The Leader in High Performance Rocketry

AEROTECH® CONSUMER AEROSPACE

Jeff Aresetti's Nike Ajax powered by five K1275R motors (Photograph by Nadine Kinney–2004).

2005-2006 PRODUCT CATALOG

SECOND EDITION

INTRODUCTION

A Letter from Gary Rosenfield

Welcome to the AeroTech division of RCS Rocket Motor Components! I want to personally thank you for taking the time to examine the wide range of products found in this catalog. I still remember the rush I experienced when I flew my first model rocket as a 14-year-old in 1969-an "Alpha" on an "A" motor.

The kits, rocket motors and accessories that you will see on these pages are the culmination of over 30 years of personal experience as well as a dedicated and ongoing team effort. Having started in 1982 with the release of its first product, the G30 composite rocket motor, AeroTech Consumer Aerospace now offers a full line of high quality rocket kits, composite propellant rocket motors, building components and ground support equipment.

AeroTech rocket kits are designed for quick assembly and are engineered to withstand the stresses of multiple high performance launches and recoveries. We introduced the reloadable hobby rocket motor in 1990, and continue to lead the industry in rocket motor development. Our rocket motor line spans a wide range of performance characteristics and includes many choices from the single-use E15W to the reloadable N2000W with over 900 lbs. of peak thrust!

AeroTech has taken a proactive role in the regulatory environment that continually affects our hobby. Many of our products have evolved as a result of our success in this area, as well as from technical advances in the industry. We believe that our participation is key, and that our efforts will permit us to consistently offer a truly innovative and broadened product line to our customers for years to come.

We have set our sights towards meeting and exceeding your needs and expectations. To that end we are committed to continual enhancement to our production capacity, to expanding our professional staff, and to opening our customer service avenues as wide as possible.

I and the entire staff here at AeroTech are dedicated to assisting you in the creation and recreation of your own rocketry experience!

Gary C. Rosenfield, President, AeroTech Division
RCS Rocket Motor Components, Inc.
June, 2005

AeroTech Website

Launched in 1996, the AeroTech web site was created to provide a resource for customers and dealers. A customer can easily locate an authorized dealer near them by using the 'Dealers' button. Another very valuable area on the web site may be found under the 'Resources' button. The Resources area contains hundreds of downloadable Adobe Acrobat PDF documents including product instructions, order forms, motor assembly drawings and regulatory documents which can be viewed on a computer screen or printed out to paper. One of the most helpful additions to the site is the 'AeroTech Theatre,' an area containing instructional QuickTime movies to help customers to better use AeroTech products. This area has being expanded to contain short video clips of rocket launches. The 'Launches' area contains a launch calendar listing rocket club launches around the world. Check the list regularly to find a rocket launch near you!

Crowd at LDRS 21, Kansas (photo: McNeely)

Rocket fliers at LDRS 21, Kansas

STARTER SETS & GROUND SUPPORT

Brian Rosenfield stands by the Initiator Starter Set.

Initiator Starter Set

The Initiator Starter Set is the perfect introduction to the thunderous experience of E, F, and G powered rockets. This comprehensive set of kits includes the over 3 foot tall Initiator rocket, Mantis launch pad, Interlock 12 volt launch controller, and complete illustrated assembly instructions. The Initiator Starter Set is available in two versions; one intended for use with single-use (SU) motors and one which includes a 29mm Reloadable Motor System (RMS) E, F, G rocket motor. Single-use motors and RMS reload kits sold separately.

Product No. 89001 (for single-use motors)

Product No. 89002 (includes reloadable 29mm RMS E, F, G rocket motor hardware)

Starter Set Components

Initiator Rocket Kit

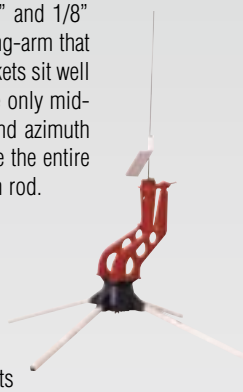
The Initiator established AeroTech's reputation for innovative and versatile advanced rocket design. Large, colorful, adhesive decals and molded plastic fins make it easy for you to achieve great looking results.

Product No. 89011

Mantis Launch Pad

The Mantis is perfect for flying both mid-power rockets (E, F, G) and small model rockets (A through D) as it accepts 1/4", 3/16" and 1/8" launch rods. Mantis makes loading a rocket easy with a swing-arm that can lower the launch rod to a horizontal position. Loaded rockets sit well off the ground for comfortable igniter hook up. Mantis is the only mid-power rocket launch pad that allows launch rod elevation and azimuth adjustments to be made without having to pick up and move the entire launcher. Mantis come with a two-piece 1/4" diameter launch rod.

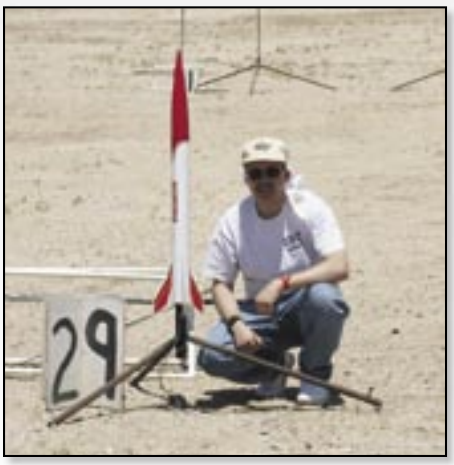
Product No.: 89281



Interlock Launch Controller

A launch controller is only as good as it is safe and convenient. When armed, the Interlock controller emits a warning tone to alert spectators to a possible launch and after firing the Key Eject system automatically disarms the firing circuit for the utmost in personal protection. Our Interlock controller is conveniently designed to hook up directly to your car's 12 volt battery and to assist in placing you at a safe launch distance, incorporates 40 feet of heavy-duty power cord.

Product No.: 89381



Bob Sanford, designer of the Initiator.

Rocket Design

AeroTech model rockets are different! Large size, sleek aerodynamics and adult styling single out AeroTech rockets as something special. But, take a look inside. That's where you'll find a revolution in model rocket design!

Other Features

- Large Colorful Self-Adhesive Decals
- Adapters Permit Use of Various Size AeroTech Motors
- Molded Lugs with Alignment Tabs
- Strong, Light Aero-Fibre Centering Rings
- Motor Hook Secures Motor & Allows for Quick Reloading
- One Piece Molded Nose Cone

AeroTech rockets have durable polymer fins with precision molded airfoils. The unique Fin-Lok™ fin mounting system carries and distributes aerodynamic and thrust loads throughout an integrated rocket structure. Assembly is quick, easy, neat, and precise. When the rocket reaches peak altitude, the Labyrinth™ ejection gas cooling system cools the hot gas from the rocket motor ejection charge. The cooled ejection gas pressurizes the parachute bay and ejects the parachute (requiring no parachute wadding). Every kit comes with motor adapters that allow you to easily use a range of different length, diameter and power AeroTech rocket motors. Innovative design and quality materials make AeroTech rockets unmatched in precision, style, performance, durability and ease of assembly.

All AeroTech mid-power (E, F, G) kits are of single stage design and come equipped with a 29mm motor mount. A 24mm motor adapter is also included with Arreaux, Barracuda, Cheetah, HV Arcas, Initiator, IQSY Tomahawk, Mustang, Strong Arm and Wart-Hog. All kits recover with a single nylon parachute with the exception of the Astrobee D and the Mirage which use two nylon parachutes.

Initiator™

Itching to fly F and G motors? The Initiator is simply the best big rocket to build first. It features molded fins, beautiful color coordinated decals, and no-wadding ejection system. An impressive 3 feet tall, the Initiator is one gorgeous rocket.

Specifications:
Length: 39"/99 cm
Diameter: 2.6"/6.7 cm
Weight (without motor): 14oz/400gms
Fins: 3
Product No. 89011

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
E18-4W	600 / 180
E11-3J	450 / 140
E28-4T	650 / 200
F24-4W	700 / 210
F12-3J	600 / 180
F39-6T	850 / 260
E16-4W	550 / 170
E23-5T	500 / 150
F40-7W	1400 / 430
F22-5J	1050 / 320
F52-8T	1300 / 400
G33-7J	1650 / 500
G64-7W	2000 / 600

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
E15-4W	370 / 110
E30-4T	440 / 130
F20-4W*	870 / 270
F23-4FJ*	690 / 210
F25-6W	1120 / 340
F26-6FJ	880 / 270
F42-4T*	770 / 230
F50-6T	1100 / 340
G38-7FJ	1460 / 450
G40-7W	1770 / 540
G80-7T	1790 / 550

*Econojet Motor

Mustang™

3,000 foot flights, striking self-adhesive graphics, molded fins, and a durable nylon parachute give the Mustang performance and value that can't be equaled in any other mid-power rocket kit.

Specifications:
Length: 32"/81 cm
Diameter: 1.9"/4.7 cm
Weight (without motor): 11oz/310gms
Fins: 4
Product No. 89010

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
D15-4T	350 / 100
E18-7W	1000 / 300
E11-5J	750 / 230
E28-7T	1050 / 320
F24-7W	1200 / 360
F12-5J	1050 / 320
F39-6T	1450 / 440
E16-7W	950 / 290
E23-5T	800 / 240
F40-10W	2250 / 680
F22-7J	1700 / 520
F52-8T	2100 / 640
G33-7J	2650 / 800
G64-10W	3200 / 980

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
E15-7W	800 / 240
E30-7T	850 / 260
F20-7W*	1480 / 450
F23-7FJ*	1230 / 380
F25-9W	1760 / 540
F26-9FJ	1490 / 450
F42-8T*	1350 / 410
F50-9T	1710 / 520
G38-7FJ	2140 / 650
G40-10W	2460 / 750
G80-10T	2460 / 750

*Econojet Motor

Arreaux™

Our trademark rocket. Pronounced "aero," the Arreaux's payload section makes it perfect for lofting altimeters, accelerometers, and other experimental projects. With "G" powered flights approaching 3000 feet, this rocket cranks!

