

NEWSPACE MARKET · SECTOR CATALOGUE

Separation Systems

Every unit we list in this sector — specifications, manufacturers and where to ask for a quote. Compiled from the live NewSpace Market catalogue.

86

PRODUCTS

19

MANUFACTURERS

8

COUNTRIES

31

WITH DATASHEETS

newspacemarket.com/catalogues/separation-systems/

as of 2 September 2026

What is inside

This catalogue lists **86 separation systems products** offered by **19 manufacturers** across **8 countries**. Of those, 31 carry a manufacturer datasheet and 6 publish a price; the rest are quoted on request — normal in this market, where configuration drives cost.

Entries are grouped alphabetically by manufacturer. Every product links back to its page on newspacemarket.com, where you will find the full specification, the datasheet and a quote form that reaches the manufacturer directly.

Compiled 2 September 2026 from the live catalogue. Specifications are as published by the manufacturers; we normalise units but do not re-measure. Where a figure looked implausible it was left out rather than guessed.

Manufacturers by country

United States 7	Germany 3	Spain 2	Russia 2	Switzerland 1	United Kingdom 1
Netherlands 1	Czech Republic 1				

All products at a glance

PRODUCT	MANUFACTURER	COUNTRY	KEY SPECIFICATION	PRICE
Advanced Lightband (ALB)	Planetary Systems Corp (Rocket Lab)	United States	Bolt circle diameters available: 8.000", 11.732", 13.000", 15.000", 18.250"...	on request
ATLAS Hold Down and Release Actuator	SPACERACE s.r.o.	Czech Republic	Mechanical interface: User customizable (to match NEA, Glenair, Eaton, Arqu...	on request
Beyond Gravity Separation Systems	Beyond Gravity (ex-RUAG Space)	Switzerland	Flight record: More than 1200 in-orbit separations	on request
CarboNIX	Exolaunch	Germany	Satellite mass range: 10–500 kg	on request
CarboNIX NEO	Exolaunch	Germany	Available sizes: 8", 15", 24", 31.6", 38.81" (custom)	on request
Deployment Sequencer BU-12	KOSMOLAB Launch Services	Russia	Dimensions (L×W×H): 300 × 235 × 145 mm	₽1 500 000
Deployment Sequencer BU-36	KOSMOLAB Launch Services	Russia	Dimensions (L×W×H): 300 × 235 × 145 mm	₽2 000 000
Deployment System 100 kg	KOSMOLAB Launch Services	Russia	Mass: 8.0 kg	₽7 500 000
Deployment System 100 kg	KOSMOLAB Launch Services	Russia	Mass: 8.0 kg	on request
Deployment System 200 kg	KOSMOLAB Launch Services	Russia	Mass: 13.5 kg	₽9 500 000
Deployment System 200 kg	KOSMOLAB Launch Services	Russia	Mass: 13.5 kg	on request
Deployment System 50 kg	KOSMOLAB Launch Services	Russia	Mass: 4.0 kg	₽6 000 000
Deployment System 50 kg	KOSMOLAB Launch Services	Russia	Mass: 4.0 kg	on request
Deployment System 500 kg	KOSMOLAB Launch Services	Russia	Mass: 17 kg	on request
Deployment System 500 kg	KOSMOLAB Launch Services	Russia	Mass: 17 kg	₽12 000 000
EBAD TiNi Microlatch ML50-1 Separation System	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Max release load: 50 lbf (222 N)	on request
EBAD TiNi Microlatch ML50-2 Separation System	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Max release load: 50 lbf (222 N)	on request
EBAD TiNi™ ejector	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Attaching screw thread size: 4-40 to 3/8"-24	on request
EBAD TiNi™ Pin Puller	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Pin puller pull force range: 5 to 1000 lbf	on request
ESPA Separation System (PSR 1575 mm / 62 in)	Beyond Gravity (ex-RUAG Space)	Switzerland	Interface diameter: 1575 mm (62 in)	on request

