CAR WASHING MADE SIMPLE

Mat Master Air

FW3D10-AIR Manual



Owner's Manual

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REV A

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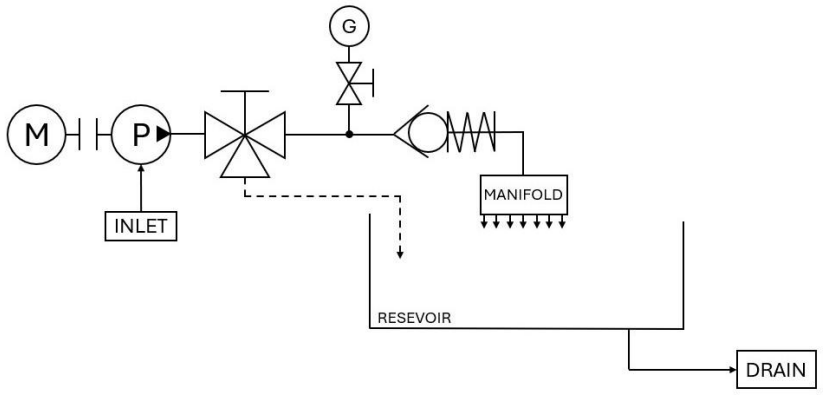
APPLICATION BRIEFING

AVW's Mat Master Air combines powerful high-pressure mat cleaning with integrated air drying in one efficient system built for durability, easy installation, and reliable operation.
Featuring ergonomic loading, plug & play junction boxes, adjustable VFD-control (water flow), and stainless steel construction.
Mat Master Air delivers a faster and cleaner experience.

– All in one design with built-in high pressure pump
– Fits large, deep formed rubber floor mats
– Curved design for easy access and maintenance
– Simple and safe to operate with convenient foot pedal

SPECIFICATIONS	
Description	Value(s)
EQUIPMENT LENGTH	25.41"
EQUIPMENT WIDTH	50.92"
EQUIPMENT HEIGHT	42.03"
---------- PUMP ----------	Wanner D10
FLOW RATE	8.8 GPM
INLET/OUTLET SIZE	1.5" BARB
MAX SPEED	1800 RPM
MAX WORKING PRESSURE	1000 PSI
---------- ELECTRIC MOTOR* ----------	-
POWER	7.5 HP
VOLTAGE*	230/460 (380/575 AVAILABLE)
CURRENT	18.4/9.18A

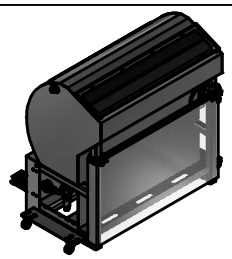
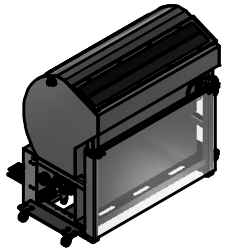
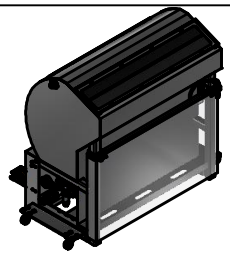
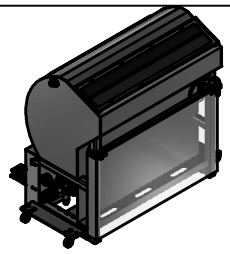
Mat Master Hydraulic Diagram



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CONFIGURATIONS

CONFIGURATIONS			
Model	Part Number	Description	ID
	FW3-AIR	Mat Master without motor and pump	A
	FW3D10-AIR	Mat Master with 460V Motor, D10 Wanner Pump, and air manifold. (includes VFD)	B
	FW3D10-AIR-575	Mat Master with 575V Motor, D10 Wanner Pump, and air manifold. (includes VFD)	C
	FW3D10-AIR-380	Mat Master with 380V Motor, D10 Wanner Pump, and air manifold. (includes VFD)	D

