

APPROVED

Certificate of Compliance

FLEXIBLE AND RIGID PIPE COUPLINGS, MECHANICAL TEES and SPLIT FLANGES

The following products are FM Approved for Shanghai Vision Mechanical Joint Co. Ltd. when manufactured at the plants listed on page 6:

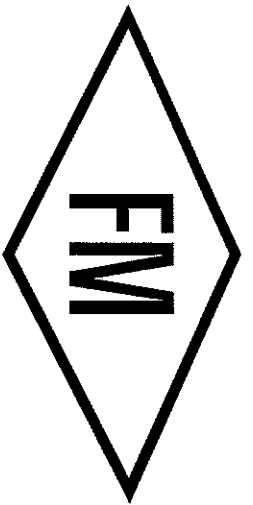
<i>Product Designation</i>	<i>Nominal Pipe Size, in./mm</i>	<i>Pipe Ends</i>	<i>Remarks</i>	<i>Max Working Pressure, psi (kPa)</i>
001	1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12	Cut Grooved Rolled Groove	a, b, c, d, e	300 (2070)
001	45, 57, 76, 108, 133, 140, 159, 165 mm	Cut Groove Rolled Groove	a, b, c, d, e	300 (2070)
001A	1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8	Cut Grooved Rolled Groove	a, b, c, d, e,	300 (2070)
001A	76, 108, 133, 140, 159, 165 mm	Cut Groove Rolled Groove	a, b, c, d, e	300 (2070)

Remarks:

- a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller - Schedule 40; 8 in. 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. With EPDM gasket.
- d. For use with Chinese Standard GB/T 3091-1993, GB/T 3092-1993 welded steel pipe with pipe wall thicknesses comparable to same size ASME B16.10M-2000, Schedule 40 pipe (8 in. NPS - Schedule 30).
- e. For use with Chinese Standard GB/T 17395-1998 seamless steel pipe with pipe wall thicknesses comparable to same size ASME B16.10M-2000, Schedule 40 pipe (8 in. NPS - Schedule 30).



Member of the FM Global Group



APPROVED

Certificate of Compliance

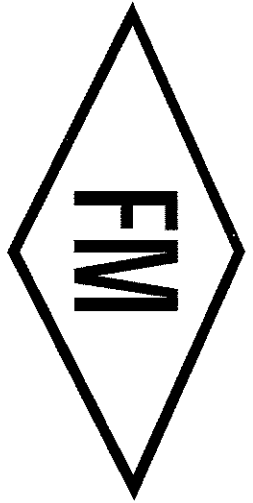
Product Designation	Nominal Pipe Size, in./mm	Pipe Ends	Remarks	Max Working Pressure, psi (kPa)
101H	1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12	Cut Grooved Rolled Groove	a, b, c, d, e	300 (2070)
101H	76, 140, 165 mm	Cut Grooved Rolled Groove	a, b, c, d, e	300 (2070)
101	1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12	Cut Grooved Rolled Groove	a, b, c, d, e	300 (2070)
101	57, 76, 108, 133, 140, 159, 165 mm	Cut Groove Rolled Groove	a, b, c, d, e	300 (2070)

Remarks:

- a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller - Schedule 40; 8 in. 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. With EPDM gasket.
- d. For use with Chinese Standard GB/T 3091-1993, GB/T 3092-1993 welded steel pipe with pipe wall thicknesses comparable to same size ASME B16.10M-2000, Schedule 40 pipe (8 in. NPS - Schedule 30).
- e. For use with Chinese Standard GB/T 17395-1998 seamless steel pipe with pipe wall thicknesses comparable to same size ASME B16.10M-2000, Schedule 40 pipe (8 in. NPS - Schedule 30).