PRODUCT	MANUFACTURER	COUNTRY	KEY SPECIFICATION	PRICE
Fast-Acting Shockless Separation Nut (FASSN) 30K	Sierra Space	United States	Load rating: 5K	on request
FuseBlox Small Satellite Docking Mechanism	SpaceWorks Enterprises	United States	Form factor: 2U	on request
GRIPPER — SMA Hold-Down Release Actuator	Nimesis Technology	—	Technology: Shape memory alloy (SMA) HDRA actuator	on request
HARPER — Ultra-Flat SMA Locking Actuator for Launchers	Nimesis Technology	—	Technology: Shape memory alloy (SMA) HDRA-type actuator	on request
JACK — SMA Pin-Puller Actuator for Satellites and Rovers	Nimesis Technology	—	Technology: Shape memory alloy (SMA) pin-puller	on request
LARA — SMA Release Nut for Launch Vehicle Stage Separation	Nimesis Technology	—	Technology: Shape memory alloy (SMA) release nut	on request
LoFF Low-Shock Separation System	Redwire Corporation	United States	Type: Low-shock frangible separation system	on request
Mark II Motorized Lightband (MLB)	Planetary Systems Corp (Rocket Lab)	United States	Bolt circle diameters available: 8.000", 11.732", 13.000", 15.000", 18.250"...	on request
Maverick 4-Point Lightweight Separation System (M4P-L)	Maverick Space Systems	United States	Type: 4-point separation system	on request
Maverick 4-Point Medium-duty Separation System (M4P-M)	Maverick Space Systems	United States	Type: 4-point separation system	on request
Micro Pin Puller (uD3PP)	Dcubed	Germany	Field-resettable: Front and Rear, in Seconds, up to 100 times	on request
Micro Release Nut (uD3RN)	Dcubed	Germany	TRL: 9	on request
Microsatellite Separation System (M3S)	ISISPACE Group	Netherlands	Maximum satellite mass: 120 kg	on request
MURPHY — Re-entry Triggered Dismantling Fastener	Nimesis Technology	—	Technology: Shape memory alloy (SMA) fastener with re-entry thermal activation	on request
Nano Pin Puller (nD3PP)	Dcubed	Germany	TRL: 9	on request
Nano Release Nut (nD3RN)	Dcubed	Germany	TRL: 9	on request
NEA Model 9040 Miniature Hold Down & Release Mechanism (HDRM)	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Proof load rating: 300 lbf (1,300 N)	on request
NEA Model 9100 Hold Down & Release Mechanism	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Proof load rating: 1,700 lbf (7,600 N)	on request
NEA Model 9106B Hold Down & Release Mechanism (HDRM)	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Proof load rating: 40,000 lbf (178,000 N)	on request
NEA PRM 9103A Payload Release Module	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Axial preload: Up to 15,000 lbf	on request
NEA PRM 9104A Payload Release Module	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Axial preload: Up to 8,500 lbf	on request
NEA® 15" Payload Release Ring (PRR-15)	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Payload capability: 250 kg	on request

PRODUCT	MANUFACTURER	COUNTRY	KEY SPECIFICATION	PRICE
NEA® 24" Payload Release Ring (PRR-24)	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Payload capability: 500 kg	on request
NEA® 8" Payload Release Ring (PRR-8)	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Payload capability: 100 kg	on request
NEA® Model 2545 Pin Puller	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Pull force at end of stroke: 25 lbf (111 N)	on request
NEA® Model 9102G Hold Down & Release Mechanism (HDRM)	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Proof load rating: 5,000 lbf (22,200 N)	on request
NEA® Model 9103 Hold Down & Release Mechanism (HDRM)	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Proof load rating: 9,217 lbf (41,000 N)	on request
NEA® Model 9107 Hold Down & Release Mechanism (HDRM)	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Proof load rating: 58,500 lbf (260,000 N)	on request
NEA® Model 9108 Hold Down & Release Mechanism (HDRM)	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Proof load rating: 86,400 lbf (384,000 N)	on request
NEA® Payload Release Module PRM 9103A	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Axial preload: Up to 15,000 lbf	on request
NEA® Payload Release Module PRM 9104A	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Axial preload: Up to 8,500 lbf	on request
PAS 381S (15 in) Separation System	Beyond Gravity (ex-RUAG Space)	Switzerland	Interface: ESPA 15 in adapter interface	on request
PAS 432S (17 in) Separation System	Beyond Gravity (ex-RUAG Space)	Switzerland	Interface diameter: 432 mm (17 in)	on request
PAS 610S (24 in) Separation System	Beyond Gravity (ex-RUAG Space)	Switzerland	Interface diameter: 610 mm (24 in)	on request
Payload Separation and Release Systems	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Products: Linear shaped charges, frangible joints, separation bolts/nuts, T...	on request
Pin Pullers	Dcubed	Germany	Dimensions (Micro Pin Puller uD3PP): Ø28x52 mm / Ø1.1x20.27 in	on request
Quadro Arrow	Exolaunch	Germany	Satellite mass range: Up to 250 kg	on request
Quadro Versa	Exolaunch	Germany	Satellite mass range: Up to 1000 kg (and beyond)	on request
REAC-053 V2 SX 5kN Nitinol Release Actuator	Arquimea	Spain	Release load: 5 kN	on request
REAC-053 V2 SX 5kN SMARQ Release Actuator	Arquimea	Spain	Release load: 5 kN	on request
REAC-153 V2 SX 15kN Nitinol Release Actuator	Arquimea	Spain	Release load: 15 kN	on request
REAC-153 V2 SX 15kN SMARQ Release Actuator	Arquimea	Spain	Release load: 15 kN	on request
REAC-353 V2 35kN Nitinol Release Actuator	Arquimea	Spain	Release load: 35 kN	on request
REAC-353 V2 EX 35kN SMARQ Release Actuator	Arquimea	Spain	Release load: 35 kN	on request

