



Kits can be set up in a variety of ways to accommodate your needs.



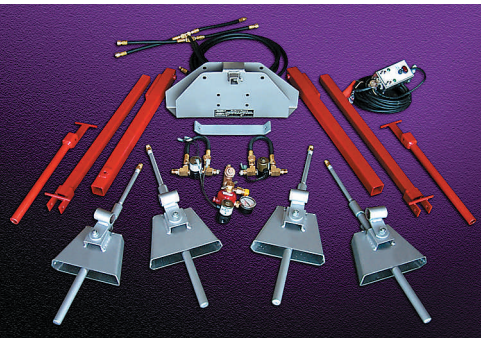
Flame Engineering can also help you custom build flaming equipment such as this canopy flaming system.



Flame Engineering, Inc. – Leaders In Flame Technology

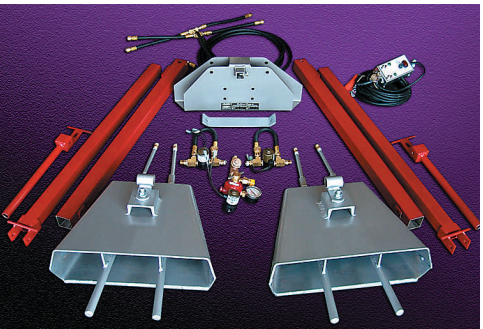
In the mid 1950's, Ralph C. Pivonka and his son Mike, designed a propane torch for burning weeds on their Kansas farm. As word spread about their torch, they found themselves building more and more to satisfy a growing local demand. They soon outgrew their family workshop and went into full production. Now, over 40 years and 8 patents later, family owned Flame Engineering and its popular Red Dragon Torch Line has expanded into national and international markets with over 100 products. With a great commitment to customer satisfaction and quality products, Flame Engineering will continue to lead into the 21st century.

Vineyard & Orchard Flaming Kits



GP 454 Berm Flaming Kit

The GP 454 Berm Flaming Kit includes the same break-away boom arms and four LT 2 x 8 Torches as featured on the GP 750 complete unit. Kit also includes boom arm mast, electronic solenoid control head, operator control box, fuel strainer, fittings and hoses.



GP 1054 Berm Flaming Kit

The GP 1054 Berm Flaming Kit includes the same break-away boom arms and two LT 6 x 18 Torches as featured on the GP-1000 complete unit. Kit also includes boom arm mast, electronic solenoid control head, operator control box, fuel strainer, fittings and hoses.



GP 020 & GP 010 Alley Flaming Attachment

The GP 020 Alley Attachment mounts on the back of GP-1000 Units and includes six LT 2x8 Torches allowing up to 9' of coverage. The GP 010 mounts on GP-750 Units and includes four LT 2x8 Torches allowing up to 6' of coverage. Both kits include mounting rack, electronic solenoid controls, operator control box, fittings and hoses.



GP 050 Window Maker Flaming Attachment

The GP 050 Window Maker Flaming Attachment mounts on the back of GP-1000 Units and includes two LT 6 x 18 Torches. This is a great tool for defoliating over head trellis D.O.V. grapes and for general canopy management. Kit includes mounting rack, electronic solenoid controls, operator control box, fittings and hoses.

Find Out What Other Successful Growers Have Already Discovered.

"We are organic growers of almonds, prunes, and pistachios. The Red Dragon Flamers are our only method of weed control, besides the hoe, on the berms. We have found flaming the most economical way to control weeds organically. The flamers are very dependable, even with daily use. I recommend Flame Engineering to anyone who would like to reduce herbicide use."

Michael Braga – Sherman Thomas Ranch
Madera, California Grower

"Red Dragon Berm Flamers minimize chemical use on the berms, are environmentally friendly and fit into any Integrated Pest Management program. In addition, it is easy to operate and roughly half the cost of chemical control."