Member of the FM Global Group



APPROVED

Certificate of Compliance

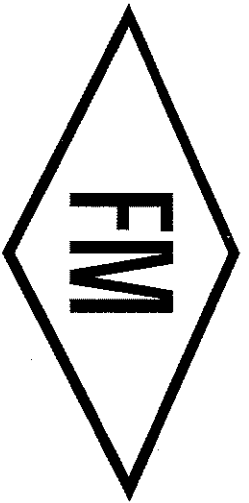
Product Description	Nominal Pipe Size, in./mm	Pipe Ends	Remarks	Max Working Pressure, psi (kPa)
020	1-1/2x1-1/4, 2x1-1/4, 2x1-1/2, 2-1/2x2, 76x2, 3x2, 3x2-1/2, 3x76, 4x2, 4x2-1/2, 4x76, 4x3	Cut Grooved Rolled Groove	a, b, c, d, e	300 (2070)
020	140x3, 140x4, 5x3, 5x4, 165x4, 165x140, 6x4, 6x5, 8x165, 8x6 in.	Cut Grooved Rolled Groove	c, f	300 (2070)

Remarks:

- a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller – Schedule 40; 8 in. 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. With EPDM gasket.
- d. For use with Chinese Standard GB/T 3091-1993, GB/T 3092-1993 welded steel pipe with pipe wall thicknesses comparable to same size ASME B16.10M-2000, Schedule 40 pipe (8 in. NPS – Schedule 30).
- e. For use with Chinese Standard GB/T 17395-1998 seamless steel pipe with pipe wall thicknesses comparable to same size ASME B16.10M-2000, Schedule 40 pipe (8 in. NPS – Schedule 30).
- f. For use on Schedule 40 pipe only.



Member of the FM Global Group



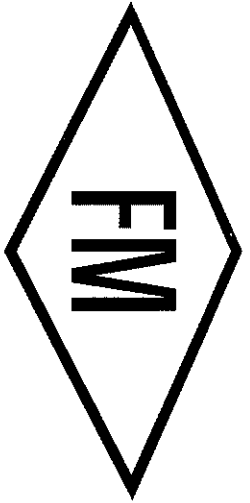
APPROVED

Certificate of Compliance

Product Designation	Pipe Actual Size in./mm	Fitting Description	Remarks	Max Working Pressure, psi (MPa)
301	57x1, 57x1-1/4, 57x1-1/2, 2x1, 2x1-1/4, 2x1-1/2, 2-1/2x1, 2-1/2x1-1/4, 2-1/2x1-1/2, 2-1/2x2, 76x1, 76x1-1/4, 76x1-1/2, 76x57, 76x2, 3x1, 3x1-1/4, 3x1-1/2, 3x57, 3x2, 3x2-1/2, 3x76, 108x1, 108x1-1/4, 108x1-1/2, 108x57, 108x2, 108x76, 108x3, 4x1, 4x1-1/4, 4x1-1/2, 4x57, 4x2, 4x2-1/2, 4x76, 4x3, 133x1, 133x1-1/4, 133x1-1/2, 133x57, 133x2, 133x76, 133x3, 133x108, 133x4, 140x1, 140x1-1/4, 140x1-1/2, 140x57, 140x2, 140x76, 140x3, 140x108, 140x4, 5x1, 5x1-1/4, 5x1-1/2, 5x2, 5x2-1/2, 5x3, 5x4, 159x1, 159x1-1/4, 159x1-1/2, 159x57, 159x2, 159x76, 159x3, 159x108, 159x4, 165x1, 165x1-1/4, 165x1-1/2, 165x57, 165x2, 165x2-1/2, 165x76, 165x3, 165x108, 165x4, 6x1, 6x1-1/4, 6x1-1/2, 6x2, 6x2-1/2, 6x3, 6x4, 8x1, 8x1-1/4, 8x1-1/2, 8x57, 8x2, 8x2-1/2, 8x76, 8x3, 8x108, 8x4	Mechanical Tee (Grooved Outlet)	a, b, c	300 (2070)
302	57x1/2, 57x3/4, 57x1, 57x1-1/4, 57x1-1/2, 2x1/2, 2x3/4, 2x1, 2x1-1/4, 2x1-1/2, 2-1/2x1/2, 2-1/2x3/4, 2-1/2x1, 2-1/2x1-1/4, 2-1/2x1-1/2, 2-1/2x2, 76x1/2, 76x3/4, 76x1, 76x1-1/4, 76x1-1/2, 76x2, 3x1/2, 3x3/4, 3x1, 3x1-1/4, 3x1-1/2, 3x2, 3x2-1/2, 3x76, 108x1/2, 108x3/4, 108x1, 108x1-1/4, 108x1-1/2, 108x2, 108x76, 108x3, 4x1/2, 4x3/4, 4x1, 4x1-1/4, 4x1-1/2, 4x2, 4x2-1/2, 4x76, 4x3, 133x1/2, 133x3/4, 133x1, 133x1-1/4, 133x1-1/2, 133x2, 133x76, 133x3, 140x1, 140x1-1/4, 140x1-1/2, 140x2, 140x76, 140x3, 5x1, 5x1-1/4, 5x1-1/2, 5x2, 5x3, 159x1/2, 159x3/4, 159x1, 159x1-1/4, 159x1-1/2, 159x2, 159x76, 159x3, 159x4, 165x1/2, 165x3/4, 165x1, 165x1-1/4, 165x1-1/2, 165x2, 165x2-1/2, 165x76, 165x3, 165x4, 6x1/2, 6x3/4, 6x1, 6x1-1/4, 6x1-1/2, 6x2, 6x2-1/2, 6x76, 6x3, 6x4, 8x1/2, 8x3/4, 8x1, 8x1-1/4, 8x1-1/2, 8x2, 8x2-1/2, 8x76, 8x3, 8x4	Mechanical Tee (Threaded Outlet)		300 (2070)