PRODUCT	MANUFACTURER	COUNTRY	KEY SPECIFICATION	PRICE
Release Device (electromechanical, shock-free). Type 2	Glavkosmos	Russia	Year of release: 2017	on request
Reliable and Advanced Mission Injector (RAMI)	UARX Space	Spain	Supported form factors: 0.25U, 0.5U, 1U, 1.5U, 2U, 3U, 6U, 12U	on request
Satellite Payload Release & Sequencing System (PRSS)	PacSci EMC	United States	Flight qualified: 74 One-Web Satellite Separation	on request
Satellite Separation and Deployment Systems	Clutch Space Systems	United Kingdom	Products: Spring-loaded deployment systems, SMA hold-down/release, separati...	on request
SATLATCH — Shock-Free Deployment and Latching Mechanism	Nimesis Technology	—	Technology: Shape memory alloy (SMA) deployment and latching mechanism	on request
SAU&RON	UARX Space	Spain	Total mass: Starting from < 1.4 kg	on request
Separation Device Clamp Band	Glavkosmos	Russia	Purpose: Spacecraft attachment to the adapter for the period of their joint...	on request
Separation Nut PSM 1/2B	Beyond Gravity (ex-RUAG Space)	Switzerland	Target spacecraft class: Constellation class satellites, typically 500-1000 kg	on request
Separation Nut PSM 3/8B	Beyond Gravity (ex-RUAG Space)	Switzerland	Target spacecraft class: OneWeb class satellites, typically 100-200 kg	on request
Solar Panels Hold-down Lock (mechanical)	Glavkosmos	Russia	Year of release: 2007	on request
Spacecraft Dispensing Systems	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Payload range: Small CubeSat to 40 metric ton primary payloads	on request
Spacecraft Separation Device	Glavkosmos	Russia	Purpose: Spacecraft attachment to the adapter for the period of their joint...	on request
SpaceTech Pyro Drive Module (Actuator Drive Unit)	SpaceTech GmbH	Germany	Bus interface: Satellite primary power, 28 V nominal	on request
Systems for Separating Small, Medium, Heavy Spacecraft	Glavkosmos	Russia	Purpose: Design, manufacture and testing of spacecraft separation systems f...	on request
TiNi Flat Pack FP50 Miniature Hold-Down Release Mechanism	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Mass: 1.17 oz (33 g) max	on request
TiNi™ Pin Puller P10	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Pull force: 10 lbf (44 N)	on request
TiNi™ Pin Puller P100	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Pull force: 100 lbf (445 N)	on request
TiNi™ Pin Puller P1000	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Pull force: 1,000 lbf (4,450 N)	on request

PRODUCT	MANUFACTURER	COUNTRY	KEY SPECIFICATION	PRICE
TiNi™ Pin Puller P25	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Pull force: 25 lbf (111 N)	on request
TiNi™ Pin Puller P50	Ensign-Bickford Aerospace & Defense (EBAD)	United States	Pull force: 50 lbf (222 N)	on request
TRIGGY — Shape Memory Alloy Breakable Fastener	Nimesis Technology	—	Technology: Shape memory alloy (SMA) actuator	on request
UNIKA HDRM Preload Device	SPACERACE s.r.o.	Czech Republic	Mechanical interface: User customized mating head	on request

Products by manufacturer

Arquimea

SPAIN · 2007 · 6 PRODUCTS

Spanish space technology company founded 2007 in Leganes, developing MEMS relay switches, SiC power devices, and miniaturized power conditioning units for satellite applications.