Dwayne Cardoza
Fresno, California Grower

GP-Series Flaming Equipment Specifications							
Part No.	Description	Tank Carrying Capacity	Standard Burners	Maximum BTU/hr per torch	Average Gal/Acre	Maximum Application Speed	Shipping Weight
GP 1000	Berm Flaming Unit w/trailer	120 Gallon	(2) LT 6 x 18 Liquid Torches	3,000,000	4-6	5 m.p.h.	585 lbs.
GP 750	Berm Flaming Unit w/trailer	58 Gallon	(4) LT 2 x 8 Liquid Torches	1,150,000	3-5	3 m.p.h.	290 lbs.
GP 1054	Berm Flaming Kit	N/A	(2) LT 6 x 18 Liquid Torches	3,000,000	4-6	5 m.p.h.	144 lbs.
GP 454	Berm Flaming Kit	N/A	(4) LT 2 x 8 Liquid Torches	1,150,000	3-5	3 m.p.h.	79 lbs.
GP 020	Alley Flaming Attachment	N/A	(6) LT 2 x 8 Liquid Torches	1,150,000	3-5	3 m.p.h.	66 lbs.
GP 010	Alley Flaming Attachment	N/A	(4) LT 2 x 8 Liquid Torches	1,150,000	3-5	3 m.p.h.	46 lbs.
GP 050	Window Maker Flaming Attachment	N/A	(2) LT 6 x 18 Liquid Torches	3,000,000	4-6	5 m.p.h.	85 lbs.
GP-Series Tank Requirements							
All GP-Series Flaming Equipment require use with propane tanks equipped with a liquid propane withdrawal valve. It is also very important that you start with a clean, purged tank. Flame Engineering does stock 58 gallon tanks for the GP-750. Order Part # C-185 or consult with your local propane dealer for the proper tank.							
Tank Size Requirement For GP-1000 120 gallon tank with a max length of 70" and max diameter of 24"				Tank Size Requirement For GP-750 Standard 58 Gallon D.O.T. Motor fuel tank – max length of 48" and max diameter of 24"			

Contact us about our complete line of agricultural flamers and torches.

Red Dragon Row Crop Flamers



Red Dragon Row Crop Flamers offer producers many options for weed control while reducing or eliminating herbicide use. Flaming can be done both pre-emerge and post emerge and has been proven effective on a wide variety of crops including corn, milo, sorghum, soybeans, cotton, carrots, lettuce and more. Flame Engineering manufactures complete units and kits, available in 2, 4, 6 and 8 row configurations.

Red Dragon Alfalfa Flamers



The Red Dragon Alfalfa Field Flamer, featuring a patented liquid spray process, reduces weevil infestation and controls weeds and grasses. Yields of weed free hay have been significantly increased with just one flame treatment. This lightweight, easy-to-assemble flamer can also be used by nut growers for pre-harvest burn down.

Contact your Red Dragon Distributor or Flame Engineering for more information today.

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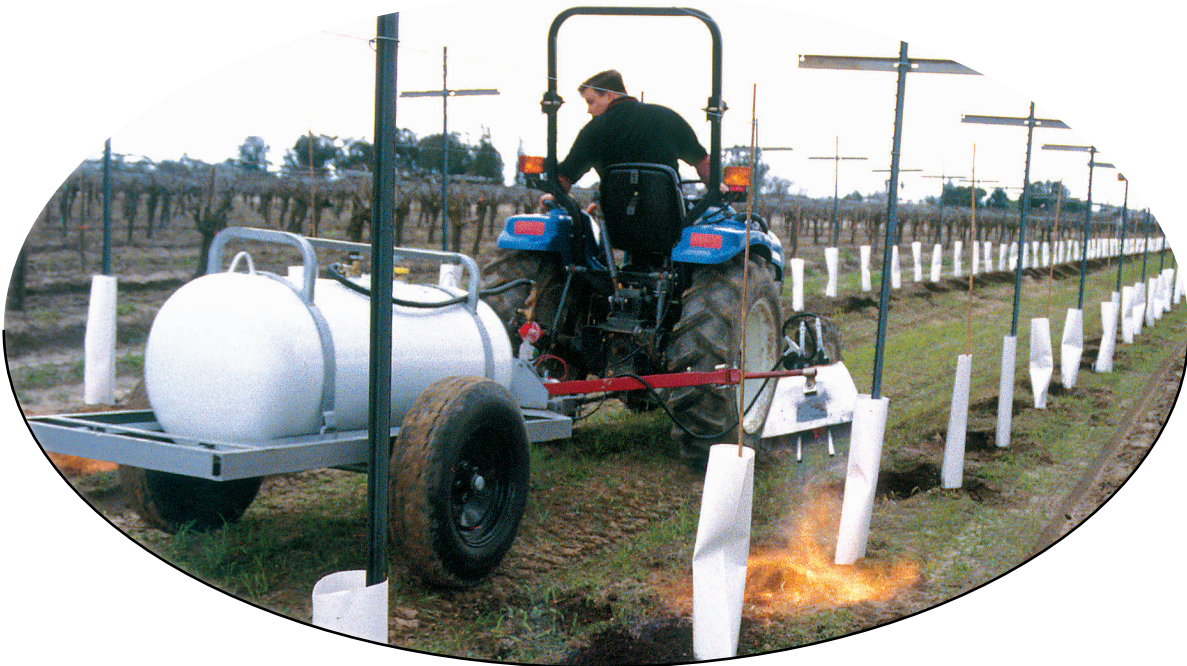


