elbow Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2	500 (3450)	b



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
35HB	Bushings Threaded	1×1/2, 3/4 1-1/4×3/4, 1 1-1/2×1, 1-1/4 2×1, 1-1/4, 1-1/2	500 (3450)	b
35RC	Concentric Reducer Threaded	1×1/2, 3/4 1-1/4×3/4, 1 1-1/2×1, 1-1/4 2×1, 1-1/4, 1-1/2	500 (3450)	b
35RE	90° Reducing Elbow Threaded	3/4×1/2 1×1/2, 3/4 1-1/4×1/2, 3/4, 1 1-1/2×1/2, 3/4, 1, 1-1/4 2×1/2, 3/4, 1, 1-1/4, 1-1/2 2-1/2×1-1/2, 2 3×3/4	500 (3450)	b
35RT	Reducing Tee Threaded	3/4×3/4×1/2, 1 3/4×1/2×3/4, 1/2 1×1×1/2, 3/4, 1-1/4, 1-1/2 1×3/4×3/4, 1 1×1/2×1 1-1/4×1-1/4×1/2, 3/4, 1, 1-1/2, 2 1-1/4×1×1/2, 3/4, 1, 1-1/4, 1-1/2 1-1/4×3/4×1-1/4 1-1/4×1/2×1-1/4 1-1/2×1-1/2×1/2, 3/4, 1, 1, 1-1/4, 2 1-1/2×1-1/4×1/2, 3/4, 1, 1-1/4, 1-1/2, 2 1-1/2×1×1/2, 3/4, 1, 1-1/4, 1-1/2 1-1/2×3/4×1-1/4, 1-1/2 1-1/2×1/2×1-1/4, 1-1/2 2×2×1/2, 3/4, 1, 1-1/4, 1-1/2, 2-1/2 2×1-1/2×1/2, 3/4, 1, 1-1/4, 1-1/2, 2 2×1-1/4×2 2×1×2	500 (3450)	b



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
35RT	Reducing Tee Threaded	2-1/2×2-1/2×3/4, 1, 1-1/4, 1-1/2, 2, 3	500 (3450)	b
35RX	Reducing Cross Threaded	1-1/4×1 1-1/2×1 2×1	500 (3450)	b
35SP	Square Head Pipe Plug Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3450)	b
35T	Equal Tee Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3450)	b
35U	Union Threaded	1, 1-1/4, 1-1/2, 2	500 (3450)	b
35X	Cross Threaded	1, 1-1/4, 1-1/2, 2	500 (3450)	b
37E	90° Elbow Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	300 (2070)	c
37F	45° Elbow Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	300 (2070)	c
37RC	Concentric Reducer Threaded	1×1/2, 3/4 1-1/4×1 2×3/4, 1	300 (2070)	c
37RE	90° Reducing Elbow Threaded	3/4×1/2 1×1/2, 3/4 1-1/4×1/2, 3/4, 1 1-1/2×1/2, 3/4, 1, 1-1/4 2×1/2, 3/4, 1, 1-1/4, 1-1/2 2-1/2×3/4, 1, 1-1/4, 1-1/2, 2 3×2	300 (2070)	c
37RT	Reducing Tee Threaded	3/4×3/4×1 1×1/2×1/2, 3/4, 1 1×3/4×1/2, 3/4, 1	300 (2070)	C



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Product Designation	Fitting Description	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
37RT	Reducing Tee Threaded	1×1×1/2, 3/4, 1-1/4, 1-1/2 1×1-1/4×1 1-1/4×1-1/4×1/2, 3/4, 1, 1-1/2, 2 1-1/4×1×1/2, 3/4, 1, 1-1/4, 1-1/2, 1-1/4×3/4×1-1/4 1-1/4×1/2×1-1/4 1-1/2×1-1/2×1/2, 3/4, 1, 1, 1-1/4, 2 1-1/2×1-1/4×1/2, 3/4, 1, 1-1/4, 1-1/2, 2 1-1/2×1×1/2, 3/4, 1, 1-1/4, 1-1/2, 2 1-1/2×3/4×1-1/4, 1-1/2 1-1/2×1/2×1-1/4, 1-1/2 2×2×1/2, 3/4, 1, 1-1/4, 1-1/2, 2-1/2 2×1-1/2×1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2 2×1-1/4×1/2, 1, 1-1/4, 1-1/2, 2 2×1×3/4, 1, 1-1/4, 1-1/2, 2 2×1/2×2 2×2×2-1/2 2-1/2×2-1/2×1/2, 3/4, 1, 1-1/4, 1-1/2, 2 2×1-1/4×2-1/2 2×1×2-1/2 2×3/4×2-1/2 2-1/2×1/2×2, 2-1/2 3×3×1-1/4, 1-1/2, 2	300 (2070)	c
37T	Equal Tee Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	300 (2070)	c