Specifications:
Length: 43"/109 cm
Diameter: 1.9"/4.7 cm
Weight (without motor): 12oz/340gms
Fins: 3
Product No. 89013

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
D15-4T	300 / 90
E18-4W	900 / 270
E11-5J	700 / 210
E28-7T	950 / 290
F24-7W	1100 / 330
F12-5J	900 / 270
F39-6T	1350 / 410
E16-7W	850 / 260
E23-5T	750 / 230
F40-10W	2100 / 640
F22-7J	1600 / 480
F52-8T	2050 / 620
G33-7J	2550 / 770
G64-10W	3150 / 950

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
E15-7W	1060 / 320
E30-7T	1080 / 330
F20-7W*	1760 / 540
F23-7FJ*	1500 / 460
F25-9W	2050 / 630
F26-9FJ	1780 / 540
F42-8T*	1610 / 490
F50-9T	1970 / 600
G38-7FJ	2410 / 730
G40-10W	2730 / 830
G80-10T	2700 / 820

*Econojet Motor

Projected Altitudes
For a given motor/rocket combination, the projected altitude shown will vary from rocket to rocket and flight to flight because of differences in launch site elevation, completed rocket weight, smoothness of finish, weather conditions and normal variation in motor performance. Projected altitudes are for a sea level launch site and without the rocket carrying any payload.

Mirage™

For those who want to fly a really big rocket, the Mirage is it! Lift-offs are impressively slow and realistic when this 7 foot monster roars off the pad on "G" power. Recovery is on two big nylon parachutes.

Specifications:
Length: 87"/220 cm
Diameter: 2.6"/6.7 cm
Weight (without motor): 31oz/880gms
Fins: 3
Product No. 89019

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
F40-4W	650 / 200
F52-5T	650 / 200
G64-4W	1300 / 400

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
F50-4T	510 / 160
G38-4FJ	680 / 210
G40-4W	870 / 270
G80-4T	880 / 270

Sumo™

For those who love to see a short, fat rocket with slow lift offs, the Sumo is it! A big four inch diameter kit with impressive decals, the SUMO really stands out!

Specifications:
Length: 39"/99 cm
Diameter: 4.0"/10.1 cm
Weight (without motor): 32oz/907gms
Fins: 4
Product No. 89024

LEVEL 1 READY!

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
G64-4W	1000 / 300
H128W-S*	2000 / 600
H165R-S*	2000 / 600
H238T-S*	2000 / 600
H180W-M*	2600 / 790
H210R-M*	2600 / 790

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
G38-4FJ	690 / 210
G40-4W	870 / 270
G80-4T	890 / 270

*Easy Access RMS Motor

Astrobee D™

The AeroTech flagship. A painstakingly crafted scale model, the "D" is nearly 6 feet of breathtaking molded detail. All of AeroTech's trademark construction features combine with "G" power to make this kit a "must have" rocket experience.

Specifications:
Length: 68"/173 cm
Diameter: 2.6"/6.7 cm
Weight (without motor): 28oz/790gms
Fins: 4
Product No. 89015

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
F40-4W	750 / 230
F52-5T	750 / 230
G64-4W	1350 / 410

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
F50-4T	720 / 220
G38-4FJ	950 / 290
G40-4W	1140 / 410
G80-4T	1120 / 430

G-Force™

This kit stands over five feet tall! Featuring a big four inch diameter, the G-Force provides spectacular slow lift-offs when powered by AeroTech "G" motors.

Specifications:
Length: 60"/152cm
Diameter: 4"/10.1 cm
Weight (without motor): 32oz/907gms
Fins: 3
Product No. 89021

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
G64-4W	800 / 240

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
G38-4FJ	440 / 130
G40-4W	600 / 180
G80-4T	640 / 200

ROCKET KITS

Rocket fliers a

HV Arcas™

This replica is 60% the size of the actual high-velocity Arcas sounding rocket and features precision molded fins, authentic decals, a data plate and detailed engineering blue-print.

Specifications:
Length: 56"/142 cm
Diameter: 2.6"/6.7 cm
Weight (without motor): 22oz/620gms
Fins: 4
Product No. 89012

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
E28-4T	450 / 140
F24-4W	500 / 150
F39-6T	550 / 170
F40-4W	1100 / 330
F52-5T	1000 / 300
G33-5J	1300 / 400
G64-7W	1750 / 530

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
E30-4T	310 / 90
F20-4W*	630 / 190
F23-4FJ*	490 / 150
F25-6W	820 / 250
F26-6FJ	630 / 190
F42-4T*	580 / 180
F50-6T	820 / 250
G38-7FJ	1090 / 330
G40-7W	1360 / 410
G80-7T	1400 / 430

*Econojet Motor

IQSY Tomahawk™

If you have never built a scale model before, the Tomahawk makes the perfect first project. Loaded with striking detail and E, F, and G power capable, this is one scale model that flies like a real sounding rocket.

Specifications:
Length: 41"/104 cm
Diameter: 1.9"/4.7 cm
Weight (without motor): 11oz/310gms
Fins: 4
Product No. 89014

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
E18-7W	900 / 270
E11-5J	600 / 180
E28-7T	850 / 260
F24-7W	1100 / 330
F12-5J	800 / 240
F39-6T	1250 / 380
E16-7W	850 / 260
E23-5T	650 / 200
F40-10W	2100 / 640
F22-7J	1500 / 450
F52-8T	1950 / 590
G33-7J	2450 / 740
G64-10W	3150 / 950

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
E15-7W	930 / 280
E30-7T	1100 / 340
F20-7W*	1800 / 550
F23-7FJ*	1530 / 470
F25-9W	1920 / 590
F26-9FJ	1640 / 500
F42-8T*	1510 / 460
F50-9T	2010 / 610
G38-7FJ	2290 / 700
G40-10W	2790 / 850
G80-10T	2760 / 840

*Econojet Motor

Strong Arm™

Featuring molded plastic fins and strakes, a huge self-adhesive decal sheet, and the styling of the Navy's Standard ARM missile, the Strong Arm is as beautiful to look at as it is to fly.

Specifications:
Length: 44"/112 cm
Diameter: 2.6"/6.7 cm
Weight (without motor): 18oz/510gms
Fins: 4 Product No. 89017

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
E18-4W	450 / 140
E28-4T	500 / 150
F24-4W	700 / 210
F39-6T	700 / 210
E16-4W	400 / 120
F40-7W	1150 / 350
F22-5J	850 / 260
F52-8T	1150 / 350
G33-5J	1450 / 440
G64-7W	1800 / 550

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
E15-4W	300 / 90
E30-4T	420 / 130
F20-4W*	810 / 250
F23-4FJ*	640 / 200
F25-6W	920 / 280
F26-6FJ	720 / 220
F42-4T*	660 / 200
F50-6T	1000 / 300
G38-7FJ	1180 / 360
G40-7W	1560 / 480
G80-7T	1580 / 480

*Econojet Motor

t Turkey Shoot 2004, Jean Dry Lake Bed, NV. (Photo: McNeely)

Wart-Hog™

As tough and "stout" as its namesake, the AeroTech Wart-Hog blends E, F, and G performance with the construction convenience of molded fins and self-adhesive decals to create a large rocket of a different breed.

Specifications:
Length: 37"/94 cm
Diameter: 2.6"/6.7 cm
Weight (without motor): 14oz/400gms
Fins: 4
Product No. 89018

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
E18-4W	600 / 180
E11-3J	450 / 140
E28-4T	650 / 200
F24-4W	850 / 260
F12-3J	600 / 180
F39-6T	850 / 260
E16-4W	500 / 150
E23-5T	500 / 150
F40-7W	1350 / 410
F22-5J	1050 / 320
F52-8T	1300 / 400
G33-7J	1650 / 500
G64-7W	1900 / 580

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
E15-4W	730 / 220
E30-4T	800 / 240
F20-4W*	1290 / 390
F23-4FJ*	1100 / 340
F25-6W	1430 / 440
F26-6FJ	1240 / 380
F42-4T*	1060 / 320
F50-6T	1450 / 440
G38-7FJ	1710 / 520
G40-7W	1990 / 610
G80-7T	1940 / 590

*Econojet Motor

Cheetah™

Like its namesake, this rocket is simply fast! The Cheetah is also AeroTech's altitude champ, soaring to over 3000 feet on "G" power. Our patented no-wadding ejection system and nylon parachute bring this cat back home flight after flight.

Specifications:
Length: 32"/81 cm
Diameter: 1.9"/4.7 cm
Weight (without motor): 10oz/280gms
Fins: 3
Product No. 89016

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
D15-4T	400 / 120
E18-7W	1150 / 350
E11-5J	900 / 270
E28-7T	1150 / 350
F24-7W	1500 / 450
F12-5J	1200 / 360
F39-9T	1550 / 470
E16-7W	950 / 290
E23-8T	900 / 270
F40-10W	2300 / 700
F22-7J	1850 / 560
F52-8T	2200 / 670
G33-7J	2750 / 830
G64-10W	3200 / 970

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
E15-7W	1130 / 340
E30-7T	1290 / 390
F20-7W*	2040 / 620
F23-7FJ*	1760 / 540
F25-9W	2180 / 660
F26-9FJ	1880 / 570
F42-8T*	1720 / 520
F50-9T	2240 / 680
G38-7FJ	2540 / 770
G40-10W	3050 / 930
G80-10T	3000 / 910

*Econojet Motor

Barracuda™

Sleek, slender and over 4 feet tall, the Barracuda is sure to impress everyone with its standout good looks and majestic flights. As with all our kits, the features include molded fins and nose cone, and a no-wadding ejection system!