Member of the FM Global Group



APPROVED

Certificate of Compliance

Product Designation	Pipe Actual Size in./mm	Fitting Description	Remarks	Max Working Pressure, psi (kPa)
300U	1-1/4x1/2, 1-1/4x3/4, 1-1/4x1, 1-1/2x1/2, 1-1/2x3/4, 1-1/2x1, 2x1/2, 2x3/4, 2x1, 2-1/2x1/2, 2-1/2x3/4, 2-1/2x1, 3x1/2, 3x3/4, 3x1, 4x1/2, 4x3/4, 4x1	U-Bolt Mechanical Tees (Threaded Outlet)	a, b, c	300 (2070)

Remarks:

- a. Min schedule cut groove pipe to be joined: 6 in. or smaller – Schedule 40; 8 in. or larger – Schedule 30.
- b. Min schedule rolled groove pipe to be joined: 6 in. or smaller – Schedule 10; 8 in. or larger – 0.188 in. (5 mm) wall.
- c. With EPDM gasket.

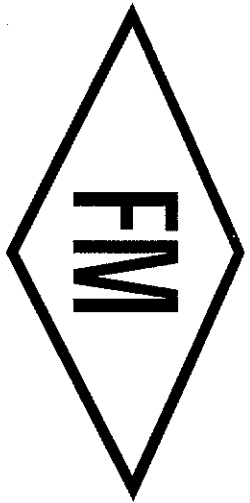
Product Description	Nominal Pipe Size, in./mm	Pipe Ends	Remarks	Max Working Pressure, psi (kPa)
007	2, 2-1/2, 3, 4, 5, 6, 8 76, 108, 133, 140, 159, 165 mm	Cut Grooved Rolled Grooved	a, b, c, d, e	300 (2070)

Remarks:

- a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller – Schedule 40; 8 in. 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. With EPDM gasket.
- d. For use with Chinese Standard GB/T 3091-1993, GB/T 3092-1993 welded steel pipe with pipe wall thicknesses comparable to same size ASME B16.10M-2000, Schedule 40 pipe (8 in. NPS – Schedule 30).
- e. For use with Chinese Standard GB/T 17395-1998 seamless steel pipe with pipe wall thicknesses comparable to same size ASME B16.10M-2000, Schedule 40 pipe (8 in. NPS – Schedule 30).



Member of the FM Global Group



APPROVED

Certificate of Compliance

Manufactured by:

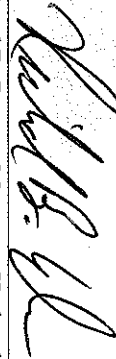
Shanghai Vision Mechanical Joint Co., Ltd.
No.221 Jinlan Rd, Jiading Industrial Park
Jiading, Shanghai, P.R.China 201807

Ningbo Vision Pipefitting Co., Ltd.
Xinquan Villa, Xiaogang, Beilun District,
Ningbo City, Zhejiang Province, P.R.China 315821

FM Approvals confirms that the items have been found to comply with the following standard:

FM Approval Standard 1920, dated November 2007

Project Identifier	Date of Approval
3035692	August 18, 2009
3033311	August 14, 2008
3030749	April 18, 2008
3026053	August 31, 2007
3017719	September 30, 2004


Richard B. Dunne, Manager, Hydraulics Group

Date August 18, 2009



Member of the FM Global Group