

# AEROTECH G53FJ

## CERTIFIED VALUES

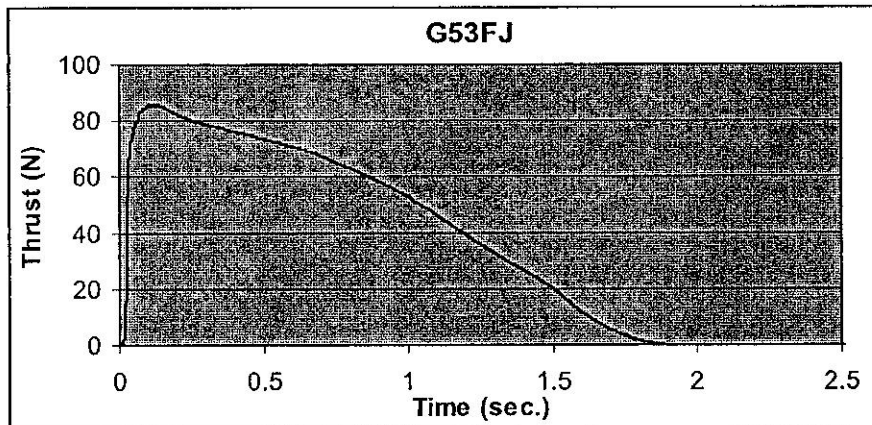
**Total Impulse:** 90.9 Newton-seconds  
**Delays:** 5, 7, 10 seconds  
**Propellant Type:** Black Max  
**Propellant Mass:** 60.0 grams  
**Casing Dimensions:** 29mm × 124mm  
**Certification Date:** August 31, 2007  
**Certification Type:** Model Rocket Motor

## STATIC TEST DATA

**Date Tested:** May 28, 2007  
**Total Impulse:** 90.9 Newton-seconds ( $\sigma$  1.0)  
**Peak Thrust:** 87.3 Newtons ( $\sigma$  5.5)  
**Burn Time:** 1.71 seconds ( $\sigma$  0.03)  
**Average Thrust:** 53.1 Newtons ( $\sigma$  1.2)  
**Mass After Firing:** 80.3grams

Delay Time(sec.)	5	7	10
Average Measured Delay(sec.)	5.52	7.25	10.31
Initial Mass (gm.)	146.2	148.2	146.9

## TYPICAL THRUST-TIME CURVE



## REMARKS

Uses Aerotech RMS 29/40-120 Reload System and Aerotech G53FJ reload kit. No substitutions allowed

# AEROTECH G64

## CERTIFIED VALUES

Total Impulse: 120 newton-seconds  
Delays: 4, 8, 10 seconds

Propellant Type: Composite  
Propellant Mass: 62.5 grams

Casing Dimensions: 29 mm × 124 mm

Certification Date: 94-February-28  
Contest Use Date: 94-May-29

Certification Type: Model Rocket

## STATIC TEST DATA

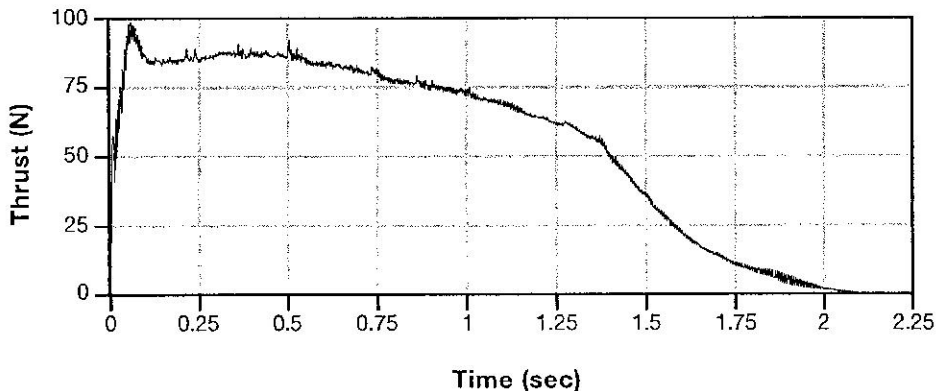
Date Tested: 94-February-27

Total Impulse: 118.80 newton-seconds ( $\sigma$  2.50)  
Peak Thrust: 98.31 newtons ( $\sigma$  8.45)  
Burn Time: 2.09 seconds ( $\sigma$  0.14)  
Average Thrust: 56.84 newtons

Mass After Firing: 83.4 grams

Delay Time	Average Measured Delay	Initial Mass	Mfg Recommended Max Liftoff Weight
4	4.04	151.0 g	1247 g
8	8.39	151.4 g	794 g
10	11.08	151.3 g	482 g

## TYPICAL THRUST-TIME CURVE



## REMARKS

Uses AeroTech RMS-29/40-120 Reload System and AeroTech G64 Reload Kit. No substitutions allowed.