- Remarks:
 a. Malleable Iron Fittings
 b. Ductile Iron Fittings
 c. Cast Iron Fittings



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
90	90° Elbows Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
	90° Elbows Threaded	5, 6	300 (2070)	a
90R	90° Reducing Elbow Threaded	1/2 x 1/4, 3/8 3/4 x 1/4, 3/8, 1/2 1 x 1/4, 3/8, 1/2, 3/4 1-1/4 x 3/8, 1/2, 3/4, 1 1-1/2 x 1/2, 3/4, 1, 1-1/4 2 x 1/2, 3/4, 1, 1-1/4, 1-1/2 2-1/2 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2 3 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2 4 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	500 (3445)	a
92	90° Street Elbow Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
	90° Street Elbow Threaded	6	300 (2070)	a
120	45° Elbow Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
	45° Elbow Threaded	5, 6	300 (2070)	a
121	45° Street Elbow Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
1221	Side Outlet Elbow Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
130	Tee Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
	Tee Threaded	5, 6	300 (2070)	a



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Product Designation	Fitting Description	Nominal Pipe Size, in.	Max Working Pressure, psi (kPa)	Remarks
130R	Reducing Tee Threaded	1/2×1/2×1/4, 3/8 1/2×1/4×1/2 1/2×3/8×1/2 3/4×3/4×1/4, 3/8, 1/2 3/4×1/2×1/2, 3/4 1×1×1/4, 3/8, 1/2, 3/4 1×1/2×1/2, 3/4, 1 1×3/4×1/2, 3/4, 1 1-1/4×1/2×1/2, 3/4, 1, 1-1/4 1-1/4×3/4×3/4, 1, 1-1/4 1-1/4×1×1/2, 3/4, 1, 1-1/4, 1-1/2 1-1/4×1-1/4×3/8, 1/2, 3/4, 1 1-1/2×1/2×3/4, 1-1/2 1-1/2×3/4×1/2, 3/4, 1, 1-1/4, 1-1/2 1-1/2×1×1/2, 3/4, 1, 1-1/4, 1-1/2 1-1/2×1-1/4×1/2, 3/4, 1, 1-1/4, 1-1/2, 2 1-1/2×1-1/2×1/2, 3/4, 1, 1-1/4 2×1/2×2 2×3/4×2 2×1×1, 1-1/2, 2 2×1-1/4×1, 1-1/4, 1-1/2, 2 2×1-1/2×1/2, 3/4, 1, 1-1/4, 1-1/2, 2 2×2×1/2, 3/4, 1, 1-1/4, 1-1/2 2-1/2×1-1/2×2, 2-1/2 2-1/2×2×2, 2-1/2 2-1/2×2-1/2×1/2, 3/4, 1, 1-1/4, 1-1/2, 2 3×2×2, 3 3×3×1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2 4×4×1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	500 (3445)	a
130R	Bullhead Tee Threaded	3/8×3/8×1/2 1/2×1/2×3/4, 1 3/4×3/4×1 1×1×1-1/4, 1-1/2, 2 1-1/4×1-1/4×1-1/2, 2	500 (3445)	a



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
		1-1/2×1-1/2×2 2×2×2-1/2		
134	Service Tee Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
165	Lateral Y Branch Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
180	Cross Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
	Cross Threaded	5, 6	300 (2070)	a
180R	Reducing Cross Threaded	3/4×1/2 1×3/4 1-1/4×3/4, 1 1-1/2×3/4, 1/1-1/4 2×3/4, 1/1-1/4, 1-1/2 2-1/2×1, 1-1/4, 1-1/2, 2 3×1, 1-1/4, 1-1/2, 2, 2-1/2 4×2-1/2, 3	500 (3445)	a
220	Coupling Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
240	Reducing Coupling Threaded	1/2×3/8 3/4×3/8, 1/2 1×3/8, 1/2, 3/4 1-1/4×1/2, 3/4, 1 1-1/2×1/2, 3/4, 1, 1-1/4 2×1/2, 3/4, 1, 1-1/4, 1-1/2 2-1/2×1-1/2, 2 3×1-1/2, 2, 2-1/2 4×2, 3	500 (3445)	a
241	Bushing Threaded	1/2×1/4, 3/8 3/4×3/8, 1/2 1×1/2, 3/4	500 (3445)	a