ARQUIMEA

REAC-053 V2 SX 5kN Nitinol Release Actuator

Miniature low-shock resettable HDRA with 5 kN release load using Nitinol (TiNi) shape memory alloy, standard temperature range variant.

Release load	5 kN
Ultimate load	7.5 kN
Mass	226–230 g
SMA material	Nitinol (TiNi)
Current consumption	4 A

price on request

ARQUIMEA

REAC-053 V2 SX 5kN SMARQ Release Actuator

Miniature low-shock resettable hold-down and release actuator with 5 kN release load. SMARQ shape memory alloy, smallest in REACT family.

Release load	5 kN
Ultimate load	7.5 kN
Mass	226–230 g
Supply voltage	25 V
Bridge resistance	15 Ω

price on request

ARQUIMEA

REAC-153 V2 SX 15kN Nitinol Release Actuator

Low-shock resettable HDRA with 15 kN release load using Nitinol shape memory alloy, standard temperature range (-90 to +65 °C).

Release load	15 kN
Ultimate load	22.5 kN
Mass	300 g
SMA material	Nitinol (TiNi)
Current consumption	4 A

price on request

ARQUIMEA

REAC-153 V2 SX 15kN SMARQ Release Actuator

Low-shock resettable hold-down and release actuator with 15 kN release load. SMARQ shape memory alloy, standard SX variant, pyro-compatible, flight proven.

Release load	15 kN
Ultimate load	22.5 kN
Proof load	18.7 kN
Mass	268 g
Supply voltage	25 V

price on request

ARQUIMEA

REAC-353 V2 35kN Nitinol Release Actuator

Large low-shock resettable HDRA with 35 kN release load using Nitinol shape memory alloy, standard temperature range variant.

Release load	35 kN
Ultimate load	52.5 kN
SMA material	Nitinol (TiNi)
Misalignment capability	±2.5°
Release shock	< 1,300 g

price on request

ARQUIMEA

REAC-353 V2 EX 35kN SMARQ Release Actuator

Low-shock resettable hold-down and release actuator for space with 35 kN release load. SMARQ shape memory alloy, pyro-compatible interface, flight proven.

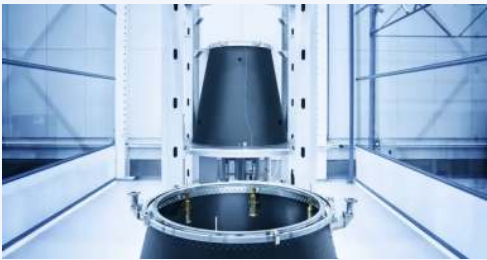
Release load	35 kN
Ultimate load	52.5 kN
Proof load	43.5 kN
Mass	367 g
Supply voltage	25 V

price on request

Beyond Gravity (ex-RUAG Space)

SWITZERLAND · 1993 · 7 PRODUCTS

Swiss-Swedish space components manufacturer providing satellite structures, thermal control products, payload electronics, and antennas for commercial and institutional programs.



BEYOND GRAVITY (EX-RUAG SPACE)
Beyond Gravity Separation Systems

Beyond Gravity offers a range of separation systems, dispenser systems, and modular payload adapters designed to securely connect satellites to launch vehicles and precisely deploy

Flight record	More than 1200 in-orbit separations
Success rate	100%
Espa separation system (psr 1575 mm) compatibility	Evolved Expendable Launch Vehicle (EELV) Secondary Payload Adapter (ESPA)
Pas 381s (15") separation system compatibility	ESPA 15" adapter interface
Pas 432s (17") separation system satellite mass	Up to 200 kg @ 0.45 mm

price on request [datasheet](#)

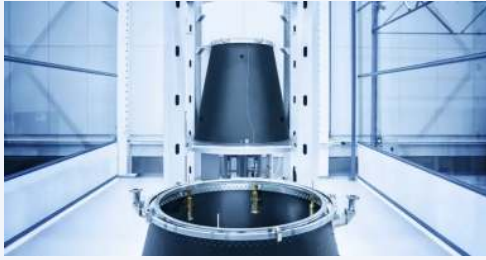


BEYOND GRAVITY (EX-RUAG SPACE)
ESPA Separation System (PSR 1575 mm / 62 in)

1575 mm (62 in) low-shock clamp band separation system fully compatible with the EELV Secondary Payload Adapter (ESPA).

