



DESIGN AND INNOVATION

F.S.S.

(Fire Suppression System)

**Installation/User's/Parts Manual
For Large Dryer Models 200 and Up**

American Dryer Corporation
88 Currant Road
Fall River, MA 02720-4781
Telephone: (508) 678-9000 / Fax: (508) 678-9447
E-mail: techsupport@amdry.com
www.amdry.com

F.S.S. In Action



The exclusive Fire Suppression System (F.S.S.) will extinguish fires that may start in the drying basket (tumbler). A series of sensors positioned throughout the basket (tumbler) and interfaced with the microprocessor will trigger the F.S.S. water jets to quickly extinguish the flames. The water jets remain on for 2 minutes and will automatically activate again if a fire condition remains or reignites. While the water jets are activated, the basket (tumbler) will jog to move the water throughout the load. The microprocessor will display that the system was activated and will continue to display until the dryer is attended to.

We have tried to make this manual as complete as possible and hope you will find it useful. **ADC** reserves the right to make changes from time to time, without notice or obligation, in prices, specifications, colors, and material, and to change or discontinue models.

BEFORE YOU START!

CHECK LOCAL CODES AND PERMITS

Call your local water company or the proper municipal authority for information regarding local codes.

IMPORTANT: It is your responsibility to have **ALL** plumbing connections made by a qualified professional to assure that the plumbing installation is adequate and conforms to local, state, and federal regulations or codes.

IMPORTANT: It is the installation or owners responsibility to see that the necessary or required water, water pressure, pipe size, or connections are provided. Manufacturer assumes no responsibility if the fire suppression system (F.S.S.) **is not** connected, installed, or maintained properly.

WARNING: Water **must be** supplied to F.S.S. or dryer **will not** operate.

INSTALLATION

1. Requirements

The connection point to the electric water solenoid valve is a 1/2" M.P.T., the F.S.S. **must be** supplied with a minimum water pipe size of 1/2-inch and be provided with a minimum of 40 PSI (2.75 bars) and a maximum of 100 PSI (6.89 bars) of pressure. For use of optional manual bypass, a second source with the same piping and pressure requirements is required.

Flexible 1/2 feeds **must be** provided to avoid damage to electric water solenoid valve by vibration (for non-tilt models only).

IMPORTANT: Flexible supply line/coupling **must be** used. Solenoid valve failure due to hard plumbing connections will VOID THE WARRANTY (for non-tilt models only).

If the rear area of the dryer, or the water supply is located in an area where it will be exposed to cold/freezing temperatures, provisions **must be** made to protect these water lines from freezing.

WARNING: If the water in the supply line or water solenoid valve freezes, the F.S.S. **will be** INOPERATIVE!!

2. Water Connections:

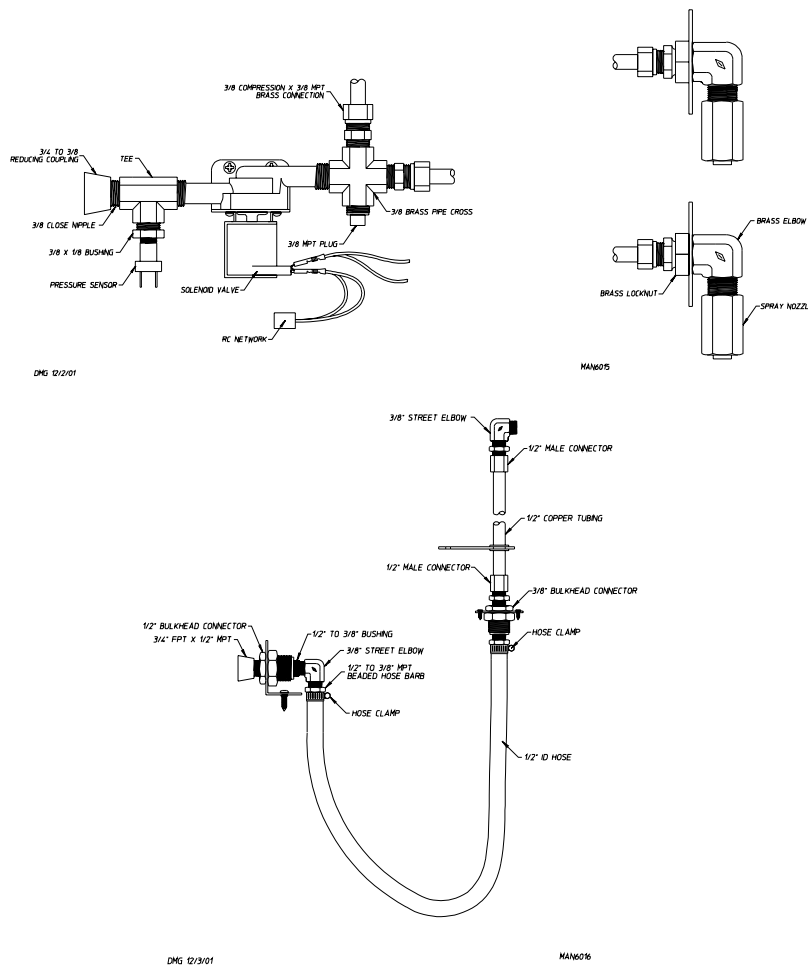
The water connection is made to the 3/4" F.P.T. bushing of the electric water solenoid valve located at the rear upper left area of the dryer (see photo). The water solenoid valve has a 1/2" M.P.T. connection and a 1/2" bushing is supplied to provide the minimum 1/2-inch supply (feed) line. Flexible supply line/coupling **must be** used in effort to avoid damage to electric water solenoid valve.