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
241	Bushing Threaded	1-1/4×1/2, 3/4, 1 1-1/2×3/8, 1/2, 3/4, 1, 1-1/4 2×3/8, 1/2, 3/4, 1, 1-1/4, 1-1/2 2-1/2×1/2, 3/4, 1, 1-1/4, 1-1/2, 2 3×1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2 3-1/2×2-1/2, 3 4×3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 3-1/2	500 (3445)	a
		5×2, 3, 4 6×2, 2-1/2, 3, 3-1/2, 4, 5	300 (2070)	a
280	Hex Nipple Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2	500 (3445)	a
291	Plug, Sq. Hd. Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
291-4	Plug, Cross slotted Threaded	4	500 (3445)	a
	Plug, Cross slotted Threaded	5, 6	300 (2070)	a
291N	Plug, Sq. Socket Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
291S	Plug, Solid Sq. Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
300	Cap Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a
	Cap Threaded	5, 6	300 (2070)	a
321	Flange	1/2, 3/4, 1, 1-1/4, 1-1/2, 2	500 (3445)	a
342	Unions Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
529	Extension Piece Threaded	1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	500 (3445)	a

Remarks:

a. Malleable Iron Fittings

<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
90	Std. 90° Elbow Grooved	1 133 mm	500 (3445)	b
	Std. 90° Elbow Grooved	267.4, 318.5 mm	300 (2070)	b
90S	90° Short Radius Elbow Grooved	108, 159, 216.3 mm	300 (2070)	b
90R	90° Reducing Elbow Grooved	6 x 4 88.9 x 76.1 mm 114.3 x 76.1 mm 165.1 x 114.3 mm	500 (3445)	b
120	45° Elbow Grooved	1 108, 139.7, 159 mm	500 (3445)	b
	45° Elbow Grooved	216.3, 267.4, 318.5 mm	300 (2070)	b
110	22.5° Elbow Grooved	1-1/4, 1-1/2, 2, 3, 4, 6 76.1, 108, 139.7, 159, 165.1 mm	500 (3445)	b
	22.5° Elbow Grooved	8	300 (2070)	b
105	11.25° Elbow Grooved	1-1/4, 1-1/2, 2, 3, 4, 6 76.1, 108, 139.7, 159, 165.1 mm	500 (3445)	b
	11.25° Elbow Grooved	8	300 (2070)	b



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
130	Equal Tee Grooved	1 133, 139.7 mm	500 (3445)	b
		267.4 mm	300 (2070)	b
130S	Short Radius Tees Grooved Ends	108, 159, 216.3 mm	300(2070)	b
130R	Reducing Te Grooved	2 x 1 2-1/2 x 1-1/2, 2 3 x 1-1/4 4 x 1-1/2 76.1 x 42.4, 48.3, 60.3 mm 88.9 x 76.1 mm 108 x 60.3, 73, 88.9 mm 114.3 x 76.1, 88.9 mm 133 x 60.3, 76.1, 108, 114.3 mm 139.7 x 48.3, 60.3, 76.1, 88.9, 114.3 mm 159 x 60.3, 76.1, 88.9, 108, 114.3, 133 mm	500 (3445)	b
	Reducing Te Grooved	10 x 6, 8 12 x 8, 10 165.1 x 60.3, 76.1, 88.9, 114.3, 133, 139.7, 159 mm 168.3 x 76.1, 139.7 mm 216.3 x 165.1 mm 219.1 x 76.1, 108, 133, 139.7, 159, 165.1 mm 273 x 165.1 mm 323.9 x 165.1 mm	300 (2070)	b
131	Equal Te Grooved	3, 4, 6	300 (2070)	b
131R	Reducing Tee Grooved	2 x 1, 1-1/2 2-1/2 x 1, 1-1/4, 3 x 1, 1-1/4, 1-1/2, 2 4 x 1, 1-1/4, 1-1/2, 2, 3	300 (2070)	b