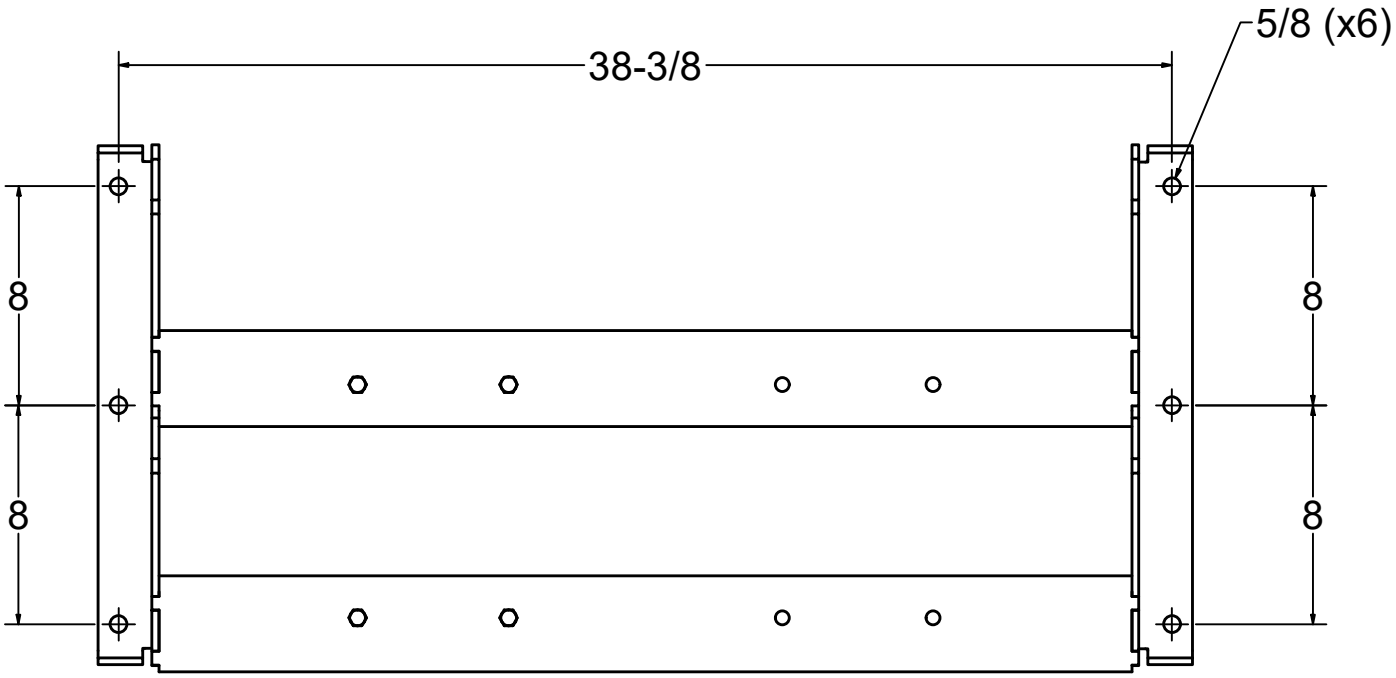
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MOUNTING SPECIFICATION