Interface diameter	1575 mm (62 in)
Compatibility	EELV Secondary Payload Adapter (ESPA)
Release mechanism	CBOD Low Shock Release Mechanism
Scope of supply	Low shock clamp band separation system, payload separation rings, umbilical connectors, se
Family diameter range	381 mm to 3100 mm (15 to 122 in)

price on request [datasheet](#)



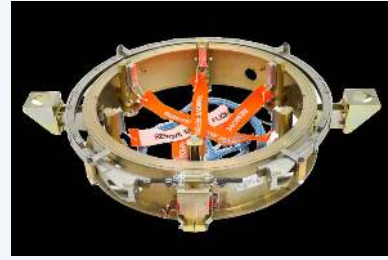
BEYOND GRAVITY (EX-RUAG SPACE)

PAS 381S (15 in) Separation System

Smallest member of the low-shock separation system family, developed to fit the ESPA 15 inch adapter interface.

Interface	ESPA 15 in adapter interface
Release mechanism	CB0D-LT Separation System Release Mechanism
Scope of supply	Low shock clamp band separation system, interface rings, umbilical connection, separation
Family diameter range	360 mm to 2624 mm (14 to 103 in)
Flight record	More than 660 in-orbit separations, 100% success rate

[price on request](#) [datasheet](#)



BEYOND GRAVITY (EX-RUAG SPACE)

PAS 432S (17 in) Separation System

Low-shock clamp band separation system designed for satellites up to 200 kg at 0.45 mm on the VEGA launch vehicle.

Interface diameter	432 mm (17 in)
First application	Satellites up to 200 kg at 0.45 mm on the VEGA launch vehicle
Release mechanism	CB0D-LT Separation System Release Mechanism
Scope of supply	Low shock clamp band separation system, interface rings, umbilical connection, separation
Flight record	More than 660 in-orbit separations, 100% success rate

[price on request](#) [datasheet](#)



BEYOND GRAVITY (EX-RUAG SPACE)

PAS 610S (24 in) Separation System

Low-shock separation system whose load capability is fully compatible with the Moog CSA ESPA and the ESPA Rideshare User's Guide environments.

Interface diameter	610 mm (24 in)
Compatibility	Moog CSA ESPA; ESPA Rideshare User's Guide environments
Release mechanism	CB0D-LT Separation System Release Mechanism
Scope of supply	Low shock clamp band separation system, interface rings, umbilical connection, separation
Flight record	More than 660 in-orbit separations, 100% success rate

[price on request](#) [datasheet](#)



BEYOND GRAVITY (EX-RUAG SPACE)

Separation Nut PSM 1/2B

Low-shock separation nut for constellation-class satellites of typically 500-1000 kg, qualified per AIAA S-113-2005.

Target spacecraft class	Constellation class satellites, typically 500-1000 kg
Qualification	AIAA S-113-2005 (former D0D-E-83578A)
Initiators	Dual NSI equivalent (PC23, 103377-191/-449/-500, PD222400024-009, 2-8001140-1, 852420-XX)
Worst-case tests passed	Single 80% initiator, cold case, no o-ring, 150% external load - 100% success
Design feature	Internal mechanical leverage reduces initiator pressure spike and shock; direct drop-in re

[price on request](#) [datasheet](#)



BEYOND GRAVITY (EX-RUAG SPACE)

Separation Nut PSM 3/8B

Smallest low-shock separation nut of the family, developed to fit OneWeb-class satellites of typically 100-200 kg.

Target spacecraft class	OneWeb class satellites, typically 100-200 kg
Qualification	AIAA S-113-2005 (former DOD- E-83578A)
Initiators	Dual NSI equivalent (PC23, 103377-191/-449/-500, PD222400024-009, 2-8001140-1, 852420-XX)
Worst-case tests passed	Single 80% initiator, cold case, no internal lube, no o- ring, 150% external load - 100% su
Design feature	Internal mechanical leverage reduces initiator pressure spike and shock; wide thermal oper

[price on request](#) [datasheet](#)

Clutch Space Systems

UNITED KINGDOM · 2018 · 1 PRODUCT

Clutch Space Systems develops software-defined ground station solutions that dramatically reduce the cost and complexity of satellite communications, enabling ground operators to multiply capacity by an order of magnitude without replacing

CLUTCH SPACE SYSTEMS

Satellite Separation and Deployment Systems

Clutch Space Systems' satellite separation mechanisms, spring-loaded deployment systems, and motorized hold-down release actuators for satellite and payload separation.