GP-Series Flamers Are Manufactured Under U.S. Patent No. 6,014,835

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GP-Series Vineyard & Orchard Flaming Equipment



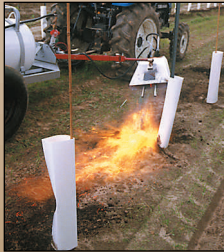
The Natural Solution For Problem Weeds, Grasses, Insect Habitat and More!



Manufactured by:
FLAME ENGINEERING, INC.
P.O. Box 577 • LaCrosse, Kansas 67548 • 800-255-2469 • www.FlameEngineering.com

GP Flamers are Safe, Effective, Economical and Environmentally Friendly!

- ▶ Safely Kill Weeds & Grasses in Vineyards & Orchards Without Harm to Vines or Trees
- ▶ Eliminate Insect Habitat ▶ Burn Clean, Efficient and Affordable Propane
- ▶ Great For Organic & Conventional Producers with USDA Approval for Organic Growers
- ▶ Save Time & Money Over Manual & Mechanical Weed Control Methods
- ▶ Lower Cost Than Herbicide



As long as you are moving and there is no smoldering residue, flaming will not damage irrigation lines, sprinkler heads, or protective vine covers.



Flaming applies intense heat to weeds and grass causing the cell structure of the plant to be destroyed. You do not have to burn weeds to a crisp.

Thumb print indicates a good kill.



Benefits of Flaming:

Flaming controls weeds and grasses, eliminates insect habitat and saves time and money over manual and chemical methods. You also keep your farm ground free of residue, runoff and ground water contamination, ensuring a healthier, more productive vineyard or orchard. Flaming DOES NOT damage vines, trees, irrigation lines, sprinkler heads or protective vine covers.

Flaming is also very economical. GP Flamers burn clean, efficient and affordable propane at a rate between 3 and 6 gallons per acre. GP Flamers reduce input cost over other weed control methods. Whether you are a conventional or organic grower, flaming can be a valuable tool in your war on pests.

How Flaming Works:

Intense heat from specially designed liquid propane torches is applied to weeds and grasses for a split second, boiling the water in the plant causing cellular damage. This damage destroys the weeds’ ability to conduct photosynthesis, thus killing the plant from the top down. You DON’T have to burn weeds to a crisp!

To test the effectiveness of flaming, pinch the leaf of a weed or grass between thumb and forefinger. A dark thumb print left on the leaf is a good indication that intense heat has been applied to the weed and that it will die.

Weed Control and More!

Flaming is done at regular intervals to maintain weed free berms. It is best to flame when the weed profile is 1-3 inches tall and is most vulnerable.

GP Flamers can also be used for winter clean up. Flaming clears out berm residue, eliminating vital cover for insect habitat.

GP Flaming equipment is also being used for leaf removal from vine canopy allowing more sunlight and easier cane cutting in grape and raisin production.

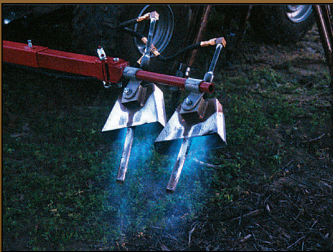


Operating at slower speeds allows you to clean up berms during the off season and eliminate insect habitat.

Flaming is proving to be an excellent canopy management tool for wine, table and raisin grape production. These overhead trellis D.O.V. grapes were defoliated with two flaming applications.