Specifications:
Length: 56"/142 cm
Diameter: 1.9"/4.7 cm
Weight (without motor): 14oz/400gms
Fins: 3
Product No. 89020

Recommended RMS Motors:

Motor	Proj. Altitude (ft/m)
E18-4W	750 / 230
E11-3J	500 / 150
E28-4T	800 / 240
F24-7W	1100 / 330
F12-5J	700 / 210
F39-6T	1150 / 350
E16-4W	600 / 180
E23-5T	600 / 180
F40-7W	1900 / 580
F22-7J	1400 / 430
F52-8T	1850 / 560
G33-7J	2350 / 710
G64-10W	3000 / 910

Recommended SU Motors:

Motor	Proj. Altitude (ft/m)
E15-4W	820 / 250
E30-4T	820 / 250
F20-7W*	1510 / 460
F23-7FJ*	1260 / 380
F25-9W	1630 / 500
F26-9FJ	1360 / 410
F42-8T*	1250 / 380
F50-9T	1730 / 530
G38-7FJ	1990 / 610
G40-10W	2480 / 760
G80-10T	2470 / 750

*Econojet Motor

Building Components

Motor Mount/Fin-Lok™ Kits

Product	Part Number
Fin-Lok™ Kits Include: Motor Tube, Fin-Lok™ rings, motor hook, cooling mesh, ejection gas baffle, screw eye, thrust ring, thrust ring flange, centering rings.	
29mm x 12" Motor Mount Tube Only	12912
29mm x 17-3/4" Motor Mount Tube Only	12918
1.9" / 3-fin Kit	21903
1.9" / 4-fin Kit	21904
2.6" / 3-fin Kit	22603
2.6" / 4-fin Kit	22604
4.0" / 3-fin Kit	22605
4.0" / 4-fin Kit	22606

Precision Airfoil Molded Fins

Product	Part Number
Precision airfoils molded from high impact white polystyrene or ABS. All have Fin-Lok fin tabs. Most fins can be used on either 1.9", 2.6" or 4.0" diameter tubes.	
Mustang/Arreaux style	11710
Initiator style	11711
Arcas/Wart-Hog style	11712
Tomahawk/Strong Arm style	11714
Astrobee D/Mirage/G-Force/Sumo style	11715
Cheetah style	11716
Barracuda style	11720

Body Tubes & Couplers

Product	Part Number
Strong and smooth. Choose from slotted and unslotted types. Slotted tubes come with launch lug alignment slots, too.	
1.9" Slot / 3-fin 22.75"	11924
1.9" Slot / 4-fin 22.75"	11923
1.9" Unslotted 22.75"	11926
1.9" Unslotted 12.00"	11912
1.9" Unslotted 9.00"	11909
1.9" Coupler 4"	11804
2.6" Coupler 6"	12606
2.6" Unslotted 15"	12615
2.6" Unslotted 19"	12619
2.6" Slot / 4-fin 24.00"	12623
2.6" Slot / 3-fin 24.00"	12624
2.6" Slot/ 3-fin 24.00" (Mirage Lower Tube)	12625
2.6" Unslotted 24"	12626
2.6" Launch Lug Slot 24.00" (Mirage Center Tube)	12627
2.6" Slot/ 4-fin 27.00" (Astrobee Lower Tube)	12628
2.6" Launch Lug Slot 27.00" (Astrobee Upper Tube)	12629
2.6" Tube sleeve 4"	12704
4.0" Coupler 6"	14008
4.0" Unslotted 19"	14019
4.0" Unslotted 23"	14033
4.0" Slot / 3-fin 23"	14023
4.0" Slot/ 4-fin 23"	14040

Bulkhead Assemblies

Product	Part Number
Bulkhead Assemblies include: Coupler tube, bulkhead, and screw eye.	
1.9" Diameter body tubes.	14819
2.6" Diameter body tubes.	11614
4.0" Diameter body tubes.	11615

Nose Cones

Product	Part Number
Blow molded with built-in shock cord attachment loop.	
1.9" 5:1 Ogive	11191
2.6" 5:1 Ogive	11261
4.0" 4:1 Ogive 5 oz. (Color: White)	11401
4.0" 4:1 Ogive 9 oz. (Color: Grey)	11405

Recovery Systems

Product	Part Number
Preassembled fabric parachutes with six shroud lines.	
16" Fabric parachute	13016
22" Fabric parachute	13022
30" Fabric parachute	13030
42" Fabric parachute	13042
3/8" x 6' Shock cord	17386
3/8" x 8' Shock cord	17388
5/8" x 18' Shock cord	17201

Motor Accessories

Product	Part Number
Motor Hook (Std).	19001
Motor Hook (Sumo).	19001-Y
"E" adapter, "F" spacer.	14005
RMS Aft Closure Wrench.	91295

Decals & Scale Details

Product	Part Number
Mustang™ decal sheet.	18010
Initiator™ decal sheet.	18011
Arcas decal sheet.	18012
Arreaux™ decal sheet.	18013
Tomahawk decal sheet.	18014
Astrobee D decal sheet	18015
Cheetah™ decal sheet	18016
Strong Arm™ decal sheet	18017
Wart-Hog™ decal sheet	18018
Mirage™ decal sheet	18019
Barracuda™ decal sheet.	18020
G-Force™ decal sheet	18021
Sumo™ decal sheet	18023
Arcas data plate	18912

AeroTech Polo Shirt (L) part #94525
AeroTech Polo Shirt (XL) part #94530
AeroTech Polo Shirt (XXL) part #94535

AeroTech Hat part #94400

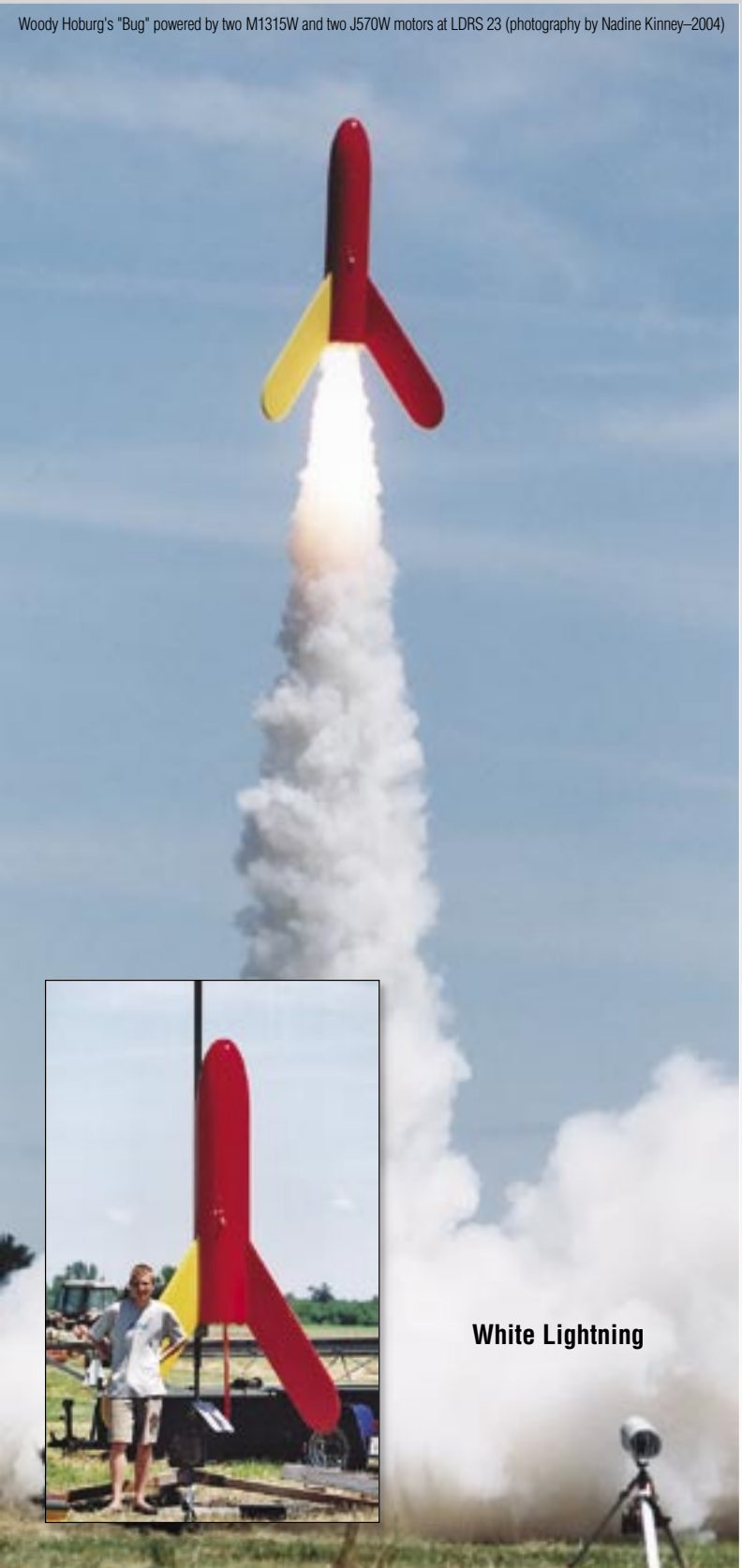
RMS Aft Closure Wrench part #91295
Actual wrench configuration may vary from photo shown.

