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APPROVAL REPORT

MEGAPRESS AND PROGRESS FITTINGS

Prepared for:

**Viega LLC
301 N Main, Fl 9
Wichita, KS 67202-4806
United States**

Project ID: 3044100

Class: 1920

Date of Approval: May 21, 2012

Authorized by:



Richard Dunne, Group Manager, Fire Protection

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MegaPress and ProPress Fittings

from

**VIEGA LLC
301 N MAIN, FL 9
WICHITA, KS 67202-4806
UNITED STATES**

I INTRODUCTION

- 1.1 Viega LLC requested an Approval examination of their MegaPress couplings and fittings for use with Schedule 40 steel pipe.
- 1.2 Viega LLC requested an Approval examination previously Approved copper ProPress fittings in additional sizes.
- 1.3 This Report is limited to the examination of the MegaPress and ProPress fittings in accordance with the standards listed below as described in Section II of this Report.
- 1.4 This Report may be freely reproduced only in its entirety and without modification.
- 1.5 **Standard:**

Title	Class Number	Date
Pipe Couplings and Fittings for Aboveground Fire Protection Systems	1920	November 2007

- 1.6 **Listing:** The products discussed in this Report will appear in the Approval Guide, an online resource of FM Approvals, under the heading Automatic Sprinkler Systems/Pipes and Fittings for Aboveground/Pipe Fittings/Compression Type as follows:

<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Copper Pipe Size, in.</i>	<i>Max. Pressure Rating psi (kPa)</i>	<i>Remarks</i>
Pro-Press	Tee Reducing Branch (Copper) (P x P x P)	2 1/2 x 2 x 2 2 1/2 x 2 1/2 x 1; 1 1/4; 3 x 2 1/2 x 3 3 x 3 x 1 1/4	175 (1205)	a
MegaPress	Adapter (PxM)	1/2; 3/4; 1; 1 1/4; 1 1/2; 2	175 (1205)	b
	Adapter (PxP)	1/2; 3/4; 1; 1 1/4; 1 1/2; 2	175 (1205)	b
	Adapter, Reducing (PxP)	3/4 x 1/2; 1 x 3/4; 1 1/4 x 1; 1 1/2 x 1 1/4; 2 x 1 1/2	175 (1205)	b
	Coupling w/ Stop (PxP)	1/2; 3/4; 1; 1 1/4; 1 1/2; 2	175 (1205)	b
	Coupling w/ no Stop (PxP)	1/2; 3/4; 1; 1 1/4; 1 1/2; 2	175 (1205)	b
	Union (PxP)	1/2; 3/4; 1; 1 1/4; 1 1/2; 2	175	b

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<i>Product Designation</i>	<i>Fitting Description</i>	<i>Nominal Copper Pipe Size, in.</i>	<i>Max. Pressure Rating psi (kPa)</i>	<i>Remarks</i>
			(1205)	
	Elbow 90° (PxP)	½; ¾; 1; 1 ¼; 1 ½; 2	175 (1205)	b
	Elbow 45° (PxP)	½; ¾; 1; 1 ¼; 1 ½; 2	175 (1205)	b
	Tee, Equal (PxP)	½; ¾; 1; 1 ¼; 1 ½; 2	175 (1205)	b
	Tee, Reducing (PxPxP)	¾ x ¾ x ½; 1 x 1 x ½, ¾; 1 ½ x 1 ½ x ½, ¾, 1, 1 ¼; 2 x 2 x ½, ¾, 1, 1 ¼, 1 ½	175 (1205)	b
	Tee, Reducing (PxPxF)	¾ x ¾ x ½; 1 x 1 x ½, ¾; 1 ½ x 1 ½ x ½, ¾, 1, 1 ¼; 2 x 2 x ½, ¾, 1, 1 ¼, 1 ½	175 (1205)	b

P = Press Joint, T = Tube Joint, F = Female NPT, M = Male NPT

Remarks:

- a. Copper and Bronze "Pro-Press" couplings and fittings. FM Approved for use with ASTM B-88 copper pipe in wet pipe systems. Fittings must be installed with Viega pressing tools Models 320-E (1-4 inch), CT-400 (1-2 inch only) and 100B (1-4 inch).
- b. Steel "MegaPress" couplings and fittings. FM Approved for use with Schedule 40 steel pipe in wet systems. Fittings must be installed with one of the following pressing tools : Rigid Model RP330B with MegaPress Jaws; Rigid Model RP330C with MegaPress Jaws

