### AIRCRAFT DYNAMICS

Robotools, Roboreels, Robopaks & Robolights





## Have New Product Ideas? Need Design & Prototyping Help? Let Us Help You!



### **Design and Product Optimization**

Our team will help bring your idea to life using advanced CAD software. With decades of collective engineering design experience, we can help guide your project down the path to success!

### Rapid Prototyping

We have an array of in-house 3D printers that hold tight tolerances for producing functional prototypes at any stage of the design process. Often times, models can be printed over night for cost effective fitment testing, functionality and aesthetics.



### **Small Batch Production**

Additive Manufacturing technology is perfect for small batch production. We utilize 3D printing everyday in our Ohio based manufacturing facility to save time and money. This allows our skilled workforce to focus their efforts on larger fabrication projects.

# In-House 3D printing and Skilled CNC Machining Call or Email Us Today!

419-331-0371

Sales@aircraftdynamics.com

## Aircraft Dynamics

**Established in 1962** 

### Solving Problems for Those who Help Others... Is our Business.

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### LED 360° Strobes

360° LED strobes utilize 12 long lasting LEDs to create a highly visible 60 flashes per minute strobe. System is easy to attach and deploy, using a heavy duty strap that attaches to all types of poles and sizes. Strobe is protected by a rugged cage and includes powder coated metal components. Standard kit is powered by 2 D-cell alkaline batteries for up to 600hrs of battery life.



Dimensions: Flags 18" x 18" (Square) Wood Staff & PVC end: 24" Long

Re-chargable 360 Kit Cat. No. 7167-R-USB(Red) Cat. No. 7167-A-USB (Amber) includes 2 Red flags & USB Charger Plug



Standard 360 Kit Cat. No. 7167-R (Red) Cat. No. 7167-A (Amber) includes 2 Red flags



3 Flag 360 Kit Cat. No. 7360-R (Red) Cat. No. 7360-A (Amber) includes 3 Red flags





Made In U.S.A.

#### 360 Bolt-thru Kit

Cat. No. 7219-R (Red) Cat. No. 7219-A (Amber) includes 2 Red flags

Dimensions: Flags 18" x 18" (Square) Wood Staff & PVC end: 24" Long





#1 Pole Transportation Safety System. Small and easy to store, yet extremely rugged with LED technology rated for 100,000 hours of heavy duty operation. Long range visibility of 5+ miles with four alternative flash patterns: Comet, Single, Steady Burn and Flare Flicker. Light modules are encapsulated for vibration and moisture resistance with front angled reflectors (front and side viewing). Easy to attach using a heavy duty strap that attaches to all poles. Additional features include powder coated metal components and powered by 3 alkaline C-cell batteries.



Pole Bug Kit Cat. No. 7015-R (Red) Cat. No. 7015-A (Amber) includes 2 Red flags





Dimensions: Flags 18" x 18" (Square) Wood Staff & PVC end: 24" Long





### Dual Pole Bug Kit

Cat. No. 7026-R (Red) Cat. No. 7026-A (Amber) includes 2 Red flags





Cat. No. 7315-R (Red)

includes 3 Red flags







**Pole Tacker Kit** Cat. No. 7032-R (Red) Cat. No. 7032-A (Amber) Includes LED & T-screw





3 - Flag Holder Cat. No. 2617 \* Flags sold separately



Dual Flag Holder Cat. No. 2642 \* Flags sold separately



### **LED Wired Light Bar**

- •36" light weight aluminum frame, powder coated safety orange
- 2" wide heavy duty binding ratchet strap
- LED STOP/ TURN/ TAIL lights DOT approved
- LED side marker lights DOT approved
- 11/16" hole in mounting cradle for 5/8" bolt for extra security
- Includes 40' of DuraFlex 4/14 cordage
- Includes (2) 18" square mesh safety flags
- Trailer wiring Options:
  - 4 way round / 6 way round/ 7 way RV plug
- Optional 12 LED 360 degree flashing or Solid pattern, battery powered strobe - Amber or Red available