PROPELLANT TYPES

Composite Propellants

AeroTech composite rocket motors are the most technically advanced hobby motors in the world. These motors use the same solid propellant as America's space boosters. Pound for pound, this propellant delivers nearly three times the power of black powder model rocket motors, allowing you to fly larger rockets, heavier payloads and achieve higher altitudes than ever before. AeroTech composite rocket motors come in five propellant formulations for both reloadable and single-use motors. Create your own special effects by choosing the performance, tracking and sound characteristics you desire.

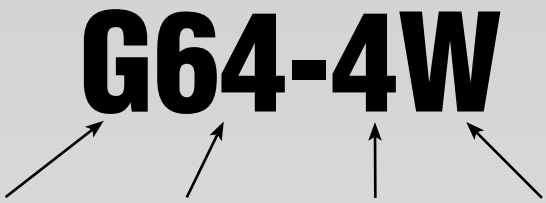
Woody Hoburg's "Bug" powered by two M1315W and two J570W motors at LDRS 23 (photography by Nadine Kinney–2004)



White Lightning

Motor Designations

Each AeroTech composite hobby rocket motor or reload kit has a designation which provides important information about performance. The designation is read as follows:



First Letter
The first letter is a code which indicates total impulse (in Newton-seconds) produced by the motor. Each succeeding letter has up to twice the power of the preceding letter. A 'G' motor has up to 160 N-seconds of total impulse.

First Number
The first number indicates the motor's average thrust in Newtons. A Newton is equivalent to 0.225 pounds of force.

Second Number
The second number shows the time delay, in seconds, between propellant burn-out and activation of the ejection charge.

Second Letter
The second letter indicates the propellant formulation of the motor. In this case the "W" indicates "White Lightning". Additional letters or numbers may be added to denote other performance characteristics.

Five Propellant Types

White Lightning™ (W)

A brilliant white flame, dense bright white exhaust and a throaty roar are the hallmarks of this popular propellant. Easy to track. Exciting to watch! White Lightning looks and sounds like actual sounding rockets and launch vehicles. Special effects professionals and aerospace companies specify the AeroTech White Lightning propellant to achieve realistic simulation.

Blue Thunder™ (T)

Produces a bright violet-blue flame with a minimum of exhaust smoke. These motors provide a higher level of thrust than White Lightning or Black Jack motors of the same total impulse. Blue Thunder is the perfect propellant for the greatest lift-off acceleration.

Black Jack™ (J) and Black Max™ (FJ)

Provides the high visibility tracking of dense black exhaust. In addition to a distinctive lift off roar, Black Jack motors give your models lower acceleration and longer powered flight than White Lightning or Blue Thunder motors of the same total impulse. Black Max provides slightly higher acceleration than White Lightning Propellant.

Redline™ (R)

Distinctly different from its propellant relatives, Redline provides unique visual and thrust characteristics for larger airframes and performance oriented flyers. The proprietary AeroTech formulation imparts Redline with its signature vivid scarlet flame. Redline's burning rate lies midway between that of White Lightning and Blue Thunder. Photos don't do justice to the "laser-beam" intensity and color of Redline… you have to see it to appreciate it!

SINGLE-USE ROCKET MOTORS

Single-Use Motors

AeroTech established its position as the leader in hobby rocket motor technology with its single-use composite motors. Hobby rocketry has come to depend on AeroTech motors for sport and competition flying.

AeroTech's single-use composite model rocket motors are offered in over 30 different combinations of physical size, power, burn time, propellant type and delay length. All rocket motors are certified by the National Association of Rocketry (NAR) or the Tripoli Rocketry Association (TRA).

In 1997, AeroTech introduced the "Econojet" line of single-use motors. AeroTech combined features of performance, design and packaging in the Econojets to create a line of motors that could be sold at a price point midway between its traditional single-use motors and RMS reload kits.

In 2003, AeroTech revolutionized single-use motor design with a one-piece molded case/nozzle unit and matching molded bulkhead with a threaded joint that was first used in the F20W Econojet. Since then, the new configuration has found its way into the F23FJ Econojet, the F25W, F50T, G40W and G80T standard motors, and the new F42T Econojet and F26FJ standard motors.

The E15W, E30T, F20W, F21W and F42T motors may be shipped via United States Postal Service (USPS) Parcel Post without incurring a Hazmat charge!

Econojet Motors

Motor	Diameter	Case Length	Total Impulse	Prop. Wt.	Motor Wt.	Delay Times
F20W (2-pak)	1.13" (29mm)	3.28"	55 N-sec	30 g	80 g	4, 7
F21W (2-pak)	0.94" (24mm)	3.75"	55 N-sec	30 g	64 g	4, 6, 8
F23FJ (2-pak)	1.13" (29mm)	3.28"	48 N-sec	33 g	84 g	4, 7
F42T (2-pak)	1.13" (29mm)	3.28"	55 N-sec	27 g	76 g	4, 8

Hobby Line Single-Use Motors

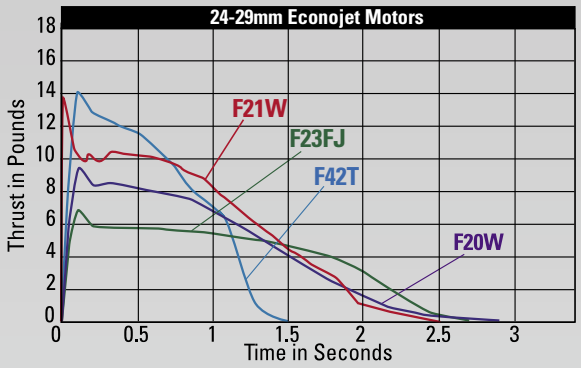
Motor	Diameter	Case Length	Total Impulse	Prop. Wt.	Motor Wt.	Delay Times
E15W	.94" (24mm)	2.75"	40 N-sec	20.1 g	48 g	4, 7, plugged
E30T	.94" (24mm)	2.75"	40 N-sec	19.3 g	47 g	4, 7
F25W	1.13" (29mm)	3.88"	73 N-sec	38.8 g	97 g	4, 6, 9
F26FJ	1.13" (29mm)	3.88"	65 N-sec	43.1 g	101 g	6, 9
F50T	1.13" (29mm)	3.88"	70 N-sec	33.6 g	90 g	4, 6, 9
G38FJ	1.13" (29mm)	4.88"	87 N-sec	59.7 g	126 g	4, 7
G40W	1.13" (29mm)	4.88"	100 N-sec	53.8 g	123 g	4, 7, 10
G80T	1.13" (29mm)	4.88"	100 N-sec	47.9 g	116 g	4, 7, 10

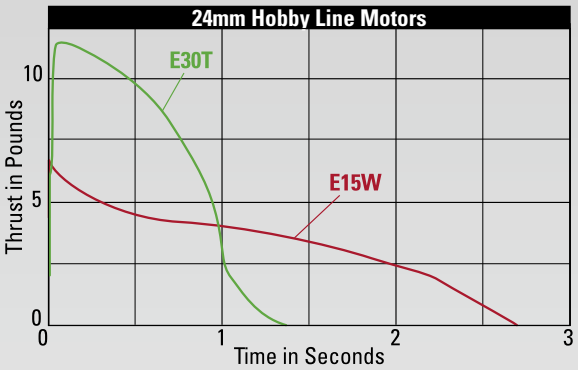
High Power Single-Use Motors

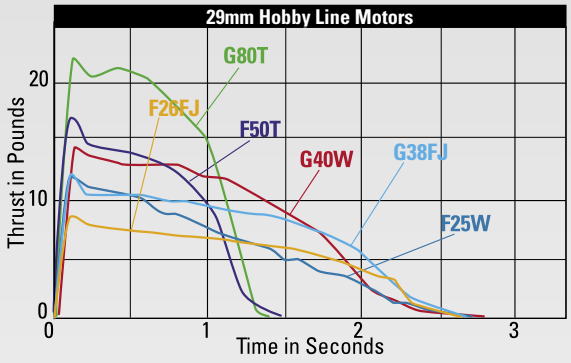
Motor	Diameter	Case Length	Total Impulse	Prop. Wt.	Motor Wt.	Delay Times
H124J*	1.13" (29mm)	9.88"	240 N-sec	164.7 g	250 g	6, 10, 14
I65PW*	2.125" (54mm)	7.75"	640 N-sec	378.0 g	625 g	plugged
J125PW*	2.125" (54mm)	13.13"	1280 N-sec	720.5 g	1100 g	plugged
K250PW*	2.125" (54mm)	25.13"	2560 N-sec	1397.0 g	2370 g	plugged
K1050PW*	2.125" (54mm)	25.13"	2560 N-sec	1365.3 g	2250 g	plugged