DESCRIPTION

- 2.1 The MegaPress fittings discussed in this Report are used to connect plain end Schedule 40 steel pipe, by means of a compression joint.
- 2.2 The ProPress fittings discussed in this Report are used to connect plain end ASTM B-88 copper pipe, by means of a compression joint.
- 2.3 These joints are made by using a power head and appropriately sized jaws for each diameter of pipe. The power heads and jaws are available from the manufacturer.
- 2.4 The rated working pressure of the fittings discussed in this Report is 175 psi (1205 kPa)

III EXAMINATION AND TESTS

A desk examination of the requested sizes of ProPress fittings was conducted. It was determined that the design was similar to previously Approved sizes of reducing tees and no testing was deemed necessary.

Sample Megapress fittings were tested according with the test Matrix below. The sizes tested are considered representative of all sizes discussed in this Report.

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TEST MATRIX

Product	Size	Examination	Hydrostatic Strength	Bending Moment Resistance	Rotational Bending Moment Resistance	Vibration Resistance	Cycling Pressure Resistance	Vacuum Resistance	Hot Gasket Tests	Cold Gasket Tests	Fire Test	Leakage Test- Assy w/o Gasket	Friction Loss	Seismic Evaluation
		4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	4.11	4.12	4.13
Adapter P x M NPT	1/2"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter P x M NPT	3/4"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter P x M NPT	1"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter P x M NPT	1 1/4"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter P x M NPT	1 1/2"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter P x M NPT	2"	X	X	X	--	X	--	--	--	--	N/A	--	N/A	N/A
Adapter P x F NPT	1/2"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter P x F NPT	3/4"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter P x F NPT	1"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter P x F NPT	1 1/4"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter P x F NPT	1 1/2"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter P x F NPT	2"	X	X	X	--	X	--	--	--	--	N/A	--	N/A	N/A
Adapter Reducing P x F NPT	3/4" x 1/2"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter Reducing P x F NPT	1" x 3/4"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter Reducing P x F NPT	1 1/4" x 1"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A

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Product	Size	Examination	Hydrostatic Strength	Bending Moment Resistance	Rotational Bending Moment Resistance	Vibration Resistance	Cycling Pressure Resistance	Vacuum Resistance	Hot Gasket Tests	Cold Gasket Tests	Fire Test	Leakage Test- Assy w/o Gasket	Friction Loss	Seismic Evaluation
		4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	4.11	4.12	4.13
Adapter Reducing P x F NPT	1 1/2" x 1 1/4"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A
Adapter Reducing P x F NPT	2" x 1 1/2"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With Stop	1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With Stop	3/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With Stop	1"	X	X	X	--	X	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With Stop	1 1/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With Stop	1 1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With Stop	2"	X	X	X	--	X	--	--	--	--	N/A	--	N/A	N/A
Elbow 90° P x P	1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Elbow 90° P x P	3/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Elbow 90° P x P	1"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Elbow 90° P x P	1 1/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Elbow 90° P x P	1 1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Elbow 90° P x P	2"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Tee P x P x P	1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Tee P x P x P	3/4"	X	X	--	X	--	--	--	X	X	N/A	--	N/A	N/A
Tee P x P x P	1"	X	X	--	X	--	X	--	X	X	N/A	--	N/A	N/A

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Product	Size	Examination	Hydrostatic Strength	Bending Moment Resistance	Rotational Bending Moment Resistance	Vibration Resistance	Cycling Pressure Resistance	Vacuum Resistance	Hot Gasket Tests	Cold Gasket Tests	Fire Test	Leakage Test- Assy w/o Gasket	Friction Loss	Seismic Evaluation
		4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	4.11	4.12	4.13
Tee P x P x P	1 1/4"	X	X	--	X	--	X	--	X	X	N/A	--	N/A	N/A
Tee P x P x P	1 1/2"	X	X	--	X	--	--	--	X	X	N/A	--	N/A	N/A
Tee P x P x P	2"	X	X	--	X	--	X	--	X	X	N/A	--	N/A	N/A
Reducing Tee P x P x P	3/4" x 3/4" x 1/2"	X	--	--	--	--	--	X	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	1" x 1" x 1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	1" x 1" x 3/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	1 1/2" x 1 1/2" x 1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	1 1/2" x 1 1/2" x 3/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	1 1/2" x 1 1/2" x 1"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	1 1/2" x 1 1/2" x 1 1/4"	X	--	--	--	--	--	X	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	2" x 2" x 1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	2" x 2" x 3/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	2" x 2" x 1"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	2" x 2" x 1 1/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x P	2" x 2" x 1 1/2"	X	--	--	--	--	--	X	--	--	N/A	--	N/A	N/A