Configurations: ALL

Frame Mounted on Ground

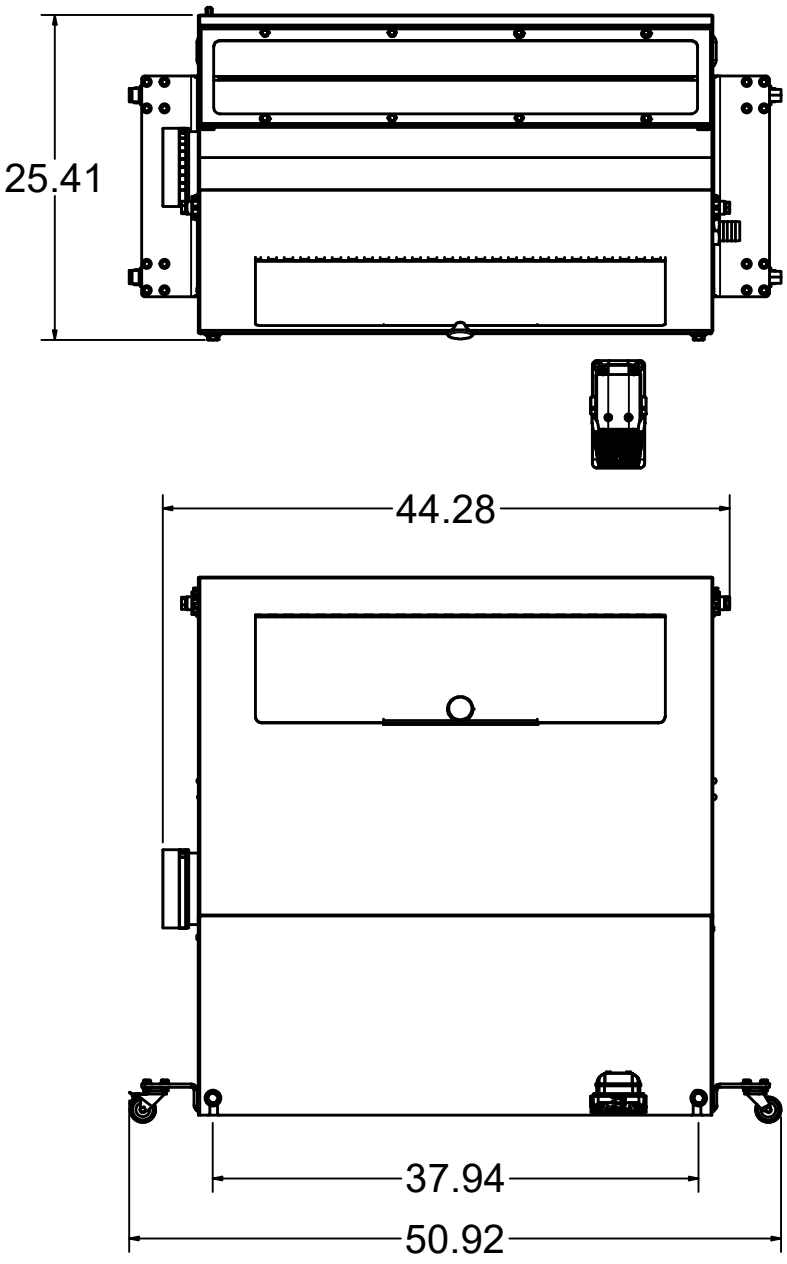


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DIMENSIONS

Configuration: ALL



Note: Configurations B, C, & D include motor to match voltage requirements and Wanner D10 pump.

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INSTALLATION

Tools and Equipment Needed:

1. Standard hand tools (e.g., wrenches, screwdrivers, and pliers).
2. Drill with appropriate bits for mounting
3. Level and measuring tape.
4. Electrical and pneumatic connections as listed in the parts.

Step 1: Site Preparation

1. Ensure the installation site meets specifications:
   -Access to water, power, and air connections.
2. Clean the area and verify no obstructions in the workplace

Step 2: Assemble Frame Components

1. Position the Mat Master in the desired location.
2. Mark the mounting hole locations in concrete.
3. Drill holes in concrete according to size of anchor bolts.
4. Secure frame using concrete anchor bolts.

Step 3: Connect Electrical Components

1. Connect motor phase wires and ground to local MCC or VFD.
2. Connect signal wires for foot pedal to motor controller.

Step 4: Connect Hydraulic Components

1. Connect 1.5" ID hose to barb fitting on pump to supply water.
2. Connect 1.5" ID hose to barb fitting on bottom of tank and route to drain.
3. Open supply water valve to verify connections do not leak.

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Step 5: Connect Pneumatic Components (if applicable)

1. Connect supply air hose to quick connect fitting on valve assembly.
2. If using pneumatic foot pedal, connect 3/8" OD hose onto foot pedal and air manifold quick connect fittings.

Step 6: Regulator Setting

1. Adjust regulator knob such that supply pressure from pump is between 600-800 psi while in operation
2. Verify regulator pressure on dial gauge indicator.
3. To reduce volume of water sent to overflow, adjust regulator nearer to 800psi.