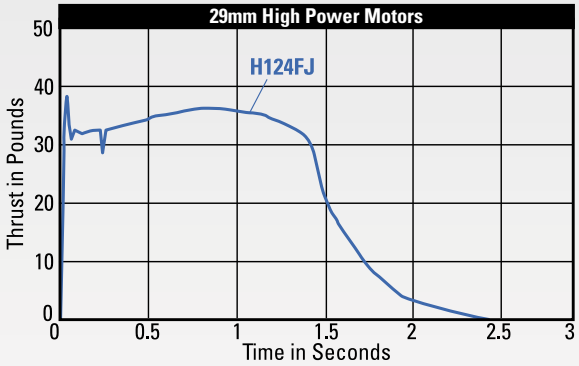
*Dealer Direct Items

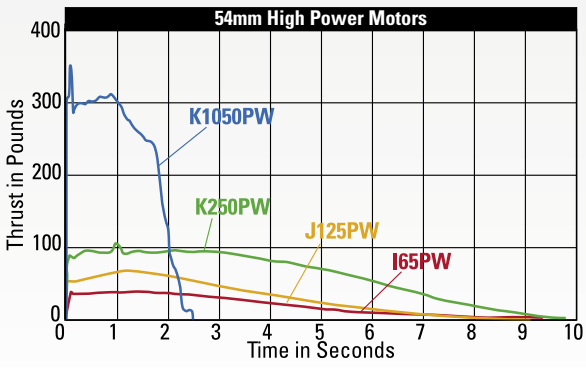
Typical Hobby Line Single-Use Motors







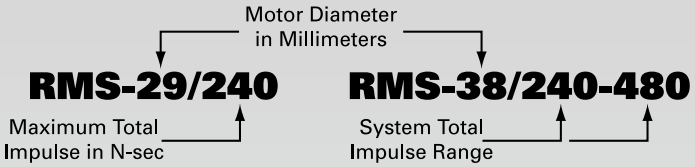




Reloadable Motor System™ (RMS™)

Now you can enjoy high power rocketry at greatly reduced cost, improved reliability and enhanced flexibility with the RMS Reloadable Motor System from AeroTech! Since 1990, when AeroTech revolutionized the hobby rocket industry with the invention and introduction of the RMS, rocket enthusiasts have been enjoying the cost and performance advantages of AeroTech's line of precision machined reloadable aluminum rocket motors and reload kits.

With the availability of a growing line of Blue Thunder, White Lightning, Redline, and Black Jack propellant reloading kits, RMS high power rocket enthusiasts not only have tremendous versatility at their fingertips but also the advantage of flight costs significantly lower than that available from single-use high power motors!



Hobby Line RMS

AeroTech introduced the hobby line RMS in 1991. There are AeroTech RMS motors to fit just about all rocket kits designed for black powder and composite motors. No modification to the rocket is necessary. As is always the case, you should perform a stability and strength check to see that the power and weight of a motor is appropriate for the rocket the motor is to be used in. An investment in RMS give you a position in a wide range of reload kits. Each RMS motor offers flexible power options.

Easy Access™ High Power RMS

In 1995, AeroTech took steps to make your involvement in high power even easier through the creation of the Easy Access and Restricted Access high power rocket motor product lines. With Easy Access, AeroTech has made it possible for appropriately certified rocket enthusiasts to see at a glance which high power reload kits and related products may be obtained and flown by Level 1 & 2 certified users and those users seeking Level 1 & 2 certification. Easy Access encompasses the entire AeroTech 29mm & 38mm high power reload kit line. In 1996, AeroTech introduced a number of new Easy Access reload kits, including the 29mm H220T, the 38mm I300T, I195J, I435T and the 38/720 J350W. 1998 saw the release of the new "King of Grunt", the 9 grain 38mm J570W. In 1999 AeroTech extended the power of 29mm motor line with the 29/360 motor and the six-grain I200W reload kit. In 2004, AeroTech further expanded the range of RMS capabilities with the 29/120 motor and the G79W and G77R reload kits, and the 38/120 motor and the G61W and G67R reload kits. The G77R and G67R were the first Redline reload kits released by AeroTech in the 'G' power class. Many of the Hobby Line RMS and 29mm Easy Access reload kits may be shipped via United States Postal Service (USPS) Parcel Post without incurring a hazmat charge!

FirstFire™ & FirstFire Jr.™ Igniters

FirstFire igniters are now included with all AeroTech RMS Easy Access high power reload kits. FirstFire igniters provide an easy-to-use two lead system and a high temperature pyrogen mixture to light your motors reliably every time. FirstFire igniters are also sold separately in three packs. FirstFire: H & above. FirstFire Jr.: F & G only.

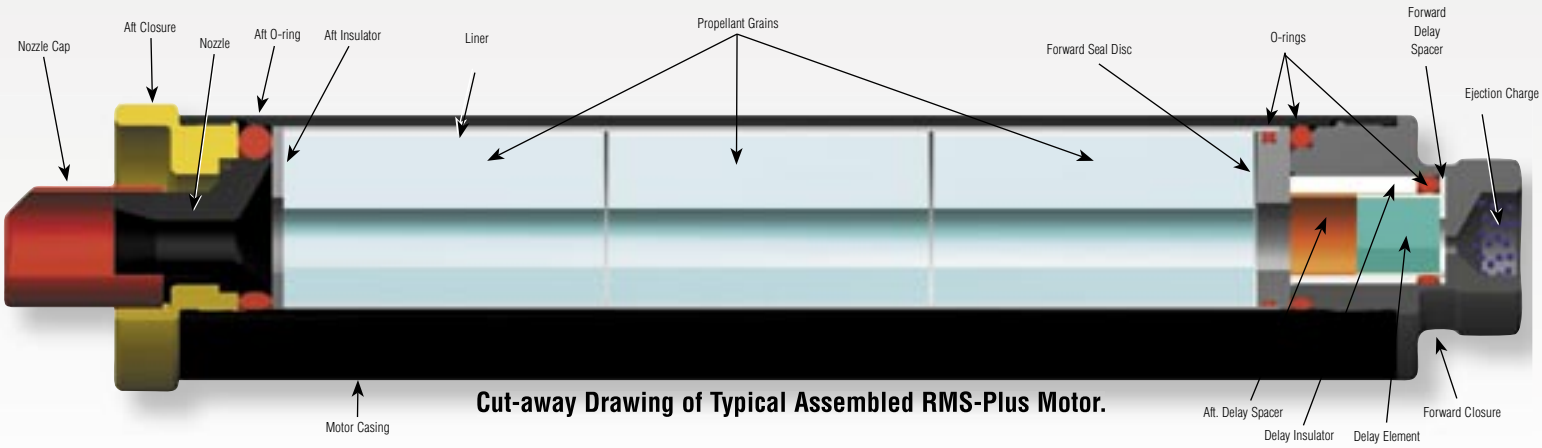
Product No.: 89894 (FirstFire)
Product No.: 89895 (FirstFire Jr.)

Restricted Access™ High Power RMS

Restricted Access, on the other hand, allows AeroTech to clearly identify for the high power rocket enthusiast, those high power reload kits that require a Level 2 or 3 certification for purchase and use. If you possess a Bureau of Alcohol, Tobacco, Firearms and Explosives (ATFE) Low Explosives User Permit, keep in mind that AeroTech continues to lead the industry in supplying "J" through "N" class reload kits. This includes AeroTech's highly popular "Long Burn 54's", the J90W, J135W and K185W reloads. 1996 saw the granting of DOT-E 10996, a shipping exemption which permits the transportation of all Restricted Access reload kits by UPS(r) or FedEx ground service. Recent product releases in the Restricted Access line include the 54/2560 motor and the K700W and K1275R reloads, the 75mm motor series and the only Tripoli certified "N" motor currently available, the 98/15360 N2000W. 1999 saw the introduction of the awesome Blue Thunder reload kits for AeroTech's popular 98mm motors, and in 2001 AeroTech released Redline reload kits for the 54, 75 and 98mm RMS hardware.

RMS-Plus™ Delay Sealing System for 29, 38 and 54mm High Power RMS

The AeroTech RMS-Plus delay sealing system provides for more precise delay times, reduced chances of forward closure "blow-by", easier cleanup, and more! Motors may be left assembled indefinitely, and there is no need to remove the delay charge assembly if the closures are loosened. All RMS-Plus reload kits come with 3-D illustrated instructions. RMS-Plus technology is completely compatible with existing AeroTech RMS motor hardware.



Cut-away Drawing of Typical Assembled RMS-Plus Motor.

Hobby Line RMS™ Hardware Data

RMS-18 Hobby Line Motor Hardware Data

Hardware	Outer Diameter	Length (w/o aft closure)	Weight
RMS-18/20	.698" (18mm)	2.895"	11.8 g

RMS-24 Hobby Line Motor Hardware Data

Hardware	Outer Diameter	Length (w/o aft closure)	Weight
RMS-24/40	.938" (24mm)	3.473"	19.7 g

RMS-29 Hobby Line Motor Hardware Data

Hardware	Outer Diameter	Length (w/o aft closure)	Weight
RMS-29/40-120	1.125" (29mm)	5.639"	58g

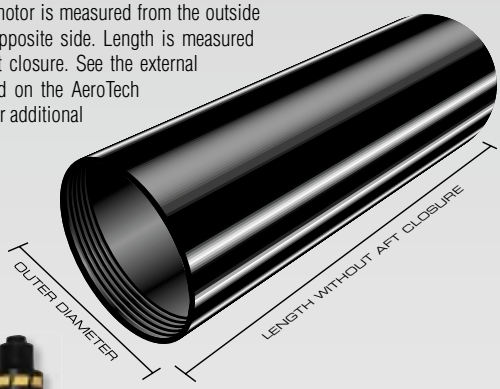
RMS-R/C-24 Hobby Line Motor Hardware Data

Hardware	Outer Diameter	Length (w/o aft closure)	Weight
RMS-R/C 24/20-40	.938" (24mm)	2.718"	20 g

RMS-R/C-32 Hobby Line Motor Hardware Data

Hardware	Outer Diameter	Length (w/o aft closure)	Weight
RMS-R/C 32/60-100	1.250" (32mm)	3.550"	56.9 g

Note: The diameter of the motor is measured from the outside of the motor tube to the opposite side. Length is measured without inclusion of the aft closure. See the external dimension drawings posted on the AeroTech website Resource Library for additional dimensional information.