WARNING: Water *must be* supplied to F.S.S. or dryer **will not** operate.

IMPORTANT: Flexible supply line/coupling *must be* used. Solenoid valve failure due to hard plumbing connections will VOID THE WARRANTY. It is recommended that a filter or strainer be installed in the water supply line.

Typical water supply ...

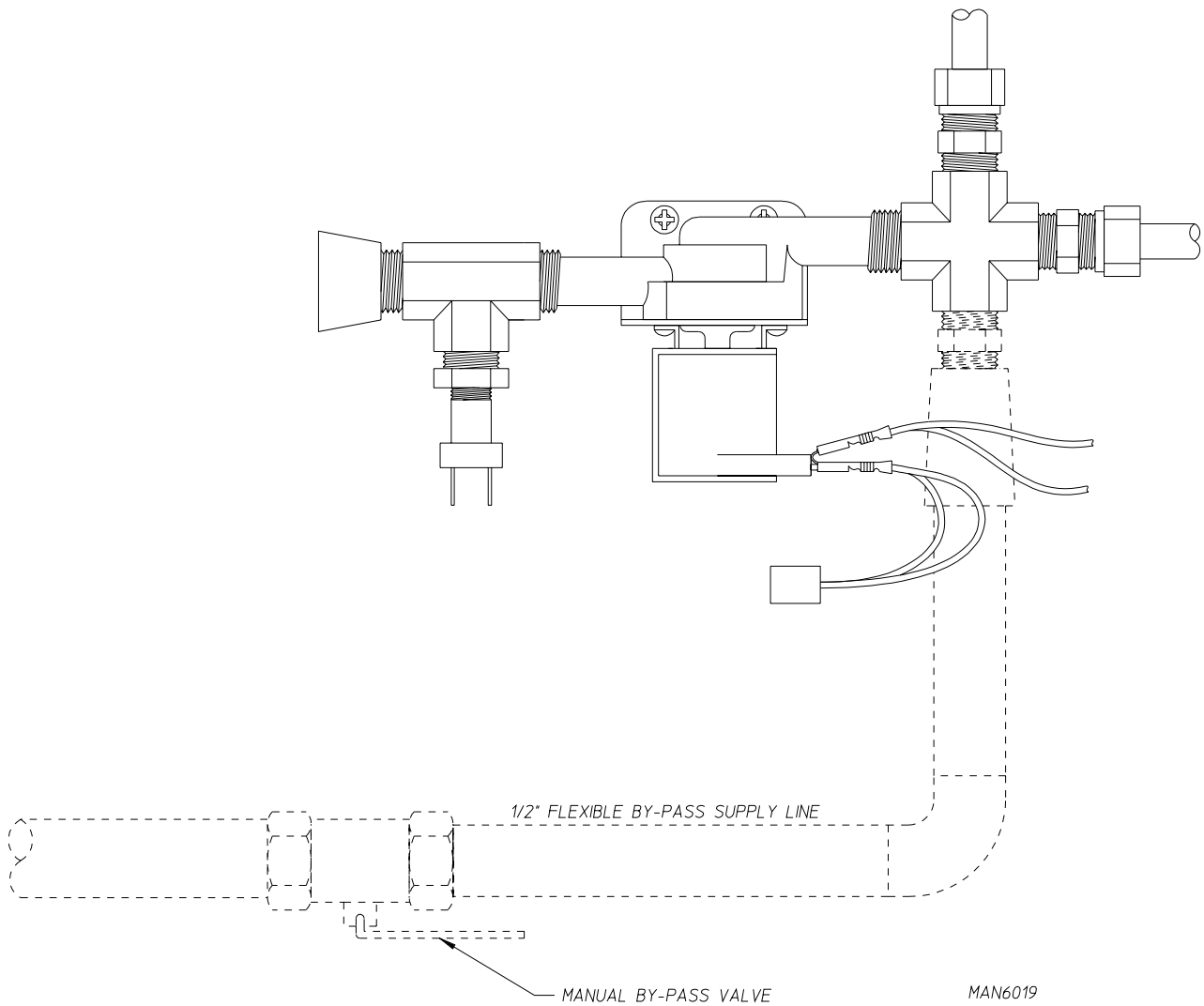


OPTIONAL MANUAL BYPASS

Provisions are made in the dryer fire suppression system (F.S.S.) for the installation of an optional manual bypass. Depending on the model dryer, the connections for the manual bypass are made at the “T” or “four way” fitting located in the outlet supply side of the water solenoid valve. The use and connections of this manual bypass are at the option or discretion of the owner.

The water connection for the manual bypass is made to the “T” or “four way” fitting which has a 3/8” F.P.T. and a coupling **must be** used to provide the minimum 1/2-inch supply (feed) line.

If the rear area of the dryer, or the water supply is located in an area where it will be exposed to cold/freezing temperatures, provisions **must be** made to protect these water lines from freezing.





WARNING: If the water in the supply line or water solenoid valve freezes, the F.S.S. **will be INOPERATIVE!!**

The manual ball cock shutoff valve **must be** located outside of the dryer at a distance from the dryer where it is easily accessible.

3. Electrical Requirements

No independent external power source or supply connection is necessary. The 24 volt power to operate the fire suppression system (F.S.S.) is accomplished internally in the dryer (from the dryer controls).

WARNING: ELECTRICAL POWER **MUST BE** PROVIDED TO THE DRYER AT **ALL** TIMES.
If the main electrical power supply to the dryer is disconnected, the F.S.S. is
INOPERATIVE!!

NOTE: F.S.S. water solenoid valve test can be performed by pressing the  stop key and  A-key together.