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Product	Size	Examination	Hydrostatic Strength	Bending Moment Resistance	Rotational Bending Moment Resistance	Vibration Resistance	Cycling Pressure Resistance	Vacuum Resistance	Hot Gasket Tests	Cold Gasket Tests	Fire Test	Leakage Test- Assy w/o Gasket	Friction Loss	Seismic Evaluation
		4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	4.11	4.12	4.13
Elbow 45° P x P	1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Elbow 45° P x P	3/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Elbow 45° P x P	1"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Elbow 45° P x P	1 1/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Elbow 45° P x P	1 1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Elbow 45° P x P	2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Union P x P	1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Union P x P	3/4"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Union P x P	1"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Union P x P	1 1/4"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Union P x P	1 1/2"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Union P x P	2"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	3/4" x 3/4" x 1/2"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	1" x 1" x 1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	1" x 1" x 3/4"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	1 1/2" x 1 1/2" x 1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	1 1/2" x 1 1/2" x	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A

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Product	Size	Examination	Hydrostatic Strength	Bending Moment Resistance	Rotational Bending Moment Resistance	Vibration Resistance	Cycling Pressure Resistance	Vacuum Resistance	Hot Gasket Tests	Cold Gasket Tests	Fire Test	Leakage Test- Assy w/o Gasket	Friction Loss	Seismic Evaluation
		4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	4.11	4.12	4.13
	3/4"													
Reducing Tee P x P x F NPT	1 1/2" x 1 1/2" x 1"	X	--	--	X	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	1 1/2" x 1 1/2" x 1 1/4"	X	X	--	X	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	2" x 2" x 1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	2" x 2" x 3/4"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	2" x 2 x 1"	X	--	--	X	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	2" x 2" x 1-1/4"	X	--	--	X	--	--	--	--	--	N/A	--	N/A	N/A
Reducing Tee P x P x F NPT	2" x 2" x 1-1/2"	X	X	--	X	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With No Stop	1/2"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With No Stop	3/4"	X	X	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With No Stop	1"	X	--	--	--	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With No Stop	1 1/4"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With No Stop	1 1/2"	X	X	X	--	--	--	--	--	--	N/A	--	N/A	N/A
Coupling P x P With No Stop	2"	X	--	--	--	--	--	--	--	--	N/A	X	N/A	N/A

3.1 Hydrostatic Test – 4 x r.w.p.

The items marked with an “X” in the above table were pressurized to four times the rated working pressure, and held for a period of 5 minutes. These fittings were deemed representative of all fittings discussed in this Report. There was no damage or deformation as a result of these tests. The results of these tests are considered satisfactory.

3.2 Bending Moment Resistance Tests

In a typical test, two lengths of pipe were joined with a coupling. The ends of the pipe are closed with end caps. The products listed in the above table, considered representative of all products discussed in this Report, were pressurized to the rated working pressure and supported in a test fixture with the joint of interest centered in that span. Force was applied to the center of the joint to deflect the assembly. This force represents the weight of water filled Schedule 40 pipe, assuming a hanger spacing of 15 feet (4.57 m), a missing hanger, and a factor of safety of 2. There was no damage or leakage as a result of these tests. The results of these tests are considered satisfactory.

3.3 Rotational Bending Moment Tests

Each assembly marked with an “X” in the table above was subjected to a rotational bending moment. The run pipe was secured to a test fixture while a moment was applied to the branch, tending to rotate the fitting around the centerline of the run pipe. Each sample was also subjected to a moment applied to the branch coplanar with the pipe axis. The required bending moment is based on the weight of water filled Schedule 40 pipe, one missing hanger, and a factor of safety of two. There was no evidence of leakage, cracking or rupture as a result of these tests. The results of these tests are considered satisfactory.