18mm 24mm 29mm

24mmRC 32mmRC

High Power RMS™ Hardware Data

RMS-29 High Power Motor Hardware Data

Hardware	Outer Diameter	Length (w/o aft closure)	Weight	Options
RMS-29/60	1.125" (29mm)	3.496"	57.5 g	Plugged forward closure
RMS-29/100	1.125" (29mm)	4.496"	61.6 g	Plugged forward closure
RMS-29/120	1.125" (29mm)	5.503"	61.6 g	Plugged forward closure
RMS-29/180	1.125" (29mm)	7.253"	84.7 g	Plugged forward closure
RMS-29/240	1.125" (29mm)	9.013"	105.3 g	Plugged forward closure
RMS-29/360	1.125" (29mm)	12.732"	138 g	Plugged forward closure

RMS-38 High Power Motor Hardware Data

Hardware	Outer Diameter	Length (w/o aft closure)	Weight	Options
RMS-38/120	1.500" (38mm)	3.830"	125.5 g	Plugged forward closure
RMS-38/240	1.500" (38mm)	5.705"	125.5 g	Plugged forward closure
RMS-38/360	1.500" (38mm)	7.580"	147.4 g	Plugged forward closure
RMS-38/480	1.500" (38mm)	9.455"	168.5 g	Plugged forward closure
RMS-38/600	1.500" (38mm)	11.330"	190.4 g	Plugged forward closure
RMS-38/720	1.500" (38mm)	13.205"	212.3 g	Plugged forward closure
RMS-38/1080	1.500" (38mm)	18.830"	278 g	Plugged forward closure

RMS-54 High Power Motor Hardware Data

Hardware	Outer Diameter	Length (w/o aft closure)	Weight	Options
RMS-54/852	2.125" (54mm)	9.115"	278.1 g	Plugged & ext fwd closure
RMS-54/1280	2.125" (54mm)	12.442"	338.2 g	Plugged & ext fwd closure
RMS-54/1706	2.125" (54mm)	15.772"	398.6 g	Plugged & ext fwd closure
RMS-54/2560	2.125" (54mm)	22.422"	519 g	Plugged & ext fwd closuret

RMS-75 High Power Motor Hardware Data

Hardware	Outer Diameter	Length (w/o aft closure)	Weight	Options
RMS-75/2560	2.965" (75mm)	15.077"	956 g	none
RMS-75/3840	2.965" (75mm)	20.390"	1182 g	none
RMS-75/5120	2.965" (75mm)	25.703"	1408 g	none
RMS-75/6400	2.965" (75mm)	31.015"	1684 g	none

RMS-98 High Power Motor Hardware Data

Hardware	Outer Diameter	Length (w/o aft closure)	Weight	Options
RMS-98/2560	3.875" (98mm)	11.413"	1140 g	none
RMS-98/5120	3.875" (98mm)	17.476"	1530 g	none
RMS-98/7680	3.875" (98mm)	23.538"	1926 g	none
RMS-98/10240	3.875" (98mm)	29.601"	2367 g	none
RMS-98/15360	3.875" (98mm)	41.711"	3204 g	none

Hardware Systems

29/60-100 system
Includes two casings (29/60 & 29/100), one aft and one forward closure

29/180-240 system
Includes two casings (29/180 & 29/240), one aft and one forward closure and one forward seal disc

38/240-480 system
Includes three casings (38/240, 38/360 & 38/480), one aft and one forward closure and one forward seal disc

54/852-1706 system
Includes three casings (54/852, 54/1280 & 54/1706), one aft and one forward closure

75/2560-6400 system
Includes four casings (75/2560, 75/3840, 75/5120 & 75/6400), one aft and one plugged forward closure

98/2560-10240 system
Includes four casings (98/2560, 98/5120, 98/7680 & 98/10240), one aft and one plugged forward closure

Professional Motor Design

AeroTech's sister division, Industrial Solid Propulsion (ISP), designs and manufactures rocket motors for government, research, aviation and space applications. AeroTech motors are designed by the same people who design motors for ISP.

Above: Static test firing of an eight foot long ISP motor destined for space application.

29mm 38mm 54mm 75mm 98mm

HOBBY LINE RMS RELOAD KITS

Hobby Line RMS™ Motors

RMS-18 Hobby Line Reload Kit Data

Hardware	Reload	Total Impulse	Prop. Wt.	Loaded Wt.	Delay Times
RMS-18/20	D13W (3 pak)	20 N-sec	9.8 g	33 g	4, 7, 10
RMS-18/20	D24T (3 pak)	20 N-sec	8.7 g	31 g	4, 7, 10

Ejection charge included with all 18mm reload kits.

RMS-24 Hobby Line Reload Kit Data

Hardware	Reload	Total Impulse	Prop. Wt.	Loaded Wt.	Delay Times
RMS-24/40	D9W (3 pak)	20 N-sec	10.1 g	45 g	4, 7
RMS-24/40	D15T (3 pak)	20 N-sec	8.9 g	44 g	4, 7
RMS-24/40	E11J (3 pak)	35 N-sec	25 g	61 g	3
RMS-24/40	E18W (3 pak)	40 N-sec	20.7 g	57 g	4, 7
RMS-24/40	E28T (3 pak)	40 N-sec	18.4 g	55 g	4, 7
RMS-24/40	F12J (3 pak)	43 N-sec	30.3 g	67 g	3, 5
RMS-24/40	F24W (3 pak)	50 N-sec	25.3 g	62 g	4, 7
RMS-24/40	F39T (3 pak)	50 N-sec	22.7 g	59 g	6, 9

Ejection charge included with all 24mm reload kits.

RMS-29 Hobby Line Reload Kit Data

Hardware	Reload	Total Impulse	Prop. Wt.	Loaded Wt.	Delay Times
RMS-29/40-120	E16W	40 N-sec	19 g	107 g	4, 7
RMS-29/40-120	E23T	40 N-sec	17.4 g	104 g	5, 8
RMS-29/40-120	F22J	65 N-sec	46.3 g	133 g	5, 7
RMS-29/40-120	F40W	80 N-sec	40 g	126 g	4, 7, 10
RMS-29/40-120	F52T	80 N-sec	36.6 g	123 g	5, 8, 11
RMS-29/40-120	G33J	100 N-sec	72.2 g	159 g	5, 7
RMS-29/40-120	G64W	120 N-sec	62.5 g	151 g	4, 7, 10

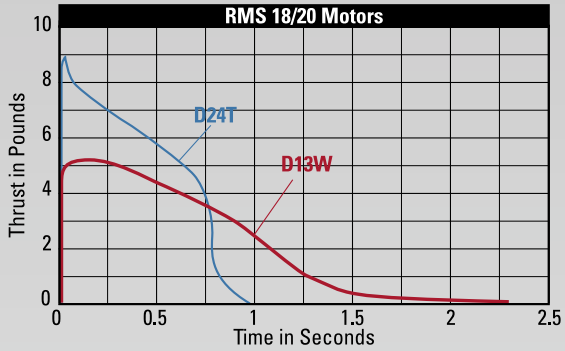
Ejection charge included with all 29mm reload kits.

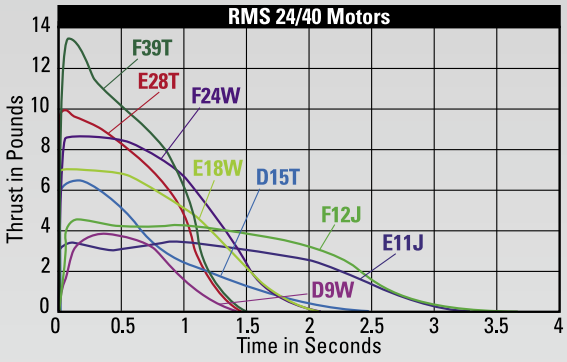
RMS-24 R/C Hobby Line Rocket Glider Reload Kit Data

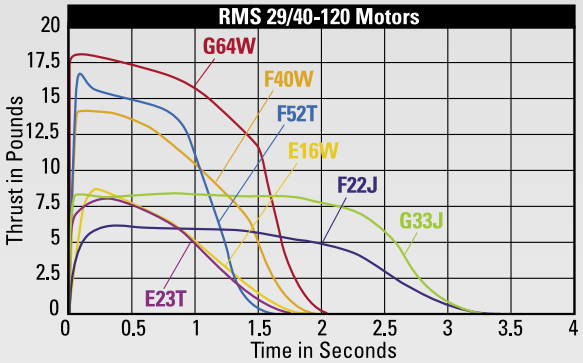
Hardware	Reload	Total Impulse	Prop. Wt.	Loaded Wt.	Delay Times
RMS-R/C 24/20-40	D7-RCT (3 pak)	20 N-sec	10.5 g	41.3 g	plugged
RMS-R/C 24/20-40	E7-RCT (3 pak)	30 N-sec	17.1 g	46.4 g	plugged
RMS-R/C 24/20-40	E6-RCT (3 pak)	40 N-sec	21.5 g	52 g	plugged
RMS-R/C 24/20-40	E12-RCJ (3 pak)	36 N-sec	28.3 g	58.8 g	plugged