# AeroTech G75

Manufacturer: AeroTech  
Entered: Mar 21, 2010  
Last Updated: Mar 21, 2010  
Mfr. Designation: G75M  
Brand Name: Aerotech, AT, ISP  
Common Name: G75  
Motor Type: SU  
Delays: 4,7,10  
Diameter: 29.0mm  
Length: 12.4cm  
Total Weight: 131g  
Prop. Weight: 67g  
Cert. Org.: Tripoli Rocketry Association, Inc.  
Cert. Designation: G75M-SML  
Cert. Date: Mar 21, 2010  
Cert. End: Mar 21, 2015  
Average Thrust: 74.7N  
Maximum Thrust: 102.0N  
Total impulse: 120.4Ns  
Burn Time: 1.6s  
Case Info: single use  
Propellant Info: Metalstorm

# AEROTECH G76G

## CERTIFIED VALUES

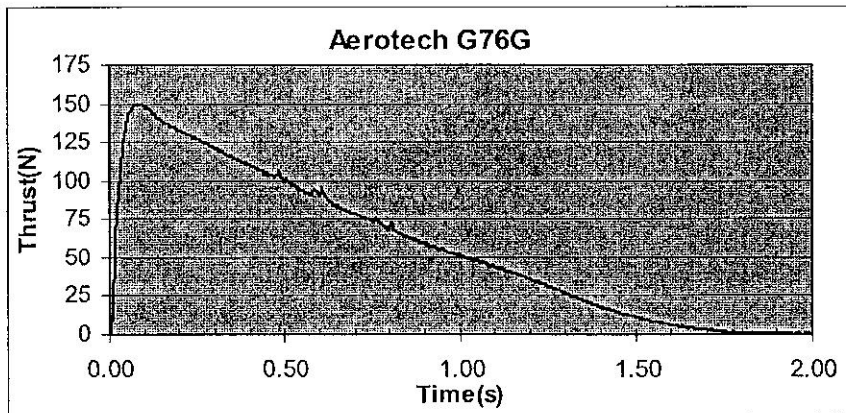
**Total Impulse:** 115.0 Newton-seconds  
**Delays:** 4, 7, 10 seconds  
**Propellant Type:** Mohave Green  
**Propellant Mass:** 60.0 grams  
**Casing Dimensions:** 29mm × 124mm  
**Certification Date:** May 29, 2008  
**Certification Type:** Model Rocket Motor

## STATIC TEST DATA

**Date Tested:** May 25, 2008  
**Total Impulse:** 115.0 Newton-seconds ( $\sigma$  1.8)  
**Peak Thrust:** 149.2 Newtons ( $\sigma$  2.8)  
**Burn Time:** 1.59 seconds ( $\sigma$  0.05)  
**Average Thrust:** 71.6 Newtons ( $\sigma$  2.4)  
**Mass After Firing:** 77 grams

Delay Time(sec.)	10	7	4
Average Measured Delay(sec.)	9.47	6.51	4.36
Initial Mass (gm.)	145	143	143

## TYPICAL THRUST-TIME CURVE



## REMARKS

Uses Aerotech RMS 29/40-120 Reload System and Aerotech G76G reload kit. No substitutions allowed

# AEROTECH G77

## CERTIFIED VALUES

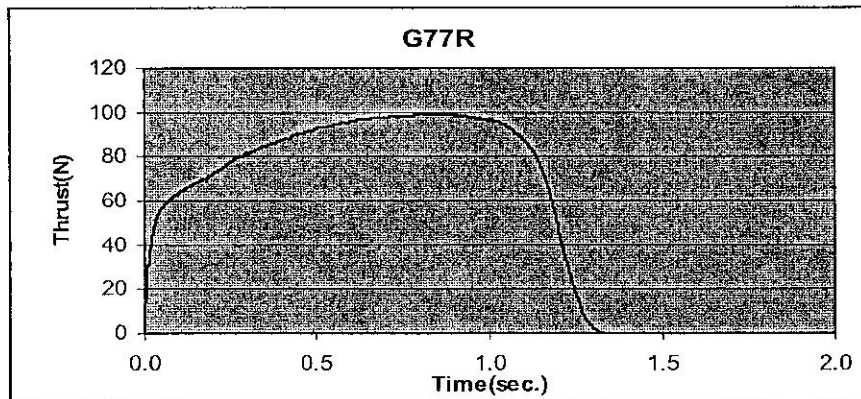
**Total Impulse:** 103 Newton-seconds  
**Delays:** 4, 7, 10 seconds  
**Propellant Type:** Redline  
**Propellant Mass:** 59.1 grams  
**Casing Dimensions:** 29 mm × 124 mm  
**Certification Date:** August 29, 2006  
**Certification Type:** Model Rocket Motor

## STATIC TEST DATA

**Date Tested:** June 3, 2006  
**Total Impulse:** 102.9 Newton-seconds ( $\sigma$  0.2)  
**Peak Thrust:** 100.5 Newtons ( $\sigma$  6.3)  
**Burn Time:** 1.28 seconds ( $\sigma$  0.02)  
**Average Thrust:** 80.1 Newtons ( $\sigma$  0.9)  
**Mass After Firing:** 59 grams

Delay Time(sec.)	4	7	10
Average Measured Delay(sec.)	3.70	7.43	10.05
Initial Mass (gm.)	122	123	123

## TYPICAL THRUST-TIME CURVE



## REMARKS

Certification is for both Single Use and LMS motors.