3.4 Vibration Test

Test assemblies were subjected to a vibration test. Assemblies were constructed with the joint of interest in the center of two sections of pipe, and the ends capped. Each assembly was pressurized to two times the rated working pressure for 5 minutes and the pressure released. The sample was mounted on a vibration table and pressurized to 80 psi (552 kPa). Each assembly was then subjected to the five frequencies of vibration listed below for a five hour duration at each setting. At the conclusion of the vibration testing, each sample was subjected to a two times rated working pressure hydrostatic test. There was no evidence of leaking, cracking or damage as a result of these tests. The results of these tests are considered satisfactory.

Total Stroke		Frequency	Time Duration
inch	mm	Hertz	Hours
0.020	0.51	28	5
0.040	1.04	28	5
0.150	3.81	28	5
0.040	1.04	18-37 (variable)	5
0.070	1.78	18-37 (variable)	5

3.5 Pressure Cycling Test

Test assemblies were constructed with the joint of interest in the center of two sections of pipe, and the ends capped. The samples were filled with water and pressurized to the rated working

pressure. The pressure was then cycled from zero to rated working pressure 20,000 times. At the conclusion of the pressure cycling, the samples were subjected to a four times rated working pressure hydrostatic test. There was no evidence of leaking, cracking or damage as a result of these tests. The results of these tests are considered satisfactory.

3.6 Vacuum Test

Test assemblies were constructed with the joint of interest in the center of two sections of pipe, and the ends capped. With the sample dry, the internal pressure was lowered to 25 inHg (85 kPa) vacuum pressure. Once the required vacuum was reached, a valve was closed and a started. There was no loss of vacuum observed over a period of five minutes. Following the vacuum test, the samples passed a two times rated working pressure hydrostatic leakage test satisfactorily. The results of these tests are considered satisfactory.

3.7 Hot Gasket Tests

In the hot gasket test, sample gaskets were assembled in a test setup consisting of a coupling and two short lengths of pipe, closed with end caps. The assemblies were hydrostatically pressurized to the rated working pressure and drained. The assemblies were placed in an environmental chamber and maintained at a temperature of 275°F (135°C) for 45 days. After exposure, the assemblies were cooled to room temperature and pneumatically pressurized to 50 psi (345 kPa). No leakage occurred. The assemblies were then disassembled and the gaskets removed and examined. The gaskets did not crack when squeezed from any two opposite points, and showed no signs of damage. The results of these tests are considered satisfactory.

3.8 Cold Gasket Tests

In the cold gasket test, sample gaskets were assembled in a test setup consisting of a coupling and two short lengths of pipe, closed with end caps. The assemblies were hydrostatically pressurized to the rated working pressure and drained. The assemblies were placed in an environmental chamber and maintained at a temperature of 5°F (-15°C) air exposure for 4 days. After exposure, the assemblies were removed from the chamber and immediately pneumatically pressurized to 50 psi (345 kPa). No leakage occurred. The assemblies were allowed to warm to room temperature and then disassembled and the gaskets removed and examined. The gaskets did not crack when squeezed from any two opposite points, and showed no signs of damage. The results of these tests are considered satisfactory.

3.9 Leakage without Gasket

A sample 2 inch coupling was installed between two sections of pipe without a gasket installed. A water supply was connected to one section of pipe and the opposite section was capped. Water pressure and flow were increased until the internal pressure of the sample reached 30 psi (205 kPa). The water flow out of the coupling was measured for one minute and recorded. Flow was below 32 gpm (120 L/min) at 30 psi (205 kPa). This result is acceptable.

IV MARKINGS

Markings on the exterior surface of the fittings include:

- the manufacturer's trademark
- the nominal size

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- the model number
- the FM Approvals Certification Mark
- the country of manufacture
- batch number

V REMARKS

The sample fittings discussed in this Report were examined and found to represent the design adequately. A complete set of drawings is kept on file at FM Approvals.

VI FACILITIES AND PROCEDURES AUDIT

The products described in this Report are FM Approved when manufactured at the following facilities:

Viega GmbH & Co. KG
Zum Langen Acker 4
Attendorn-Ennest, Germany 57439 or

Viega GmbH & Co. KG
An der Muhle 4
Grossheringen, Germany 99518

These manufacturing sites are part of FM Approvals audit program and are subject to follow-up audit inspections. The facilities and quality control procedures in place have been found to be satisfactory to manufacture product identical to that examined and tested as described in this Report.