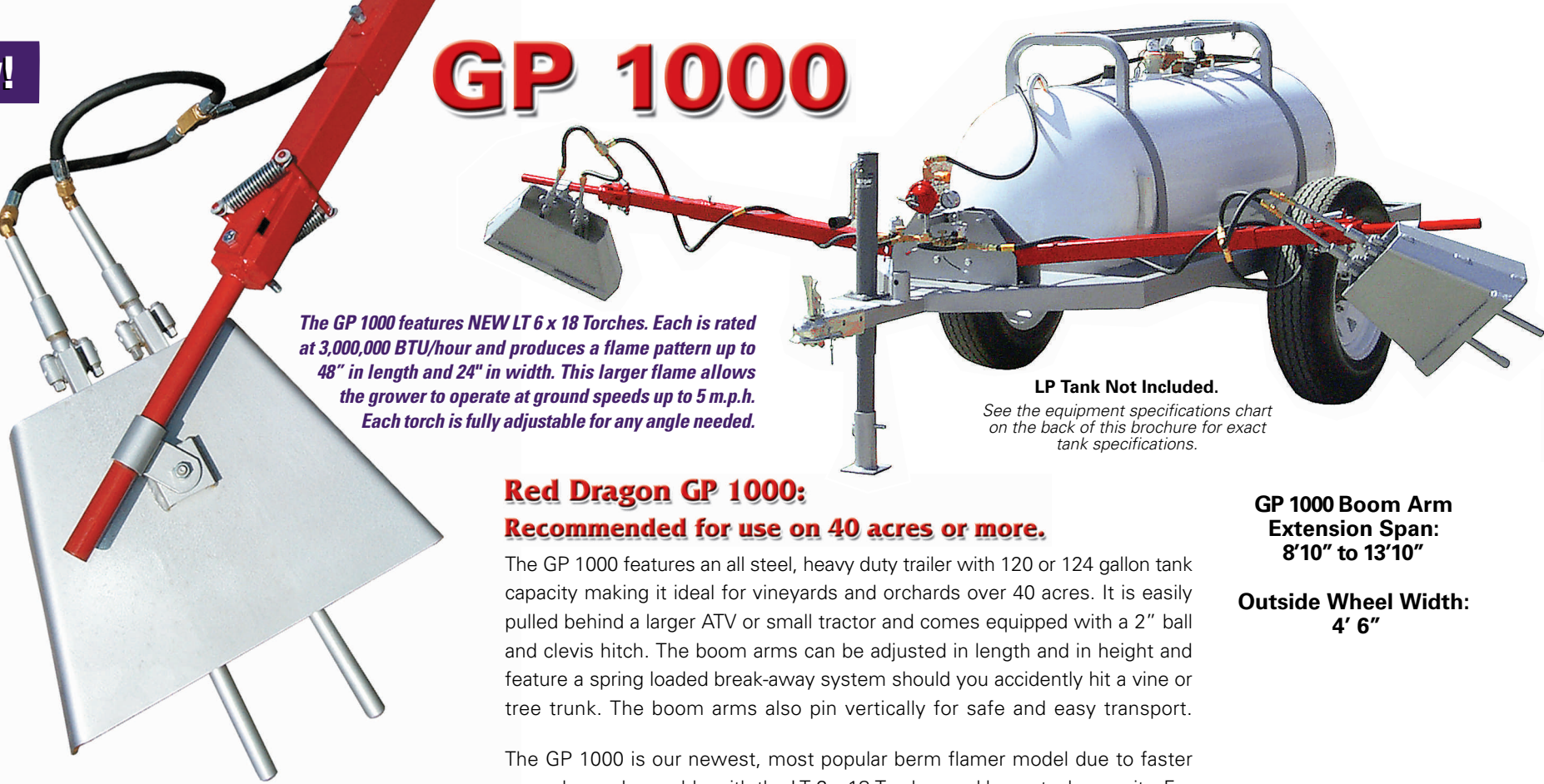
Burning the torches in the evening or in low light, will give you a good indication of the flame pattern. This is helpful for setting the proper burner angles and fuel pressure.



The control box is easily mounted for convenient access to the operator.



GP 1000



The GP 1000 features NEW LT 6 x 18 Torches. Each is rated at 3,000,000 BTU/hour and produces a flame pattern up to 48" in length and 24" in width. This larger flame allows the grower to operate at ground speeds up to 5 m.p.h. Each torch is fully adjustable for any angle needed.

LP Tank Not Included.

See the equipment specifications chart on the back of this brochure for exact tank specifications.

Red Dragon GP 1000: Recommended for use on 40 acres or more.