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MAINTENANCE

1) Clean out the inside of the tank daily using the access lid and 5-1/2" clean out port

2) Check pump oil level and condition of oil. The oil is at the correct level, ¼ in. (6 mm) from the bottom of the fill port.

3) Change the pump oil after the first 100 hours of operation, and then according to the manufacturer guidelines.

4) Refer to pump manufacturer's product manual for fluid and hydraulic end service instructions.

5) Lubricate motor with manufacturer recommended grease every 2 years or per manufacturer recommended time interval.

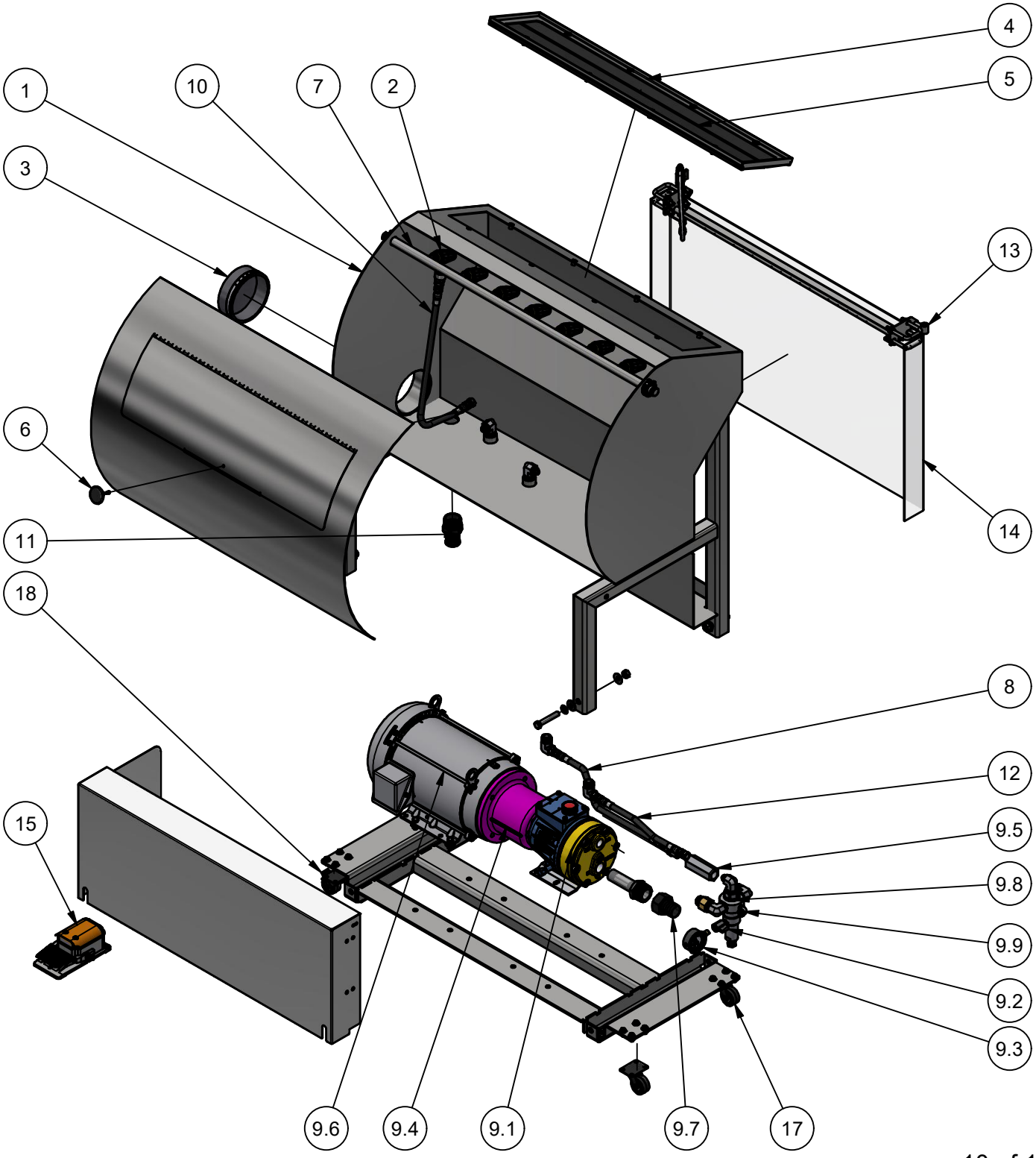
6) Replace turbo nozzles if showing signs of reduced cleaning power, a wider spray pattern than normal, uneven rotation, or intermittent spinning.