VII MANUFACTURERS RESPONSIBILITIES

Documentation considered critical to this Approval is on file at FM Approvals and listed in the Documentation File, Section VIII of this Report. No changes of any nature shall be implemented unless notice of the proposed change has been given and written authorization obtained from FM Approvals. The Approved Product Revision Report, Form 797, shall be forwarded to FM Approvals as notice of proposed changes.

VIII DOCUMENTATION

The following drawings describe the fittings covered by this examination. They will be filed in the Hydraulics Information Center under P. I. 3024760 in order to consolidate files.

Drawing No.	Revision Level	Drawing Title
100246	M	Marking Versions ProPress Model 09...XL
101050	L	Marking Versions Megapress
154106	B	O-Ring
154107	B	O-Ring
154108	B	O-Ring
154109	B	O-Ring
154110	B	O-Ring
154111	B	O-Ring

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Drawing No.	Revision Level	Drawing Title
185567	C	Insert Adapter
187369	I	Tee with SC Propress XL-C 2-1/2x2-1/2x1
187377	H	Tee with SC Propress XL-C 2-1/2x2-1/2x1-1/4
187382	H	Tee with SC Propress XL-C 3x3x1-1/4
187482	F	Tee with SC Propress XL-C 2-1/2x2x2
245989	E	Tee with SC Propress XL-C 2-1/2x2x1
247847	D	Tee with SC Propress XL-C 3x2-1/2x3
266371	F	Unit T-Piece Iron Pipe Fitting 1/2
266453	D	Sleeve Iron Pipe Fitting Model 4815 417 1/2
266456	F	Sleeve Iron Pipe Fitting Model 4815 417 3/4
266463	F	Sleeve Iron Pipe Fitting Model 4815 417 1
266495	E	Sleeve Iron Pipe Fitting Model 4815 417 1-1/4
266503	E	Sleeve Iron Pipe Fitting Model 4815 417 1-1/2
266511	E	Sleeve Iron Pipe Fitting Model 4815 417 2
266524	E	Sliding Sleeve Megapress 1-1/2
266541	E	Unit T-Piece Iron Pipe Fitting 1
266614	F	Unit T-Piece Iron Pipe Fitting 1-1/4
266628	E	Unit T-Piece Iron Pipe Fitting 1-1/2
266656	F	Unit T-Piece Iron Pipe Fitting 2
291047	C	Verschraubung 1/2 (Union)
291322	C	Verschraubung 3/4 (Union)
291496	C	Verschraubung 1 (Union)
291567	C	Verschraubung 1-1/4 (Union)
291699	C	Verschraubung 1-1/2 (Union)
291738	D	Verschraubung 2 (Union)
296195	D	Unit Adapter Iron Pipe Fitting Model 4811 87E 1/2x1/2NPT
296216	E	Unit Adapter Iron Pipe Fitting Model 4811 87E 3/4x3/4NPT
296218	E	Unit Adapter Iron Pipe Fitting Model 4811 87E 1x1NPT
296220	F	Unit Adapter Iron Pipe Fitting Model 4811 87E 1-1/4x1-1/4NPT
296222	F	Unit Adapter Iron Pipe Fitting Model 4811 87E 1-1/2x1-1/2NPT
296224	D	Unit Adapter Iron Pipe Fitting Model 4811 87E 2x2NPT
296298	D	Unit Adapter Megapress 1/2x1/2NPT
296302	E	Unit Adapter Megapress 3/4x3/4NPT
296307	E	Unit Adapter Megapress 1x1NPT
296309	F	Unit Adapter Megapress 1-1/4x1-1/4NPT
296311	E	Unit Adapter Megapress 1-1/2x1-1/2NPT
296313	D	Unit Adapter Megapress 2x2NPT
296419	E	Unit Adapter Iron Pipe Fitting 3/4x1/2NPT
296439	F	Unit Adapter Iron Pipe Fitting 1x3/4NPT
296447	E	Unit Adapter Iron Pipe Fitting 1-1/4x1NPT
296451	E	Unit Adapter Iron Pipe Fitting 1-1/2x1-1/4NPT
297030	D	Unit T-Piece Iron Pipe Fitting 3/4x3/4x1/2
297033	D	Unit T-Piece Iron Pipe Fitting 1x1x1/2
297036	D	Unit T-Piece Iron Pipe Fitting 1x1x3/4
297051	E	Unit T-Piece Iron Pipe Fitting 1-1/2x1-1/2x1/2
297054	D	Unit T-Piece Iron Pipe Fitting 1-1/2x1-1/2x3/4
297057	D	Unit T-Piece Iron Pipe Fitting 1-1/2x1-1/2x1
297063	D	Unit T-Piece Iron Pipe Fitting 1-1/2x1-1/2x1-1/4