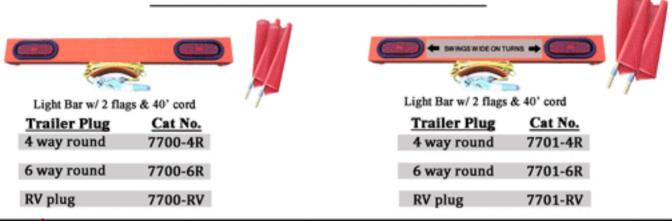






Light Bar w/ strobe light, 2 flags & 40' cord

Trailer Plug	Cat No.
4 Way round / Amber Strobe	7700-4R-A360
4 Way round / Red Strobe	7700-4R-R360
6 Way round / Amber Strobe	7700-6R-A360
6 way round / Red Strobe	7700-6R-R360
RV plug / Amber Strobe	7700-RV-A360
RV plug / Red Strobe	7700-RV-R360







Replacement Red LED Cat No. - 7028



Replacement LED Amber Cat No. - 7030



#### Replacement 360 LED Red Cat No. - 7169



Replacement 360 LED Amber Cat No. - 7164

Replacement Flags

Specifically designed for high speed transport or stationary use, each flag is constructed of light weight heavy-duty mesh which is extremely durable and will provide you with extended use.

> Dimensions: Flags 18" x 18" (Square) Wood Staff & PVC end: 24" Long



Red Flag Cat. No. 7074



Orange Flag Cat. No. 7474



Red - Cat. No. 7144 Orange - Cat. No. 7247 Heavy Duty 1" Nylon Dowel



### 🔨 Wi

### Wire containment & payout reel

Triplex and Guy Wire RoboReels are designed for linemen to provide an easy and safe means to unwind and rewind cumbersome wire and cable. Extremely rugged, all-weather heavy duty reels. Made of steel and Industrial coated to ensure long life, RoboReels have adjustable arms that allow an easy and secure means of loading, unwinding and rewinding various coils with different diameters. Coils can be simply rolled into the stand, and with the adjustable arms, securely clamped into place in seconds. Wire or cable is then easily pulled or rewound through smooth center guides.



### Triplex RoboReel " Cat. No. 5478

- · 8 adjustable arms
- · Holds coils up to 10-1/4" wide
- · Accepts coils
  - outside dia. 26" 32"
  - inside dia. 14" 20"
- · Dimensions: 34-1/2" H x 14" D x 33-1/2" W
- · Weight: 58 lbs.

RoboReel Crank Assit Cat. No. 5420



\*\*only compatible with 5478 Triplex reel\*\*

RoboReel <sup>™</sup> Quick Change Base Plate Cat. No. 5074



Made In

U.S.A

Great space organizer. Ideal accessory for those who want a quick means to remove or remount your RoboReel. "" \*\*\* not compatible with horizontal reels.\*\*





The 5800 RoboReel is an enlarged and strengthened version of our 5478 RoboReel designed to handle 500' coils of 1/0 triplex wire. It incorporates a larger 1" diameter center bolt and field adjustable braking system to minimize any whiplash. The RoboReel uses an oil-embedded bronze bushing to reduce the need for field lubrication. The 5800 has a larger wire guide and adjustable arms to handle the large 1/0 triplex wire coils. Made of steel and Industrial coated to ensure long life, RoboReels have adjustable arms that allow an easy and secure means of loading, unwinding and rewinding various coils with different diameters.



### Triplex RoboReel <sup>™</sup> for large diameter coils Cat. No. 5800

· 8 adjustable arms



- · Holds coils up to 10-1/4" wide
- · Accepts coils
  - outside dia. 32" 43"
  - inside dia. 16" 25"
- · Dimensions: 45" H x 14" D x 44" W
- · Weight: 68 lbs.





### Guy Wire RoboReel <sup>\*\*</sup> Cat. No. 5276

- 4 adjustable arms
- Holds guy wire with 1/2" diameters
- · Accepts coil outside dia. 22" 31"
- · Holds coils up to 4.75" wide
- · Dimensions: 33 3/4" H x 9 1/4" D x 32 1/4"W
- · Weight: 41 lbs.
- · Wire can be pulled from either direction





### Guy Wire RoboReel<sup>™</sup> for large diameter coils Cat. No. 5415

- 4 adjustable arms
- Holds guy wire with 1/2" diameters
- · Accepts coil outside dia. 32" 36"
- Holds coils up to 8 3/4" Wide
- · Weight: 54 lbs.