Fire Suppression System (F.S.S.) Theory of Operation


20-seconds after the heat turns off, the Phase 7 control monitors the F.S.S. probe located in the top of the basket (tumbler) chamber and records the minimum temperature. If the minimum recorded temperature is no less than 120° F (48° C) and the control detects a 35° rise in temperature, this will be the trip point and the F.S.S. routine will activate.

While a drying cycle is in process and the heat is on, the Phase 7 control monitors the exhaust temperature transducer. If the drying cycle temperature set point is set greater than 160° F (71° C) and the control detects an exhaust temperature rise 25° F (-3.8° C) greater than set point, this will be the trip point and the F.S.S. routine will activate.

Once the F.S.S. routine is activated, water will be injected into the basket (tumbler) chamber. Anytime water is being injected into the basket (tumbler); the basket (tumbler) drive will turn the load for 1-second every 15-seconds. This process will continue for a minimum of 3 minutes. After 3 minutes has elapsed, the control will check if the temperature remained above trip point, if so water will remain on. The control will continue to check if temperature is above trip point every 30-seconds. If the water has been on for a constant 10 minutes, the water will be turned off regardless of the temperature. If the temperature has dropped below trip point, the control will turn off the water prior to 10 minutes.

SYSTEM RESET

After the microprocessor determines that the situation is under control and shuts the water being injected into the basket (tumbler) off, the microprocessor display will read “FIRE SUPPRESSION SYSTEM ACTIVATED,” and the horn/tone will sound until reset manually.

To reset the microprocessor and F.S.S., press the red  key on the keyboard (touch pad).

F.S.S.