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Drawing No.	Revision Level	Drawing Title
297066	D	Unit T-Piece Iron Pipe Fitting 2x2x1/2
297069	D	Unit T-Piece Iron Pipe Fitting 2x2x3/4
297072	D	Unit T-Piece Iron Pipe Fitting 2x2x1
297075	D	Unit T-Piece Iron Pipe Fitting 2x2x1-1/4
297081	D	Unit T-Piece Iron Pipe Fitting 2x2x1-1/2
297185	D	Unit T-Piece Iron Pipe Fitting 3/4x3/4x1/2NPT
297188	D	Unit T-Piece Iron Pipe Fitting 1x1x1/2NPT
297190	D	Unit T-Piece Iron Pipe Fitting 1x1x3/4 NPT
297198	C	Unit T-Piece Iron Pipe Fitting 1-1/2x1-1/2x1/2 NPT
297200	C	Unit T-Piece Iron Pipe Fitting 1-1/2x1-1/2x3/4 NPT
297207	C	Unit T-Piece Iron Pipe Fitting 2x2x1/2 NPT
297209	C	Unit T-Piece Iron Pipe Fitting 2x2x3/4 NPT
315082	B	Bogen Megapress 1/2 1x1 90
315117	B	Bogen Megapress 3/4 1x1 90
315128	B	Bogen Megapress 1 1x1 90
315139	B	Bogen Megapress 1-1/4 1x1 90
315164	B	Bogen Megapress 1-1/2 1x1 90
315170	B	Bogen Megapress 2 1x1 90
315220	B	Bogen Megapress 1/2 1x1 45
315254	B	Bogen Megapress 3/4 1x1 45
315260	B	Bogen Megapress 1 1x1 45
315278	B	Bogen Megapress 1-1/4 1x1 45
315296	B	Bogen Megapress 1-1/2 1x1 45
315298	B	Bogen Megapress 2 1x1 45
341165	A	Sliding Sleeve Megapress 1/2
341178	A	Sliding Sleeve Megapress 3/4
341201	A	Sliding Sleeve Megapress 1
341245	A	Sliding Sleeve Megapress 1-1/4
341254	A	Sliding Sleeve Megapress 1-1/2
341335	A	Sliding Sleeve Megapress 2
362753	B	Reducer 3/4x1/2
362765	B	Reducer 1x1/2
362792	B	Reducer 1x3/4
362811	C	Reducer 1-1/4x1
362838	B	Reducer 1-1/2x3/4
362846	B	Reducer 1-1/2x1
362853	C	Reducer 1-1/2x1-1/4
362868	D	Reducer 2x1
362872	C	Reducer 2x1-1/4
362877	C	Reducer 2x1-1/2
84483	D	Marking ProPress Model 29..
84635	A	Marking ProPress Model 2916
84636	A	Marking Versions ProPress Model 29161
84637	A	Marking Versions ProPress Model 2926
84638	B	Marking Versions ProPress Model 29261
84639	D	Marking Versions ProPress Model 2918
84641	A	Marking Versions ProPress Model 2915...
84642	B	Marking Versions ProPress Model 29151

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Drawing No.	Revision Level	Drawing Title
84643	B	Marking Versions ProPress Model 29152
84644	A	Marking Versions ProPress Model 2956

IX CONCLUSION

- 9.1 The products described in Section 1.6 of this Report, when manufactured at the facilities listed in Section VI, meet FM Approval requirements.
- 9.2 Since a duly signed Master Agreement is on file for this manufacturer, Approval is effective as of the date of this signed Approval Report.

EXAMINATION BY:

Bruce Wood

TESTING PERFORMED BY:

James Horn

ORIGINAL DATA FILED IN:

Project Data Record P. I. 3044100

REPORT BY:

REPORT REVIEWED BY:



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