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MAT MASTER AIR

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BILL OF MATERIALS

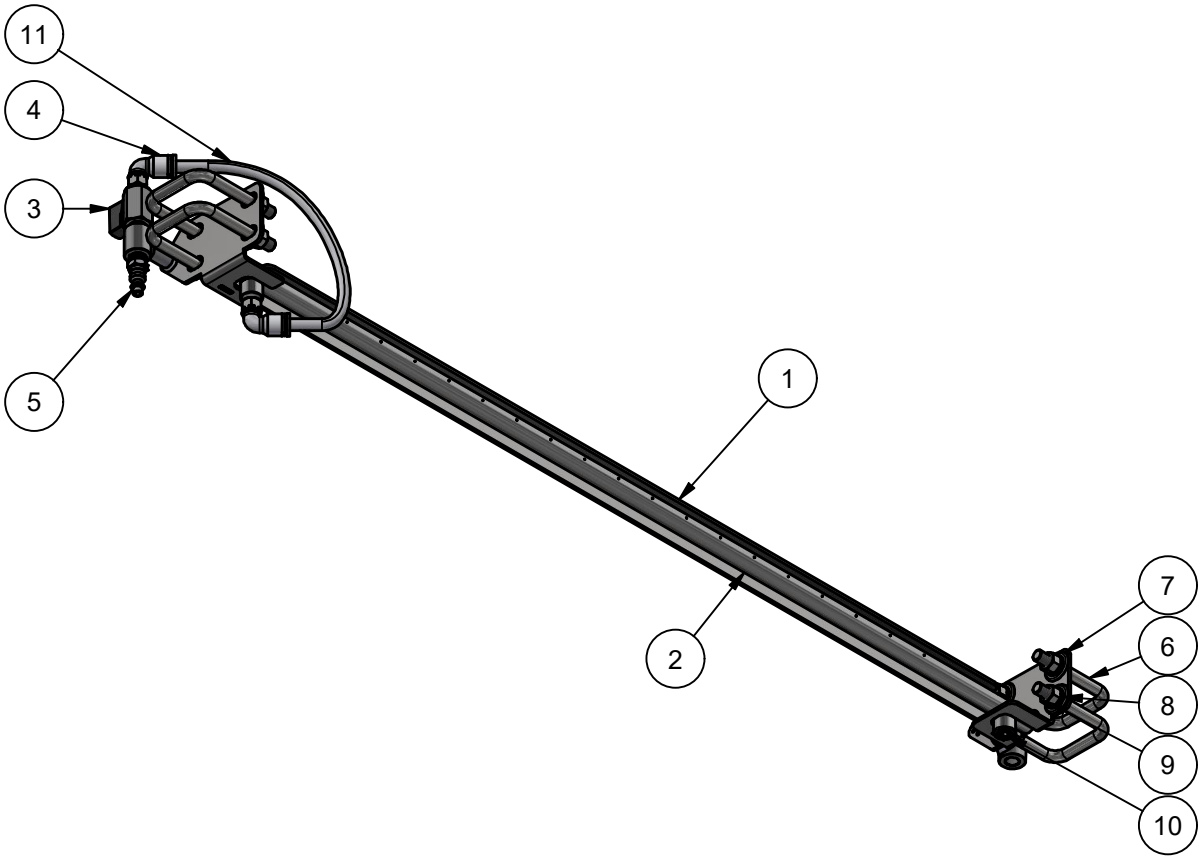
Parts List				
ITEM	PART NUMBER	QTY	DESCRIPTION	CONFIG
1	FW3D10-J	1	FW3 Frame Weldment	ALL
2	FW3-TN3600-3	7	Nozzle (Turbo), ST-357 3.0 Capacity	ALL
3	FW2-RDEC5	1	Round End Cap: PVC, For 5 in Pipe	ALL
4	FW3D10-D	1	FW3 Slot Weldment	ALL
5	FW3D10-N	2	39.875" Brush	ALL
6	KNOB2X1	1	Knob 2" Dia, 1" LG SS	ALL
7	FW3D10-AS	1	42" Manifold Weldment	ALL
8	FW3D10-H1	1	FW3 Hose Assembly Pump to Tank	B,C,D
9.1	PSD10-P08	1	Pump (Hydra-Cell): D10	B,C,D
9.2	NV1-4-1007	1	Valve-Ball, 1/4" MNPT x 1/4" FNPT	ALL
9.3	GP1500	1	Gauge, 2-1/2" Dial, Liquid Filled, SS Case	ALL
9.4	FW3D10-BHL	1	A04-002-1200 Hydra-Cell D10 Motor Adapter	B,C,D