(Fire Suppression System)

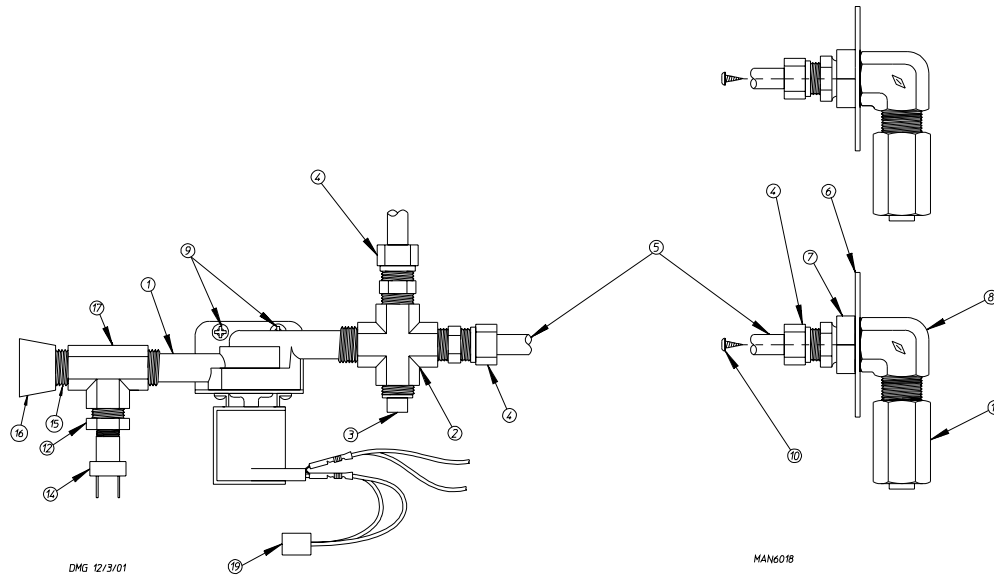
PARTS BREAK DOWN

Replacement parts can be obtained from your reseller or the **ADC** factory. When ordering replacement parts from the factory, you can FAX your order to **ADC** at (508) 678-9447 or telephone your order directly to the **ADC** Parts Department at (508) 678-9000. Please specify the dryer **model number** and **serial number** in addition to the **description** and **part number**, so that your order is processed accurately and promptly.

The illustrations on the following pages may not depict your particular dryer exactly. The illustrations are composite of the various dryer models. Be sure to check the descriptions of the parts thoroughly before ordering.

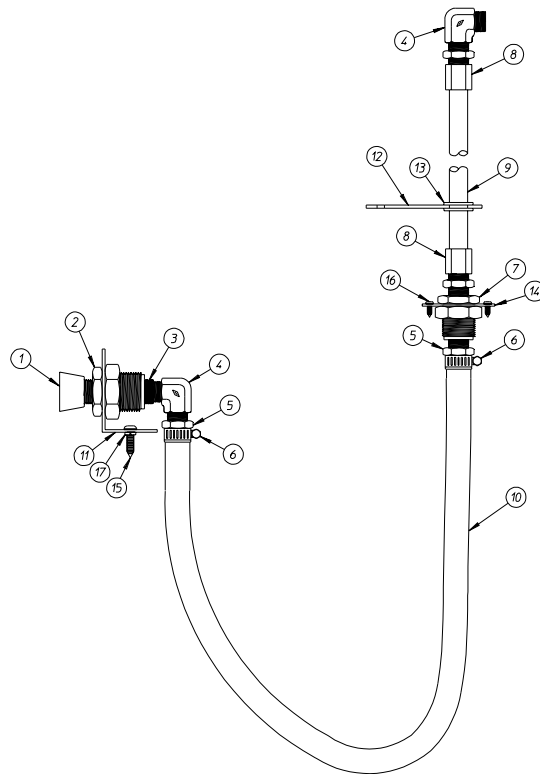
We have tried to make this manual as complete as possible and hope you will find it useful. **ADC** reserves the right to make changes from time to time, without notice or obligation, in prices, specifications, colors, and material, and to change or discontinue models.

Upper F.S.S. Piping Assembly



Illus. No.	Part No.	Qty.	Description
1	165114	1	F.S.S. Solenoid Valve 24V 50/60 HZ
2	143236	1	3/8" Brass Pipe Cross
3	143251	1	3/8" M.P.T. Brass Plug
4	143208	4	3/8" Comp x 3/8" M.P.T. Brass Connector
5	143099	3'	3/8" OD x 0.035 Wall Copper Tubing
6	311588	2	Sprinkler Head Mounting Plate
7	143303	2	3/8" N.P.T. Brass Locknut
8	143155	2	3/8" Brass Elbow 90°
9	150430	2	#10 x 1/2" Phillips Pan Head Self Drilling Screw
10	150301	8	#8-18 x 7/16" Phillips Pan Head TEK Screw
11	143581	2	3 GPM 3/8" F.P.T. Spray Nozzle
12	143315	1	3/8" x 1/8" Bushing (IE) 110-B-06x02
13	333178	1	F.S.S. Assembly Cover (not shown)
14	136987	1	Pressure Sensor
15	143241	1	3/8" Close Nipple
16	143317	1	Reducing Coupling 3/4" x 3/8" McMaster
17	143220	1	Tee
18	154005	4	Tinnerman Clip (not shown)
19	824081	1	RC Network Assembly