### HDPE Gas Pipe RoboReel"

- · Designed for 1" HDPE Gas Distribution Pipe
- · Pipe pulls from Inside through roller guide system
- 4 Adjustable arms
- · Dimensions: 52" H x 22" D x 48" W
- · Weight: 65 lbs.
- · Accepts gas pipe coils with following dimensions Inside Dia: 24" - 32"
  - Outside Dia: 42" 50"
  - Width: 13.5"



Cat No. 5740 for 1" HDPE Gas Distribution Pipe

- Designed for 1/2" HDPE Gas Distribution Pipe
- · Adjustable brake and clamping system
- · 8 Adjustable arms
- Dimensions: 52" H x 14" D x 48" W
- · Weight: 65 lbs.
- · Accepts gas pipe coils with the following dimensions

Inside Dia: 24" - 32"

Outside Dia: 42" - 50"

Width: 6" - 10"

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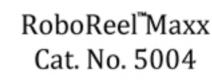


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Cat No. 5730





- · Easy to load Works with Triplex or ACSR type wire
- · Adjust arms out to tighten against inside of the coil
- · Brake locks arms in place
- · Removable outside hooks adjust for different coil widths
- · For use with coils up to 34" wide

Inside diameter 13" to 20" and widths up to 13"

- · Adjustment crank included
- Mounting base 30" x 23 3/4"
- Weight: 110 lbs





### Horizontal Mount Triplex RoboReel<sup>™</sup> Cat. No. 5456

- · 4 adjustable arms
- · Holds coils up to 8 3/4" Wide
- · Accepts coil

outside dia. 27" - 32"

inside dia. 16" - 21"

- · Dimensions: 14" H x 34" D x 34" W
- ·Weight: 37 lbs



U.S.A

### Wood Bits

Barracuda Ultra Smooth Augers have three cutting Spurs for fast, smooth cutting without resistance. Teflon coated to resist heat and friction Designed to cut smooth hole without "Blowout" in framing lumber

		<b>B</b> -	BARR/
BARRACUDA™		ength Shank CAT NO.	<u>.</u>
	3/8"	2918-6	
	7/16"	2918-7	
	1/2"	2918-8	
	9/16"	2918-9	
	5/8"	2918-10	
	11/16"	2918-11	
	3/4"	2918-12	
	13/16"	2918-13	
	7/8"	2918-14	
	15/16"	2918-15	
	1"	2918-16	
	1 1/8"	2918-18	
	1 1/4"	2918-20	
	13/8*	2918-22	

PoleKat Double Cut Augers use a double-cut tip for a more robust design that tracks true with minimal wobble and blowout.

1 1/2\*

2918-24

		Length ' Shank	POLEKAT		Length "Shank		LEKAT"
8	SIZE	CAT NO.	5	IZE	CAT NO.		
	3/8"	2818-6					5
	7/16"	2818-7					
	1/2"	2818-8					
	9/16"	2818-9					
	5/8"	2818-10					
	11/16"	2818-11	11	/16"	2824-1	1	
	3/4"	2818-12	3/	4"	2824-12	2	
	13/16"	2818-13	13	/16"	2824-13	3	
	7/8"	2818-14	7/	8"	2824-14	4	
_	15/16"	2818-15	15	/16"	2824-1	5	
	1"	2818-16	1"		2824-10	6	
	1 1/16"	2818-17	1-	1/16"	2824-17	7	
	1 1/8"	2818-18	1.	1/8"	2824-18	8	
_	1 1/4"	2818-20	1 -	1/4"	2824-20	0	
	1 3/8"	2818-22		3/8"	2824-22		
_	1 1/2"	2818-24		1/2"	2824-24		

Note: All 1" and larger diameter bits are not designed for use with Impact tools.

419-331-0371



### Wood & Fiberglass Bits

Robotool<sup>14</sup> Black Widow Bits are rugged, heat treated and with proprietary flute design. Self-feeding screw and cutting spur, will cut through the hardest poles with ease and will decrease average drilling times by 50%.