9.5	FW3D10-E	1	60psi Check Valve	ALL
9.6	EM075-1800-213TC-FW3	1	Marathon Motor 7.5HP 1800rpm 213TC	B
9.7	BRBPP150FX150	1	Hose Fitting 1.5" FNPT X 1.5" BARB - Poly	B,C,D
9.8	RV0075-K	1	Pressure Regulator 3/4in Kothar	ALL
9.9	EL90S304025	1	Elbow--90° (Street): 1/4"NPT, 150# SS 304	ALL
10	FW3D10-H2	1	3/8" Hose Assembly Pump to Manifold 25" lg	ALL
11	BRBPP150MX150	1	Hose Fitting 1.5" MNPT X 1.5" BARB - Poly	ALL
12	FW3D10-H3	1	3/8" Hose Assembly, Reg Over Pressure	B,C,D
13	FW3D10-AIR-KIT	1	FW3D10 Air Manifold Assembly	ALL
14	FW3-AIR-VINYL	1	FW3D10 Vinyl Curtain	ALL
15	FW2-FOOTSWITCH	1	Temco Heavy Duty Foot Switch Cast Aluminum	ALL
16	FW3D10-JO	1	Mat Master Motor Cover	B,C,D
17	FW3-WHEEL-A	2	2" Caster Wheel	ALL
18	FW3-WHEEL-B	2	2" Caster Wheel w/ Brake	ALL