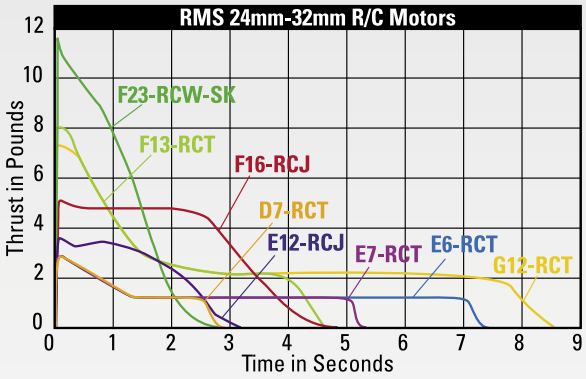
RMS-32 R/C Hobby Line Rocket Glider Reload Kit Data

Hardware	Reload	Total Impulse	Prop. Wt.	Loaded Wt.	Delay Times
RMS-R/C 32/60-100	F13-RCT (2 pak)	60 N-sec	31.2 g	105 g	plugged
RMS-R/C 32/60-100	F16-RCJ (2 pak)	80 N-sec	57.1 g	137 g	plugged
RMS-R/C 32/60-100	F23-RCW-SK (2 pak)	70 N-sec	35.2 g	127 g	plugged
RMS-R/C 32/60-100	G12-RCT (2 pak)	100 N-sec	51.1 g	126 g	plugged









Phoenix Missile Rocket at LDRS 21, Kansas (photo McNeely)

Easy Access™ High Power RMS™ Motors

RMS-29 High Power Reload Kit Data

Hardware	Reload	Total Impulse	Prop. Wt.	Loaded Wt.	Delay Times
RMS-29/60	F37W	50 N-sec	28.2 g	112.2 g	S, M, L
RMS-29/60	F62T	50 N-sec	25.0 g	109.0 g	S, M, L
RMS-29/100	G54W	90 N-sec	46.0 g	140.8 g	S, M, L
RMS-29/100	G104T	90 N-sec	40.8 g	135.6 g	S, M, L
RMS-29/120	G77R	105 N-sec	55.4 g	155.0 g	S, M
RMS-29/120	G79W	115 N-sec	58.6 g	158.0 g	S, M, L
RMS-29/180	G75J	155 N-sec	105.6 g	227.9 g	S, M
RMS-29/180	H128W	175 N-sec	92.2 g	214.5 g	S, M, L
RMS-29/180	H165R	170 N-sec	83.1 g	205.0 g	S, M, L
RMS-29/180	H238T	175 N-sec	79.8 g	202.1 g	S, M, L
RMS-29/240	H97J	200 N-sec	140.9 g	281.5 g	S, M
RMS-29/240	H180W	230 N-sec	123.0 g	263.6 g	S, M, L
RMS-29/240	H210R*	220 N-sec	110.8 g	251.0 g	S, M, L
RMS-29/240	H220T*	220 N-sec	106.4 g	238.6 g	S, M, L
RMS-29/360	I200W*	330 N-sec	175.0 g	364.0 g	S, M, L
RMS-29/360	H268R*	320 N-sec	166.0 g	346.0 g	S, M, L

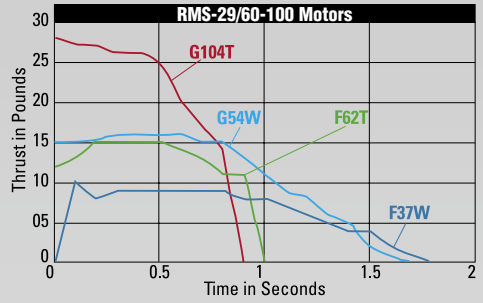
Ejection charge and "medium" delay included with all 29mm reload kits.
*29mm H210R, H220T, I200W and H268R reload kits must be used in conjunction with the 29mm forward seal disc.

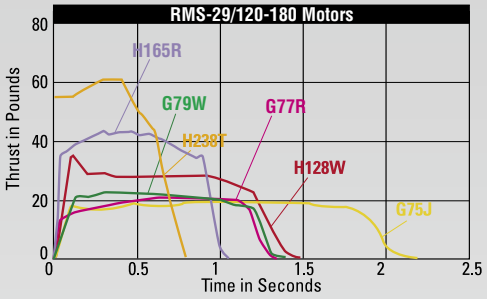
RMS-38 High Power Reload Kit Data

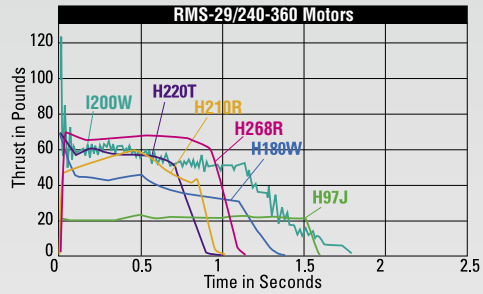
Hardware	Reload	Total Impulse	Prop. Wt.	Loaded Wt.	Delay Times
RMS-38/120	G61W	120 N-sec	60.9 g	193.9 g	S, M, L
RMS-38/120	G67R	110 N-sec	57.6 g	191.0 g	S, M
RMS-38/240	H73J	180 N-sec	125.0 g	293.3 g	S, M
RMS-38/240	H123W	230 N-sec	125.0 g	293.3 g	S, M, L
RMS-38/240	H148R	220 N-sec	115.1 g	283.0 g	S, M, L
RMS-38/240	H242T	230 N-sec	110.8 g	279.1 g	S, M, L
RMS-38/360	H112J	280 N-sec	187.5 g	384.8 g	S, M
RMS-38/360	I161W	350 N-sec	187.5 g	384.8 g	S, M, L
RMS-38/360	I218R	330 N-sec	172.7 g	370.0 g	S, M, L
RMS-38/360	I357T	350 N-sec	166.2 g	363.5 g	S, M, L
RMS-38/480	I154J*	360 N-sec	250.0 g	476.3 g	S, M
RMS-38/480	I211W*	460 N-sec	250.0 g	476.3 g	S, M, L
RMS-38/480	I285R*	420 N-sec	230.2 g	456.0 g	S, M, L
RMS-38/480	I300T*	440 N-sec	221.6 g	440.5 g	S, M, L
RMS-38/600	I195J*	478 N-sec	312.5 g	582.4 g	S, M
RMS-38/600	I284W*	590 N-sec	312.5 g	567.8 g	S, M, L
RMS-38/600	I366R*	550 N-sec	287.8 g	543.0 g	S, M, L
RMS-38/600	I435T*	600 N-sec	277.0 g	526.9 g	S, M, L
RMS-38/720	I600R*	640 N-sec	323.7 g	617.0 g	M
RMS-38/720	J350W*	700 N-sec	375.0 g	665.0 g	S, M, L
RMS-38/720	J420R*	650 N-sec	345.3 g	635.0 g	S, M, L
RMS-38/1080	J570W*	1060 N-sec	527.0 g	908.0 g	S, M, L

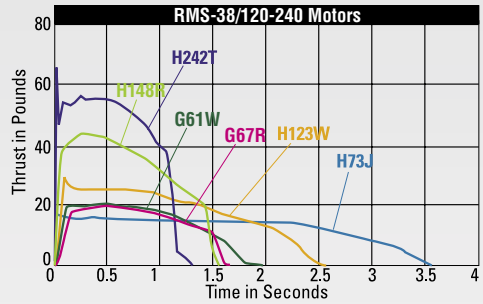
Ejection charge and "medium" delay included with all 38mm reload kits.
*38/480-38/1080 reload kits must be used in conjunction with the 38mm forward seal disc.

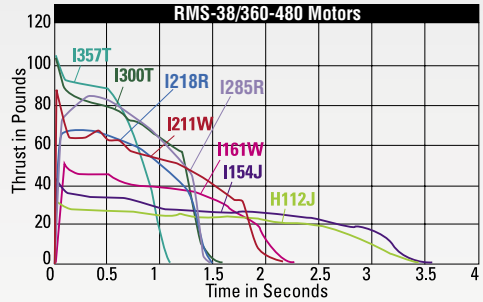
Contents of a Typical 38mm RMS Reload Kit

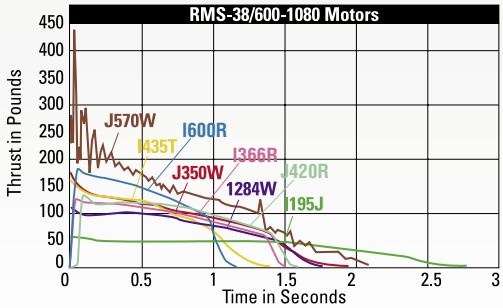












Restricted Access™ High Power RMS™ Motors

RMS-54 High Power Reload Kit Data

Hardware	Reload	Total Impulse	Prop. Wt.	Loaded Wt.	Delay Times
RMS-54/852	J90W*	770 N-sec	391.4 g	834.1 g	S, M, L
RMS-54/852	J180T	800 N-sec	398.2 g	840.9 g	S, M, L
RMS-54/852	J275W	850 N-sec	440.2 g	882.9 g	S, M, L, X
RMS-54/852	J315R	780 N-sec	415.0 g	844.0 g	S, M, L, X
RMS-54/852	J460T	850 N-sec	390.2 g	832.9 g	S, M, L, X
RMS-54/1280	J135W*	1200 N-sec	587.1 g	1125.7 g	S, M, L
RMS-54/1280	J415W	1280 N-sec	660.3 g	1198.9 g	S, M, L, X
RMS-54/1280	J540R	1180 N-sec	622.0 g	1154.0 g	S, M, L, X
RMS-54/1280	J800T	1280 N-sec	595.3 g	1133.9 g	S, M, L, X
RMS-54/1706	K185W*	1500 N-sec	782.8 g	1417.5 g	S, M, L
RMS-54/1706	K550W	1700 N-sec	880.4 g	1515.1 g	S, M, L, X
RMS-54/1706	K695R	1520 N-sec	830.0 g	1450.0 g	S, M, L, X
RMS-54/1706	K1100T	1500 N-sec	733.3 g	1368.0 g	S, M, L, X
RMS-54/2560	K700W**	2400 N-sec	1232 g	2059 g	plugged
RMS-54/2560	K1275R**	2230 N-sec	1170 g	1990 g	plugged

"Long" delay included with all 54mm reload kits. Ejection charge not included.
*54mm J90W, J135W and K185W must be used with extended forward closure.
**Plugged reload kits do not utilize a motor actuated ejection charge. Plugged motors must be used in conjunction with a timer, altimeter or radio-activated recovery system.