11					<b>-</b>
		BLA	CK WIDO	W-	
ີກ	18" L	ength		24"	Length
J'	7/16"	Shank		7/16'	' Shank
/	SIZE	CAT NO.		SIZE	CAT NO.
	7/16"	2505			
	1/2"	2511			
	9/16"	2525			
	11/16"	2523	11	/16"	2527
	13/16"	2524	13	/16"	2528
	7/8"	2577	,	8"	2543
	15/16"	2526	15	/16"	2529
	1"	2516	1"		2532
	1 - 1/16"	2542	1-	1/16"	2531
	1 - 1/8"	2533	1.	1/8"	2534
	1 - 1/4"	2588		1/4"	2536
				3/8"	2537
	1 - 1/2"	2561	1.	1/2"	2578

Note: All 1" and larger diameter bits are not designed for use with Impact tools.

Designed specifically for drilling hollow core utility poles Black Widow Hollow Core Fiberglass Bits made from Fiberglass, Resin or composite materials

	Length ' Shank	18" Le 7/16" S		24" Le 7/16" S	
11/16"	2890	9/16"	2878	9/16"	2876
13/16"	2882	11/16"	2888	11/16"	2886
15/16"	2866	13/16"	2884	13/16"	2880
11/8"	2897	15/16"	2896	15/16"	2872
		1"	2892	1"	2868
		1 1/8"	2894		

#### Black Widow Solid Foam / Core Fiberglass Bits Indefine Fiberglass, Resin or composite materials

12" Length 18" Length 7/16" Shank 7/16" Shank 2688 1/2" 9/16\* 2676 9/16" 2678 11/16" 2684 2686 11/16" 13/16" 2680 2682 13/16" 15/16" 2653  $1 - 1/16^{*}$ 2689

Designed specifically for drilling solid foam core utility poles

Drill Bit Holder Cat. No. 9296 · Holds four pole bits up to 1" diameters and any length. Will mount in vehicles or on any vertical surface-Weather proof - will not rust

WOOD BITS

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### ROBOTOOLS

### Tired of breaking adapters?







Blue Bully adapter 7/16" to 1/2" sq. Cat. No. 2801

- 2 3/4" Length
- Designed For High Torque Impact Wrenches.
- Advanced Impact Resistant Technology
- Aerospace Quality/Engineered Shock Steel
- Increased Torque Yield Points
- Advanced Toughness & Wear Resistance
- Reduced Deformation
- Maximum Mechanical Properties
- Most superior adapter for Safety, Durability, and Performance



Little Bull<sup>®</sup> adapter 1/4" to 1/2" sq. Cat. No. 2802



1/2" Keyless Chuck Kit Cat. No. 2530

Keyless 3 jaw chuck adapter for use with impacts to drill holes in steel, wood or fiberglass

\*Not for use with bits that cause continuous impacting



1/2" Keyed Chuck Kit Cat. No. 2590

Kit includes: Chuck and attached 7/16" Blue Bully Hex Drive Adapter & Chuck Key

Keyed 3 jaw chuck adapter for use with impacts to drill holes in steel, wood or fiberglass

> \*Not for use with bits that cause continuous impacting



### **ROBOTOOLS**<sup>™</sup>

#### ARE YOUR SOCKETS IMPACT QUALITY SAFE?

Black Oxide Finish - Heavy-Duty Impact Quality Steel - Best Sockets Available!

	Sq. Dr. ble Sq.	1/2" Sq. Dr. Penta Socket <u>Cat. No. 2775</u> · Inside Length: 1/2	2"
Size	Cat. No.	· Opening: 13/16"	a trade of the second second second
1-1/8" 9/16" 3/4" 13/16" 7/8" 1"	2489 2490 2491 2492 2493 2494	Overall Length: 2 Penta Socket with proprietary impact stee is securely attached to plastic coated comfort grip "T" handle for extra leverage	The only penta socket that uses impact quality steel.
			Penta T-Wrench Cat. No. 2779 Duty 1/2" Sq. Dr. / Double Sq
• 2 Sockets in 1 • Leng Cat. No. 2757 1" and 1- Cat. No. 2751 13/16" an Cat No. 2710 1-1/8" an	1/8" Openings nd 15/16" openings	ROBOTOOL LIFETIME WARRANTY ON ALL SOCKETS!	<ul> <li>Overall Length: 7.25"</li> <li>Penta Opening: 13/16"</li> <li>Inside Length: 1/2"</li> <li>Weight: 14 oz.</li> </ul>
Sockets are secured in an B-coated mounting	U.3.A	dly adapters	t. No. 2403 - Ball Quick Change Chuck apper Heavy Duty 7/16" (1/2" Sq. br.) Quick-Change Chuck. The nost secure and durable quick change huck available! Utilizing a roprietary three ball bearing ystem, this chuck will secure your sits, adapters and sockets under xtreme circumstances. Designed o be used with high torque 1/2" q. drive impact wrenches.

