# **Therkules**

#### <u>Models:</u> GW/R-T GW/R-2-T GW/R-3-T





This manual contains important information concerning the installation and operation of the gun washers listed above. Read manual thoroughly and keep for future reference

#### INSTRUCTIONS



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#### Warning Symbol

#### 

This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

Serial Number

Purchase Date	

Distributor

#### **Caution Symbol**

#### 

This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

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### EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended use.
- Do not alter or modify this equipment.
- Do not exceed the maximum working pressure of the lowest rated system component.
- Do not operate the gun washer at a pressure above the maximum working pressure rating of the gun(s) being cleaned.
- Route the hoses away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not use the hoses to pull the equipment.
- Do not move pressurized equipment.
- Use fluids or solvents that are compatible with the equipment wetted parts. Read the fluid and solvent manufactures warnings
- Comply with all applicable local, state and national fire, electrical and other safety regulation.

#### PRESSURIZED EQUIPMENT HAZARD

Spray from hose leaks, ruptured components, or from operating the gun washer with an open lid can splash fluid in the eyes or on the skin and cause serious injury.

- A safety device has been installed to shut off the pump when the gun washer lid is opened. Do not tamper with or alter this device.
- Open the gun washer lid slowly.
- Do not prop the gun washer lid open with an object or by any other means.
- Do not stop or deflect fluid leaks with your hand, body, glove, or rag.
- Tighten all fluid connections before operating the equipment.
- Replace worn, damaged, or loose parts immediately.

# **WARNING**

### FIRE AND EXPLOSION HAZARD

Improper grounding, poor air ventilation, open flames, or sparks can cause a hazardous condition and result in fire or explosion and serious injury.

- Ground the equipment. See Installation for grounding procedure.
- Provide fresh air ventilation to avoid the build up of flammable fumes from the solvent.
- Extinguish all open flames or pilot lights in gun washer area.
- Electrically disconnect all equipment in the gun washer area.
- Keep the gun washer area free of debris, including solvent, rags, and gasoline.
- Do not turn on any light switch in the gun washer area while operating or if fumes are present.
- Do not smoke in the gun washer area.
- Do not operate a gasoline engine in the gun washer area.
- Follow the gun manufactures solvent and other cleaning recommendations.
- Use solvent with the highest possible flash point.
- If there is any static sparking while using the equipment, **stop operation immediately.** Identify and correct the problem.
- Drain the solvent into a proper storage container when gun washer(s) is not in use.

## TOXIC FLUID HAZARD

Hazardous fluids or toxic fumes can cause serious injury or death if splashed in eyes or on the skin, swallowed, or inhaled.

- Know the specific hazards of the fluid you are using. Read the fluid manufactures warnings.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.
- Wear the appropriate protective clothing, gloves, eyewear and respirator.
- Pipe and dispose of the exhaust air safely. If diaphragm fails, the fluid may be exhausted along with the air.

# **Model Information**



NOTE: Dimensions listed are overall measurements.

Model shown: GW/R-T

Model	Description		A	Dimensior B	ns in. (mm) C	D
GW/R-T	Two gun, two cup paint gun washer/recycler equipped with diaphragm pump, filter-regulator and timer.	74 (33.6)	41.625 (1057)	20.5 (521)	24.375 (619)	30.75 (781)
GW/R-2-T	GW/R-T for use with water based cleaning solutions or standard lacquer thinner solvents.	74 (33.6)	41.625 (1057)	20.5 (521)	24.375 (619)	30.75 (781)
GW/R-3-T	GW/R-T adapted for pressure feed systems, paint hoses, and cans up to 5 gallons.	75 (34)	41.625 (1057)	20.5 (521)	24.375 (619)	30.75 (781)

# Installation

#### Installing the Gun Washer

- 1 Connect diaphragm pump housing to Gun Washer. (See page 12)
- 2 Place gun washer on a level surface in a properly ventilated paint mixing room or paint booth.