RMS-75 High Power Reload Kit Data

Hardware	Reload	Total Impulse	Prop. Wt.	Loaded Wt.	Delay Times
RMS-75/2560	K560W**	2560 N-sec	1341 g	2774 g	plugged
RMS-75/2560	K780R**	2360 N-sec	1268 g	2701 g	plugged
RMS-75/3840	L850W**	3840 N-sec	2011 g	3741 g	plugged
RMS-75/3840	L1150R**	3560 N-sec	1902 g	3632 g	plugged
RMS-75/5120	L1420R**	4610 N-sec	2535 g	4562 g	plugged
RMS-75/5120	M1297W**	5417 N-sec	2681 g	4708 g	plugged
RMS-75/6400	M1315W**	6700 N-sec	3351 g	5675 g	plugged
RMS-75/6400	M1550R**	5600 N-sec	3170 g	5494 g	plugged

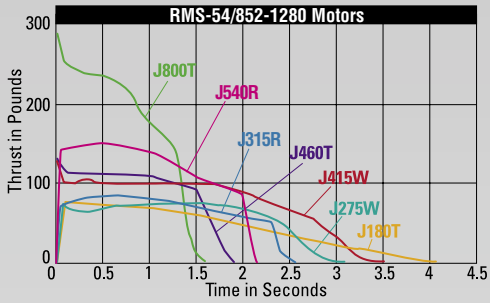
Smoke charge included with all 75mm reload kits. Ejection charge not included.
**Plugged reload kits do not utilize a motor actuated ejection charge. Plugged motors must be used in conjunction with a timer, altimeter or radio-activated recovery system.

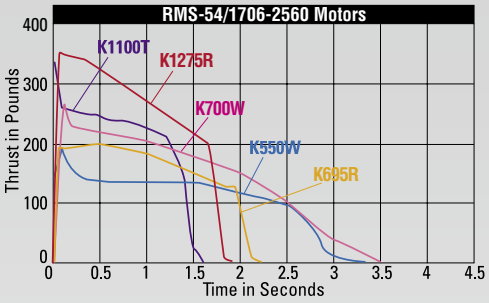
RMS-98 High Power Reload Kit Data

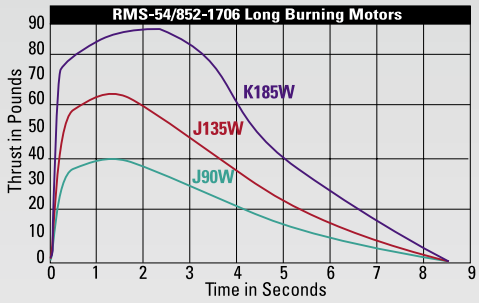
Hardware	Reload	Total Impulse	Prop. Wt.	Loaded Wt.	Delay Times
RMS-98/2560	K458W**	2560 N-sec	1330.0 g	3106.2 g	plugged
RMS-98/2560	K650T**	2560 N-sec	1176 g	2957 g	plugged
RMS-98/2560	K680R**	2358 N-sec	1254 g	3035 g	plugged
RMS-98/5120	L952W**	5120 N-sec	2660 g	5027 g	plugged
RMS-98/5120	L1300R**	4567 N-sec	2508 g	4884 g	plugged
RMS-98/5120	L1500T**	5120 N-sec	2351 g	4728 g	plugged
RMS-98/7680	M1419W**	7680 N-sec	3990 g	6931 g	plugged
RMS-98/7680	M1600R**	7085 N-sec	3762 g	6717 g	plugged
RMS-98/7680	M2400T**	7680 N-sec	3527 g	6483 g	plugged
RMS-98/10240	M1939W**	10240 N-sec	5320 g	8845 g	plugged
RMS-98/10240	M2000R**	9218 N-sec	5016 g	8429 g	plugged
RMS-98/10240	M2500T**	10240 N-sec	4572 g	8117 g	plugged
RMS-98/15360	N2000W**	14000 N-sec	7676 g	12412 g	plugged

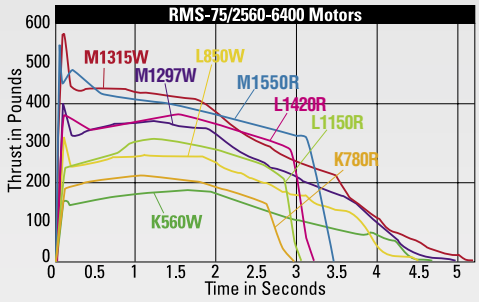
Smoke charge included with all 98mm reload kits. Ejection charge not included.
**Plugged reload kits do not utilize a motor actuated ejection charge. Plugged motors must be used in conjunction with a timer, altimeter or radio-activated recovery system.

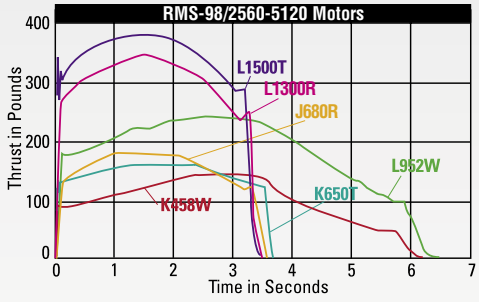
Dave Eckhart's "Great Ball-O-Fire" rocket with M1419W motor (photography by Nadine Kinney–2004).

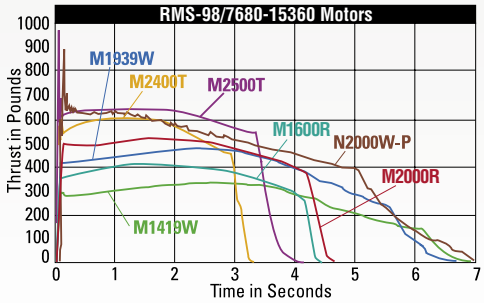












Hobby Rocket Categories

Model Rocketry

As children, many of us launched model rockets. Today, these rockets are sold by Estes and Quest. Estes and Quest rockets are available in most hobby shops. These rockets use black powder motors up to "D" (20 N-sec) size. Each succeeding letter denotes up to twice the impulse of the smaller letter; a "C" motor is up to twice as powerful as a "B" motor. These rockets usually weigh a few ounces and fly less than 2000 feet high, which allows them to be flown in nearly any open space without special permission. Model rockets are usually simple to build and are quite safe. Motors are relatively inexpensive, costing only a few dollars apiece.

Mid-Power Rocketry

Beyond model rocketry is what many call "mid-power rocketry." Rockets in this category typically use black powder or composite propellant motors in the "E" through "G" sizes. The largest manufacturer of mid-power kits and motors is AeroTech Consumer Aerospace. Mid-power rockets also generally weigh under a pound, but can fly much higher than model rockets. Rockets which contain over 4 ounces of propellant or weigh over 1 pound require Federal Aviation Administration (FAA) notification 24 to 48 hours in advance. Mid-power rockets are not necessarily more difficult to build than model rockets. Composite propellant rocket motors are more expensive than black powder motors ($5-$24 per flight), but usually less per unit of power.

High-Power Rocketry

The largest rockets built with commercially manufactured motors and sanctioned by national organizations are classified as "High-Power Rockets." Motors used in this class range from "H" through "O" in size. The largest manufacturers of high-power kits are LOC/Precision and Public Missiles, Ltd., although there are other companies making these kits. These rockets generally weigh from a few pounds up to a hundred pounds or more and can fly up to 25,000 feet high or more. Some high-power rocket motors currently require federal licensing and approvals to purchase and fly and can only be flown at organized club launches held in unpopulated areas of large open space. High-power rockets are the most challenging rockets which fly on pre-manufactured motors and appeal to those who like large vehicles and enjoy the impressive flights with the larger, more powerful and more expensive ($15-$840 per flight) motors. More advanced materials and techniques are required for high-power rockets because of the dramatically increased stresses encountered in flight.

Experimental Rocketry

Those who build their own rocket motors rather than using commercially manufactured motors engage in a hobby rocket category known as "Experimental Rocketry." Motors can be any size, though generally they tend to be in the larger high-power range. In some ways, experimental rocketry is less regulated than high-power rocketry, although the FAA requirements are the same. Making your own motors can be dangerous and should not be undertaken lightly. Experimental rocketry is appealing to people who either want to do everything themselves or enjoy the process of developing and making their own motors. It should be noted, however, that making your own motors is rarely a money-saving proposition. AeroTech is a division of RCS Rocket Motor Components, Inc., a company that was founded in 1995 to manufacture and sell rocket motor parts and materials for the experimental rocketry market.

Ed Miller flew his UFO at LDRS 23 powered by an M2000R motor (photography by Nadine Kinney–2004).

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AeroTech Consumer Aerospace Division
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