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RETROFIT KIT

Retrofit Kit for Mat Master - FW3-AIR-KIT



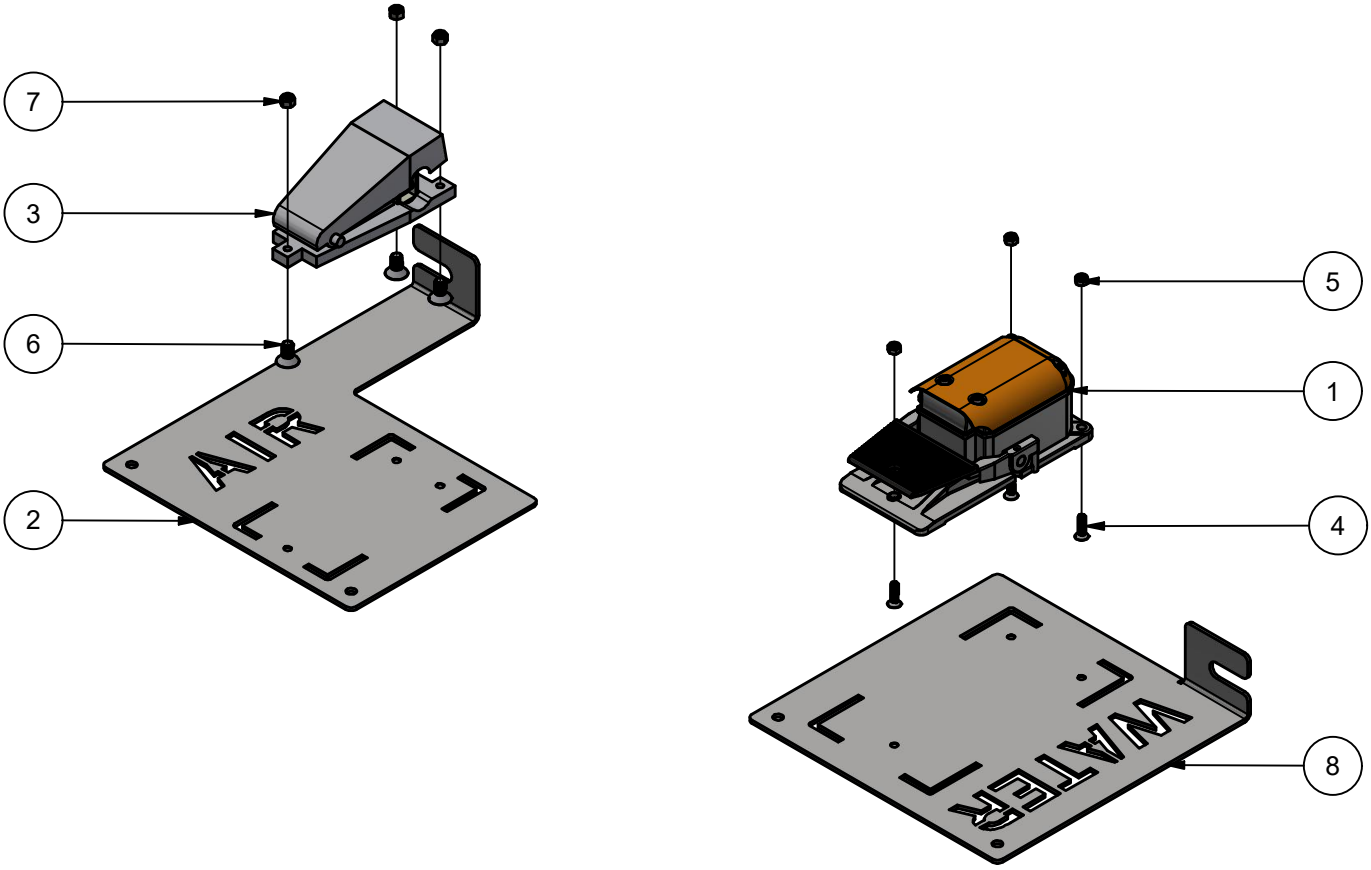
Parts List			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	FW3D10-M	1	Retrofit Air Manifold Support Bracket Weldment
2	FW3D10-L	1	Retrofit Air Manifold Weldment
3	NV1-4-1007	1	Valve-Ball, 1/4" MNPT x 1/4" FNPT
4	APF3814-EL90	2	Push-Connect Fitting, 90° Elbow, 3/8" x 1/4" NPT
5	ACF14	1	1/4" NPT Standard Air Coupling
6	UB-SQ0375x800	4	U-Bolt (Square): 3/8" x 2" x 3", (mount to 2" x 2")
7	FW38	8	Flat Washer: 3/8" SS
8	SLW38	8	3/8" Split Lock Washer
9	HN3816	8	Hex Nut: 3/8"-16, SS
10	PLUG3040250-SH	3	1/4" NPT Hex Driven Stainless Steel Recessed Plug
11	FW3D10-H4	1	Retrofit Air Manifold 3/8" OD Hose