#### Grounding the Gun Washer

1 Connect the ground wire on the gun washer's pump to a true earth ground.

2 Ground all equipment used or located in the gun washer area.

#### **Connecting the Air Line**

- 1 Install a 1/4 in. npt male coupler, that is compatible with the quick disconnect of your air supply line, into the open port of the filter/regulator located at the back of the pump housing.
- 2 Connect air line with 90-120 psi to the coupler. Filter/regulator is preset. Do not adjust.

# Operation

#### Filling the Gun Washer with Fluid

- 1 Close ball valve located on the bottom of the tank.
- 2 Pour five gallons (18.9 liters) of high quality slow evaporating solvent into the tank. DuPont 3661S or equivalent is recommended.

#### Preparing the Equipment to be washed

- 1 Remove paint cup or paint line and the air line from the paint gun.
- 2 Drain excess paint from cup and gun.
- 3 Remove all gauges and regulators.
- 4 Lock the gun trigger in the open position by placing the trigger lock around the gun handle and trigger (see Fig. 2).

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All pressure gauges must be removed before placing the equipment in the gun washer to avoid damaging the gauges.

#### Placing Equipment in the Gun Washer

To clean guns not mentioned here, use the long or short stem supports as needed (see Fig. 2). For questions or adapter kits contact your paint gun washer distributor.

#### Siphon Feed Guns

Place the gun siphon tube on the short stem support.

#### **Gravity Feed Guns**

Place long stem support over one of the short stem supports. Place paint inlet of gun on long stem support.

\*For Gravity Feed, High Volume Low Pressure Guns an adapter kit (part number 23K) is available for best cleaning.

#### **Pressure Feed Guns**

Place long stem support over one of the shorter stem supports. Place paint inlet of gun on long stem support.

#### Pots and Cups

Place pots and/or cups on divider platform over front spray nozzles.



# Operation

# Additional Washing Features of Model GW/R-3-T

#### **Internal Washing of Paint Lines**

Remove the brass plugs from the bottom of the 3-way valve and the internal wash bulkhead (see Fig. 3 & 4). Install a female fluid quick coupler with 1/4 in. npt male threads (suitable for lacquer thinner) into the bottom of the 3-way valve. Install a female fluid quick coupler with 3/8 in. npt male threads (suitable for lacquer thinner) into the internal wash bulkhead. Connect the paint line to the couplers. Face the pointer of the 3-way valve down and operate the gun washer.



#### Figure 3

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#### Internal Washing of Paint Lines with Guns Attached

Remove the brass hex plug from the bottom of the 3-way valve. Install a female fluid quick coupler with 1/4 in. npt male threads (suitable for lacquer thinner). Connect paint line with gun attached, to the coupler. Face the pointer of the 3-way valve down and operate the gun washer. To "bleed" the paint (into a container) hold the trigger of the gun open until clean thinner begins to flow.

#### Washing Pressure Pot and Lid

Insert the spray nozzle assembly, hanging on the back of the manifold, into the Q.D. coupler in the center of the manifold (See figure 6). Place pot over spray nozzle. Place pickup tube of lid over one of the short stem supports (remove gauges). Operate gun washer.



#### Washing Five Gallon Cans

Insert the spray nozzle assembly, hanging on the back of the manifold, into the Q.D. coupler in the center of the manifold (See figure 5). Place five gallon can over spray nozzle.

Operate gun washer.





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# Operation

#### **Operating the Gun Washer**

- 1 Make sure all wire trigger locks and other accessories are inside the gun washer tank.
- 2 If washing only one set of equipment, place empty cans over the unused nozzles and/or stem supports to prevent solvent spray from hitting the underside of the gun washer lid.
- 3 Close the gun washer lid.
- 4 Turn the timer knob clockwise 90 degrees to start the gun washer. The gun washer will run for 90 seconds. Turning the timer knob less than 90 degrees will reduce the timing cycle. Paint equipment will clean in 60 to 90 seconds.
- 5 If the lid is opened prior to the end of the timing cycle, the safety air cutoff switch will stop the gun washer. The gun washer will start again when the lid is closed if time remains on the timer.