Cat. No. 2758 includes: 9/16", 13/16", 1" and 1-1/8" Sockets

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### **ROBOTOOLS**<sup>™</sup>



### The DIRT BAG

Made In U.S.A.	

Size	Cat No.
8' x 8' v-notch	5107
8' x 8' square	5619
10' x 10' v-notch	5774
10' x 10' square	5127

- · Creates a safer job site, eliminating injuries
- · Setting poles becomes easier, cleaner and faster
- · Save thousands of man hour dollars
- · Save time filling holes, moving material and cleaning
- · Proprietary "V- Notch" design for close "to-the-pole" use
- · Stronger than any other like tarp
- · 22 oz. coated polyester reinforced with 5000 lb. rated straps
- · Superior strength webbing and abrasion resistance
- Size : 8' x 8' for poles to 55 ft.
- Size : 10' x 10' for poles over 55 ft.

#### Pressure Digger Auger Sock Cat. No. 5714





- · Designed to cover Pressure Digger Truck Augers
- · Covers Augers 25"dia, 36" overall length, & 24" height
- Heavy Duty Vinyl Construction
- · Reinforced Zipper for easy installation and removal
- · Locking Buckle on top for added security
- · Handle on bottom of sock for easy tailings removal
- · Reflective striping stiched in for added visiblity

#### Grip Stik Tap Twister

Cat. No. 5438



- · Designed to be used for switching taps on Pad Mount Transformers
- · Provides additional leverage with positive control
- Grip-Stik handles fold for easy storage on sticks
- · For use with hot stick or switch stick with 1-1/4\* diameter body
- · Length with handles extended: 21"
- Weight: 2.5 lbs









### ROBOPAKS



#### XL 9200 Cat No. 3600

- · Dimensions: 9-3/8" L x 6-1/4" W x 9" D
- · Weight: 22 lbs.
- · Amp Hr. @ 24v 28v ..... 12A
- · Amp Hr. @ 18v.....12A
- · Amp Hr. @ 12v 14.4v...24A
- Amp Hr. @ 6v..... 48A







#### XL 9280 Cat No. 3481

- · Dimensions: 9-3/8" L x 6-1/4" W x 5-5/8" D
- · Weight: 18 lbs.
- · Amp Hr. @ 24v 28v......7.2A
- · Amp Hr. @ 18v.....7.2A
- · Amp Hr. @ 12v 14.4v...14.4A



4338 AC Charger



#### SS-LP Robopak® Cat. No. 3439

- · 24v..... 12 Amp Hr. Capacity
- · Dimensions: 10-5/8" L x 9-11/16" W x 4-7/8"D
- · Weight: 22 lbs.

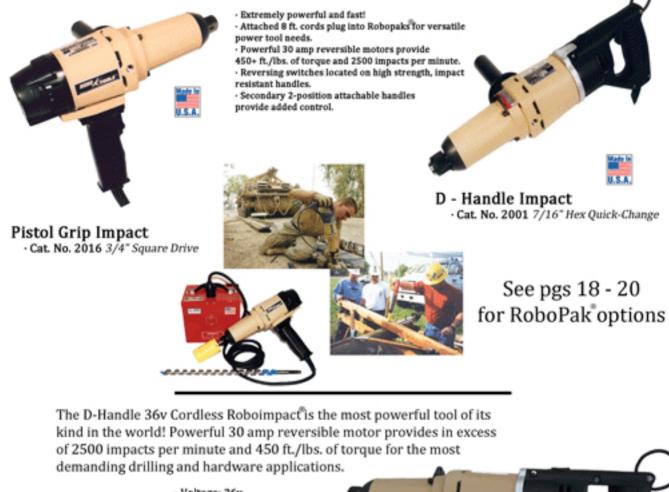


4366 A/C Charger



### ROBOIMPACTS

Powered by Variable Voltage Robopak<sup>®</sup>or other DC power sources, Roboimpacts are so versatile they can be powered between 24v - 36v, providing up to 2500 impacts per minute and 450+ ft./lbs. of torque. Roboimpacts<sup>®</sup>are used by linemen and professional workers all over the world. They are also standard issue items on many military vehicles. Unmatched in power, durability and reliability!