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
131R	Reducing Tee Grooved	6 x 2, 3 8 x 2, 3, 4 76.1 x 33.7, 42.4, 48.3, 60.3 mm 88.9 x 76.1 mm 108 x 60.3, 76.1, 88.9 mm 114.3 x 76.1 mm 133 x 60.3, 76.1, 88.9 mm 139.7 x 33.7, 42.4, 48.3, 60.3, 76.1, 88.9 mm 159 x 60.3, 76.1, 88.9 mm 165.1 x 33.7, 42.4, 48.3, 60.3, 76.1, 88.9, 114.3 mm 168.3 x 76.1 mm 219.1 x 76.1 mm	300 (2070)	b
180	Equal Cross Grooved	108, 139.7, 159 mm	500 (3450)	b
180R	Reducing Cross Grooved	3 x 2 4 x 2, 3 8 x 2, 4 139.7 x 114.3 mm 159 x 108 mm 165.1 x 60.3, 76.1, 88.9, 114.3 mm	500 (3450)	b
	Reducing Cross Grooved	219.1 x 139.7, 159, 165.1 mm	300 (2070)	b
181R	Reducing Cross Grooved	4 x 1, 1-1/4, 1-1/2, 2 165.1 x 60.3 mm	300 (2070)	b
240	Concentric Reducer Grooved	1-1/4 x 1 1-1/2 x 1, 1-1/4 4 x 1-1/4 5 x 2-1/2 76 x 42, 48, 60 mm 89 x 76 mm 108 x 60.3, 73, 76 mm 114.3 x 76.1 mm	500 (3450)	b



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
240	Concentric Reducer Grooved	133 x 108, 114.3 mm 139.7 x 60.3, 76.1, 88.9, 114.3 mm 159 x 60.3, 76.1, 88.9, 108, 114.3, 133 mm 165.1 x 60.3, 76.1, 88.9, 114.3, 139.7 mm 168.3 x 76.1, 139.7 mm	500 (3450)	b
		216.3 x 114.3, 165.1 mm 219.1 x 108, 139.7, 159, 165.1 mm 273 x 159, 165.1, 168.3, 219.1 mm 322.9 x 219.1, 273 mm	300 (2070)	b
240N	Concentric Reducer Grooved x Female NPT	4 x 1/2, 3/4, 1-1/4 8 x 1-1/2, 2 76 x 21, 27, 34, 42, 48, 60 mm 89 x 76 mm 108 x 34, 42, 48, 60, 76, 89 mm 114 x 76 mm 133 x 48, 76 mm 140 x 27, 34, 42, 48, 60, 76, 89, 114 mm 159 x 27, 34, 42, 48, 60, 89, 114 mm 165 x 21, 27, 34, 42, 48, 60, 76, 89, 114 mm 219 x 76 mm	500 (3450)	b
240W	Concentric Reducer Grooved x Male NPT	76 x 60 mm	500 (3450)	b
230	Reducing Coupling, Eccentric Grooved	4 x 2, 3 6 x 3, 4 8 x 4 88.9 x 60.3 mm 108 x 76.1, 88.9 mm 114.3 x 76.1 mm 139.7 x 114.3 mm 159 x 108, 114.3 mm 165.1 x 88.9, 114.3, 139.7 mm	300 (2070)	b



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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
230	Reducing Coupling, Eccentric Grooved	168.3 x 139.7 mm	300 (2070)	b
230N	Reducing Coupling, Eccentric Grooved x Female NPT	108 x 76.1 mm 114.3 x 76.1 mm 139.7 x 88.9 mm 165.1 x 88.9 mm	300 (2070)	b
300	Cap Grooved	1 3 x 1/2, 1, 1-1/2 4 x 1/2, 1, 1-1/2 6 x 1-1/2 76.1 x 48.3 mm 108, 133, 139.7, 159, 216.3 mm 165.1 x 21.3, 33.7 mm	500 (3450)	b

Remarks:

b. Ductile Iron Fittings



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Certificate of Compliance

Manufactured by:

Jinan Meide Casting Co. Ltd.
No. 3 Nanmen Road
Pingyin, Jinan, Shangdong Province 250400
China

FM Approvals Class: 1920, dated November 2007

Approval Identification: 3034638

Approval Granted: December 18, 2009

Said Approval is subject to satisfactory field performance, continuing follow-up Facilities and Procedures Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

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A handwritten signature in black ink, appearing to read 'Richard B. Dunne', written over a horizontal line.

Richard B. Dunne, Manager
Hydraulics Group
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062

December 28, 2009
Date



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