The GP 1000 features an all steel, heavy duty trailer with 120 or 124 gallon tank capacity making it ideal for vineyards and orchards over 40 acres. It is easily pulled behind a larger ATV or small tractor and comes equipped with a 2" ball and clevis hitch. The boom arms can be adjusted in length and in height and feature a spring loaded break-away system should you accidentally hit a vine or tree trunk. The boom arms also pin vertically for safe and easy transport.

The GP 1000 is our newest, most popular berm flamer model due to faster ground speeds capable with the LT 6 x 18 Torches and larger tank capacity. For smaller acreages or tight berm spacings, refer to the GP 750.

GP-Series Equipment Is Safe and Easy To Operate With Complete Control From The Driver's Seat.

GP-Series Units and Kits come complete with an operator control box and electronic solenoid control manifold. The control box is easily mounted for convenient access to the operator. This system allows for complete safety shut down and control over both right and left boom arm burners, making the system very safe and convenient. By allowing the operator this flexibility, one or both sides can be used depending on the situation and application. Burners are lit by hand with a torch, while in the pilot mode, and can then be switched to full flame, back to pilot or completely shut off with the control box.



Electronic solenoid control.



All GP flamers feature a spring loaded break-away boom arm system so there is no worry about damage to the vine, tree or equipment. The arms immediately snap back into operating position once it has passed.



GP 750



LP Tank Not Included.

Flame Engineering does stock the 58 gallon tank required for this unit. Please order part #C-185 or consult your local propane dealer. See the equipment specifications chart on the back of this brochure for tank specifications.

GP 1000 Boom Arm Extension Span: 8'10" to 13'10"

Outside Wheel Width: 4' 6"

GP 750 Boom Arm Extension Span: 6'4" to 10'

Outside Wheel Width: 4'

The GP 750 features four LT 2 x 8 Torches which produce up to 1,150,000 BTU/hour each and flames 36" in length and 18" in width. This torch configuration allows the grower to flame at ground speeds up to 3 m.p.h. Each torch is fully adjustable for any angle needed.

Flame Engineering manufactures RED DRAGON flaming equipment designed to fit your needs.

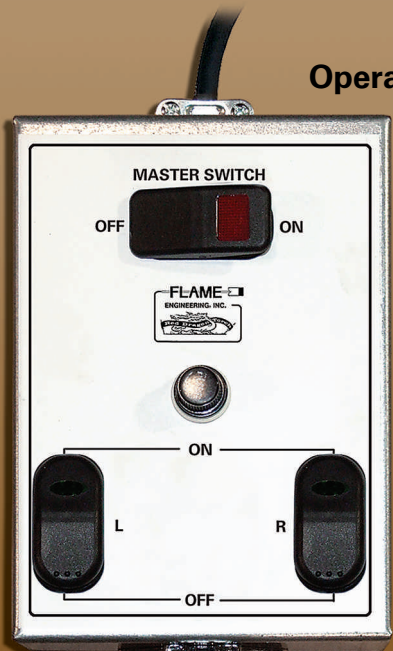
Red Dragon GP 750: Recommended for use on 40 acres or less.

The GP 750 is perfect for smaller vineyard and orchard operations or for those who need a smaller unit to get in and out of tight rows. The compact size and lightweight construction make it easy to pull behind any ATV or small tractor and it comes equipped with a 2" ball and clevis hitch. The sturdy trailer is designed to hold a 58 gallon tank and rides on wide flotation tire which reduce soil compaction. The boom arms, like the GP 1000, can be adjusted in length and height, feature the spring loaded break-away system and pin vertically for safe and easy transport.

The GP 750 is also great for flaming driveways, fencelines, roadsides, irrigation ditches and many other hard-to-mow areas. Call today to find out more about GP Flaming Units.

Operator Control Box

All GP-Series Equipment feature the safety and convenience provided by the operator control box. Safety master shut down switch and independent control over the right and left boom arm burners allow the operator to run one or both sides at a time.



The Torches are lit with a hand torch while at a pilot setting.

Here Are A Few More Great Reasons To Flame:

- The EPA is drafting new rules that penalize farmers that put chemical off into streams and rivers.
- Weeds and insects develop immunity to chemicals. They can't develop immunity to heat!
- It takes 20 to 30 years for agricultural chemicals to dissipate from wells and streams.
- Even if you have chemicals custom applied, you and your family still breath the chemicals.