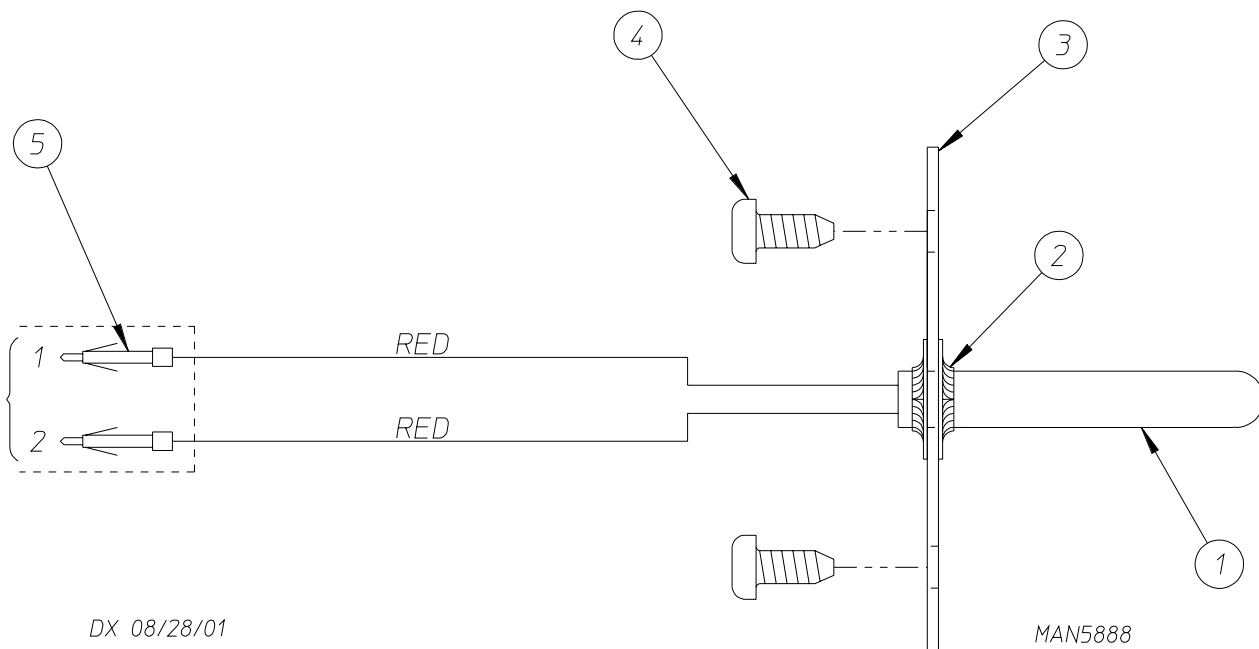
Lower F.S.S. Piping Assembly



DMG 12/3/01

MAN6017

Illus. No.	Part No.	Qty.	Description
1	143318	1	3/4" F.P.T. x 1/2" M.P.T. Adaptor
2	182595	1	1/2" Bulkhead
3	143261	1	1/2-3/8" Bushing
4	143155	2	3/8" Street Elbow
5	143319	2	1/2" x 3/8" M.P.T. Beaded Hose Barb
6	182529	2	Hose Clamp
7	143257	1	3/8" Bulkhead
8	143316	2	1/2" Comp x 3/8" M.P.T. Connector
9	143104	6'	1/2" Copper Tube
10	143107	3'-6'	1/2" ID Hose
11	333179	1	Support Bracket
12	333177	1	Steady Clamp
13	121412	1	Grommet
14	334710	1	Bulkhead Plate
15	150523	2	1/4-20 x 3/4" Screw
16	150301	2	#8-18 x 7/16 Screw
17	153007	2	1/4" Lock Washer



Illus. No.	Part No.	Qty.	Description
1	822752	1	F.S.S. Temperature Probe Assembly (includes illus. nos. 1 through 5)
2	154007	2	Push On Fastener
3	390390	1	Sensor Bracket (only)
4	150301	2	#8-18 Phillips PH TEK Screw
5	122647	1	Connector Only (does not include terminals)