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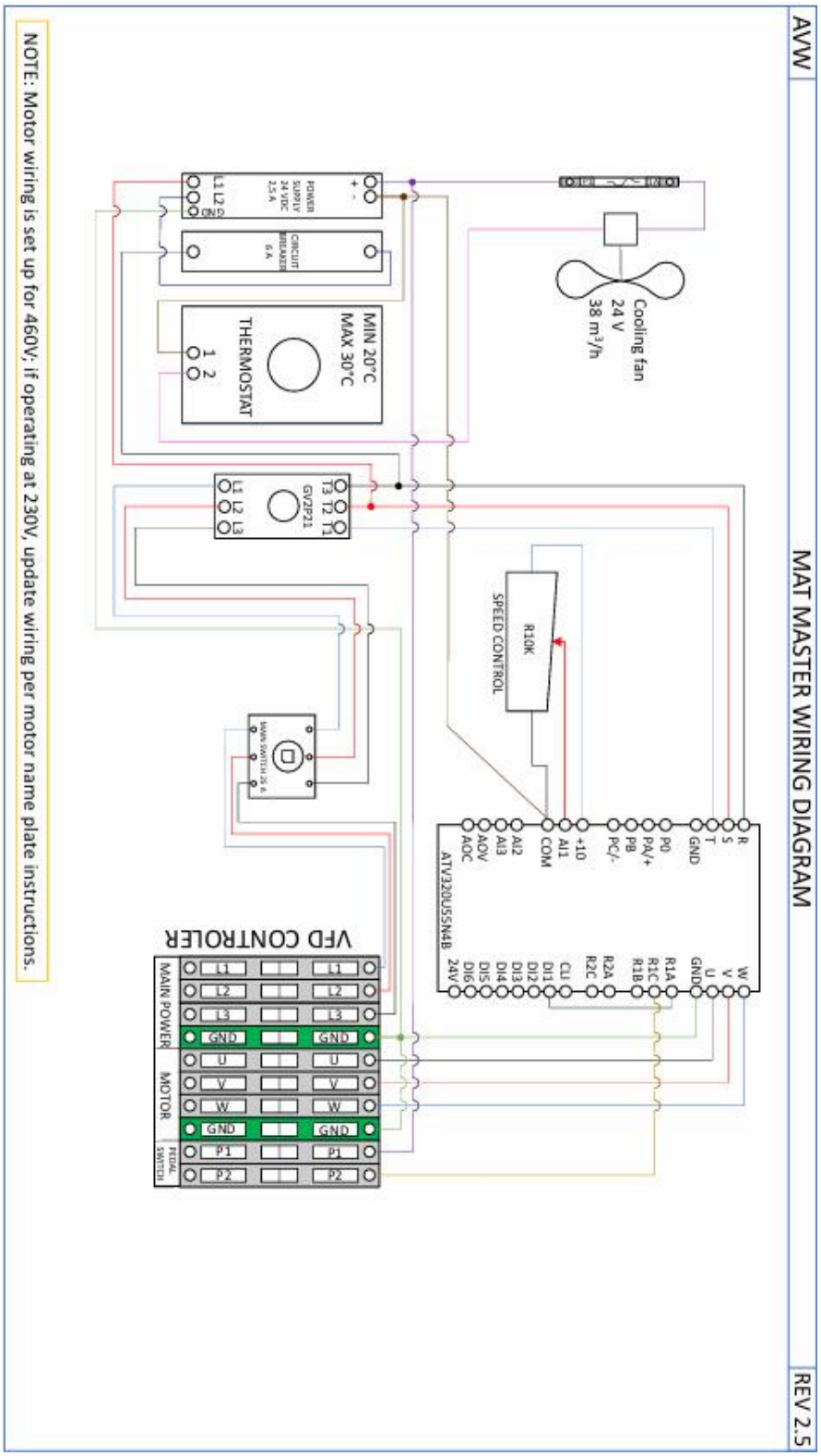
Retrofit Kit for Mat Master - FW3-PEDAL-KIT



Parts List				
ITEM	CATEGORY	PART NUMBER	QTY	DESCRIPTION
1	P	FW2-FOOTSWITCH	1	Temco Heavy Duty Foot Switch Cast Aluminum
2	F	FW3-PEDAL-KIT-A	1	Air Pedal Mounting Plate
3	P	FW3-AIR-PEDAL	1	SMC Pneumatic Foot Switch
4	P	FHSCSM6X1-22M	3	Flat Head Hex Drive Cap Screw M6x1 x 22mm, SS
5	P	NLNM6X1	3	Nylon Locknut M6x1
6	P	SHCS1420100	3	Flat Head Hex Drive Cap Screw 1/4"-20 x 1", SS
7	P	NLN1420	3	Nylon Lock Nut 1/4"-20
8	F	FW3-PEDAL-KIT-B	1	Electric Pedal Mounting Plate

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REVISION TABLE

REVISION HISTORY				
REV	ECN#	DESCRIPTION	DATE	INITIALS
A	-	Initial Release	11/12/2026	AR

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