Note: Open the lid slowly to minimize solvent vapor escape.

6 Remove the equipment from the gun washer and wipe off any remaining solvent. The gun hanger on the front of the stand can be used to dry the guns.

# **Preventive Maintenance**

- 1 Drain excess paint from cup or pot before placing in gun washer.
- 2 Drain paint sludge from gun washer tank weekly. Do this after a weekend so that it has settled. Open ball valve and drain until clear solvent flows. Add solvent to 1" above intake filter.
- 3 Remove the filter bowl and check the filter inside the regulator for excess buildup approx. every 6 months.
- 4 Change solvent completely when objects being cleaned become tacky to the touch.
- 5 Clean inside of tub and intake filter before filling with solvent.



# Troubleshooting

Problem		Possible Solution
Gun washer will not turn on.	1	Make sure the air line is properly connected with 90-120 psi.
	2	Make sure lid is fully closed. Make sure the limit valve (#M1C) on the valve bracket (#M1SA) is closed in the downward position.
	3	Check all air connections to ensure that there are no leaks.
	4	Make sure timer cam is engaging the limit valve (#M1C) on the pump housing assembly.
	5	Make sure timer is on and functioning correctly.
Gun washer turns on but	1	Make sure intake filter (#70) is not clogged (Clean or replace).
pumps slowly or not at all.	2	Make sure the air line is properly connected with 90-120 psi.
	3	Check all air connections to ensure that there are no leaks.
	4	Drain filter/regulator of water. See number 3 of PREVENTIVE MAINTENANCE.
	5	Make sure there is 5 gallons of clean solvent in the gun washer. The solvent should be an inch above the intake filter (#70).
	6	Make sure lid is fully closed. Make sure the limit valve (#M1C) on the valve bracket (M1SA) is closed in the downward position.
	7	Make sure manifold nozzles and stem supports are not clogged.
Gun washer will not shut off	1	Make sure timer cam (#M230-001A) is moving. If its not slightly
		loosen the nuts holding the limit valve (#M1C) on the top panel of the pump housing assembly. Reposition valve and tighten nuts.
	2	Make sure limit valve (#M1C) located on the lid valve bracket assembly or the pump housing is not stuck in closed position.

Notes

Notes

# **Diaphragm pump housing assembly instructions**

1 Place the two nylon spacers over the housing bolts and insert into the gun washer frame holes. Place flat washer, then lock washer, then nut onto the 1" bolt and finger tighten.

Note: The timer knob is at the front of the housing and the air tubing lines are at the rear.

2 Connect the two metal solvent tubes between the pump and the tub.

Note: Some adjustment of the pump fittings may be necessary.

- a. Connect the 3/8" diameter tube between the "Material Outlet" of the pump and the top outlet of the tub. Finger tighten.
- b. Connect the 1/2" diameter tube between the "Material Inlet" of the pump and the lower outlet of the tub. Some alignment may be necessary for proper fitting of all four flare connections. Finger tighten.
- c. When the housing and the solvent tubes are aligned, tighten the four flare nuts.

Note: When tightening the 1/2" solvent tube, use a 13/16" open end wrench to hold the flare fitting in the pump while tightening the 7/8" flare nut on the solvent tube. This will prevent pump damage when tightening.

- 3 Tighten the diaphragm pump housing to the upper stand.
- 4 Connect air tubing between pump housing and lid valve bracket.
- a. Connect the blue plastic air tubing running from the air cut off switch on the pump housing to the in port of the air cut off switch on the lid valve bracket. See drawings pages 12-13. The hose must bottom out in the switch. Pull firmly to test for tight connection.
- b. Connect the black plastic air tubing running from the pump housing to the out port of the air cut off switch on the lid valve bracket. See drawings pages 12-13. Again the hose must bottom out in the switch. Pull firmly to test for tight connection





# Parts layout for GW/R-T





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# Parts layout for GW/R-2-T





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# Parts layout for GW/R-3-T