# AEROTECH G80

## CERTIFIED VALUES

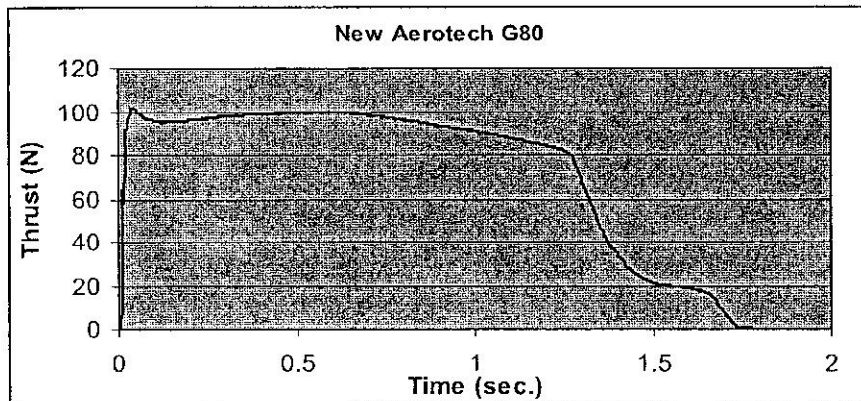
**Total Impulse:** 136.7 Newton-seconds  
**Delays:** 7, 10, 13  
**Propellant Type:** Blue Thunder  
**Propellant Mass:** 62.5 grams  
**Casing Dimensions:** 29mm × 128mm  
**Certification Date:** November 28, 2007  
**Certification Type:** Model Rocket Motor

## STATIC TEST DATA

**Date Tested:** November 25, 2007  
**Total Impulse:** 136.6 Newton-seconds ( $\sigma$  3.1)  
**Peak Thrust:** 108.5 Newtons ( $\sigma$  7.4)  
**Burn Time:** 1.70 seconds ( $\sigma$  0.03)  
**Average Thrust:** 77.6 Newtons ( $\sigma$  2.1)  
**Mass After Firing:** 59.3grams

Delay Time(sec.)	7	10	13
Average Measured Delay(sec.)	5.88	9.09	12.85
Initial Mass (gm.)	127.6	127.9	129.3

## TYPICAL THRUST-TIME CURVE



## REMARKS

Motor can be identified from previous versions of the Aerotech G80 by the thrust ring molded into the case.

# AEROTECH G138T

## CERTIFIED VALUES

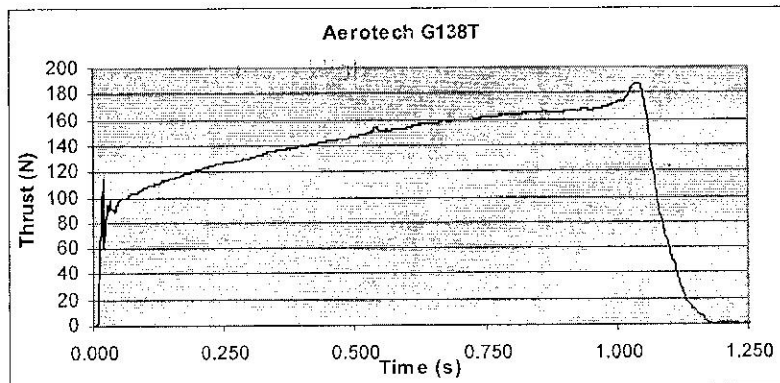
**Total Impulse:** 157.1 Newton-seconds  
**Delays:** 14 seconds, adjustable  
**Propellant Type:** Blue Thunder  
**Propellant Mass:** 70.0 grams  
**Casing Dimensions:** 29mm × 124mm  
**Certification Date:** July 26, 2010  
**Certification Type:** High Power Rocket Motor

## STATIC TEST DATA

**Date Tested:** July 22, 2010  
**Total Impulse:** 157.1 Newton-seconds ( $\sigma$  0.5)  
**Peak Thrust:** 190.1 Newtons ( $\sigma$  3.3)  
**Burn Time:** 1.14 seconds ( $\sigma$  0.01)  
**Average Thrust:** 138.0 Newtons ( $\sigma$  0.4)  
**Mass After Firing:** 78 grams

Reduction Rate (in./sec.)	Adjustment Depth	Nominal Delay (sec)	NFPA Tolerance		Observed Delay (sec)
			-20%	20%	
0.032	0.000	14.00	11.20	16.80	13.66
0.032	0.075	11.66	9.33	13.99	12.99
0.032	0.175	8.53	6.83	10.24	9.23

## TYPICAL THRUST-TIME CURVE



## REMARKS

Uses Aerotech RMS 29/40-120 Reload System  
Delay adjustment is: .032" per second.  
Maximum Adjustment: 0.250"