- Voltage: 36v
- Ft./Lbs. of Torque: 450
- Impacts Per Minute: 2500
- Chuck: 7/16\* Hex Quick-Change
- · Cordless Battery: 4.0 amp/hr. Li ion
- Charging: AC Li ion
- · Weight (Tool and Li-ion Battery): 12.5 lbs.
- · Average drill time in 10" diameter pole: 9 seconds
- · Average number of holes per charge in 10" diameter pole: 20+

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Cat. No. 5310 - Tool, 2 - 2756 Li-ion Batteries and 4376 A/C Charger



### ROBOPAKS

#### BackupRobopak<sub>®</sub>

Cat. No. 3501

The Solar Battery Backup Braking System offers peace of mind with maximum safety during emergency situations. This unit contains the highest quality sealed batteries that are maintained during periods of non-use via the fully encapsulated Solar Maintenance Charger. Designed to operate independently of the vehicle's electrical system. It is durable and corrosion proof.

Simply the best battery backup system available.

Cast ALMAG 35 Housing
 Sealed Long-Life Military Batteries
 Fully encapsulated Solar Voltaic Cells
 High Quality Momentary Switch
 Quick-Connect / Disconnect Features

### **ROBOLIGHTS**<sup>™</sup>



The Ultimate LED Helmet Light Cat. No. 7625

The Ultimate Headlamp offers high, low and flash output. The Ultimate uses a MaxBright LED that allows the beam to spot at distances. The Ultimate comes with a rubber hard hat strap & 3M Dual Lock to securely attach to your hard hat.

#### Specs:

- Power 130 Lumens
- Batteries 3AAA Alkaline included
- ·Burn Time 21.5 hrs Headlamp only
- Weight 3.7oz
- Waterproof IPX7

#### Grab-n-Go Magnetic LED work light

This Versatile and rugged magnetic light lets you attach to any ferrous metal and position the light right where you need it.



Magnet Mount High Power LED Cat. No. 7444 3700 Lumens / 51 Watt 5" Magnet 200 lbs. of pull force On / Off switch 12v DC power



Magnet Mount High Power LED Cat. No. 7225 4500 Lumens / 45 Watt

4500 Lumens / 45 Watt 5" Magnet 200 lbs. of pull force On / Off switch 12v DC power



### ROBOLIGHTS



FlareLight Kit Cat No. 7029 Contains four Red and one Amber FlareLights with five separate metal support plates that will provide additional security and weight if needed. Batteries included.

#### **Rechargeable Handheld Spot Light**

- Handheld
- Swivel Head
- Comfort grip handle
- Sealed lead based battery
- 27 watt 2150 lumen LED





Cat No. 7792 DC Vehicle Mount Charger



Made In

Cat No. 7181-LED



**Cones alone are not enough!** Maximize the safety of your workers and surrounding areas with the Robolight<sup>™</sup> ConeLights. Robolight<sup>™</sup> ConeLights are small, versatile and more effective than using cones by themselves. Providing a safer alternative, ConeLights can be easily placed over your cones. ConeLights utilize durable long lasting weather resistant LEDs. Lights are attached to rust resistant powder coated orange plates that can be used with all cone sizes. 4 AA Batteries Included.

419-331-0371







Cone Light Kits: Contains 4 lights in a crush proof case. Cat. No. 7038-R (4-Red) - Kit Cat. No. 7039-A (4-Amber) - Kit

Singles Cat. No. 7036-R single red Cat. No. 7037-A single amber





Aircraft Dynamics Corp. P.O. Box 3038 Elida, OH 45807

### Home of RoboTools<sup>®</sup> AIRCRAFT DYNAMICS

## Utility Division

RoboReels RoboPaks RoboLights RoboTools