Products	Spring-loaded deployment systems, SMA hold- down/release, separation bolts
Interfaces	6U, 12U CubeSat dispenser; ESPA-class satellite interface
SMA actuators	Pyrotechnic-free (no shock, no HAZMAT, simpler regulatory)
Engineering	Shock analysis, spring design, contamination assessment
Market	CubeSat/smallsat constellation deployment (high volume, low cost)

price on request

Dcubed

GERMANY · 5 PRODUCTS

German manufacturer of space deployables using patented Shape Memory and Origami technologies — release actuators, solar arrays, and antenna deployables for CubeSats and microsatellites.



DCUBED

Micro Pin Puller (uD3PP)

The Dcubed Micro Pin Puller (uD3PP) is a Shape Memory Alloy (SMA) based release actuator designed to secure sensitive equipment during launch and release it safely on orbit. It is

Field-resettable	Front and Rear, in Seconds, up to 100 times
Lead time	10-12 weeks
Actuation	Fully Redundant
Trigger	Smart SMA
Shock	Very Low

price on request



DCUBED

Micro Release Nut (uD3RN)

The Dcubed Micro Release Nut (uD3RN) is a Shape Memory Alloy (SMA) based release actuator designed to secure sensitive equipment during launch and release it on orbit. It is a comp

TRL	9
On-ground resettable	40-100 times
Short delivery time	10-12 weeks
Axial load (Release Load)	4,000 N
Proof load	4,500 N Pull-out

price on request



DCUBED

Nano Pin Puller (nD3PP)

The Dcubed Nano Pin Puller (nD3PP) is a compact, space-qualified, Shape Memory Alloy (SMA) based release actuator designed to secure equipment during launch and release it on orbit

TRL	9
Field resettable	Front and Rear, in Seconds, up to 400 times
Lead time	6-8 weeks
Actuation	Fully Redundant
Trigger	Smart SMA

price on request



DCUBED

Nano Release Nut (nD3RN)

The Dcubed Nano Release Nut (nD3RN) is a space-proven, resettable, Shape Memory Alloy (SMA) based release actuator for compact space mechanisms, available in Stainless Steel or Alu

TRL	9
Resetability	On-Ground and In-Space Resettable in Seconds, up to 400 times
Lead time	Short (6-8 weeks)
Actuation	Fully Redundant
Trigger	Smart SMA

price on request



DCUBED

Pin Pullers

The Pin Puller product line offers easy-to-use and highly-resettable release actuators designed for shear-load applications in space.

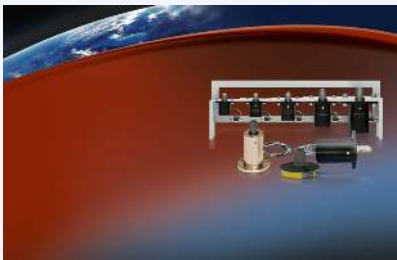
Dimensions (Micro Pin Puller uD3PP)	Ø28x52 mm / Ø1.1x20.27 in
Mass (Micro Pin Puller uD3PP)	85 grams / 3 oz
Load (Micro Pin Puller uD3PP)	Shear Load: >490 N / 110 lbf
TRL (Micro Pin Puller uD3PP)	9
Dimensions (Nano Pin Puller nD3PP)	17x17x17 mm / 0.67x0.67x0.67 in

price on request

Ensign-Bickford Aerospace & Defense (EBAD)

UNITED STATES · 27 PRODUCTS

US manufacturer of non-explosive actuators (TiNi FrangiBolt, pin pullers, ejectors) and energetic hold-down and release systems.



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
EBAD TiNi Microlatch ML50-1 Separation System

A non-pyrotechnic, field-resettable separation system for low preload dispensing, utilizing shape memory alloy technology.

Max release load	50 lbf (222 N)
Proof load	100 lbf (445 N)
Max torque	25 in-oz
Coupler kick-off force	7.5 lbf
Mass	.53 (15 g)

price on request [datasheet](#)

ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
EBAD TiNi Microlatch ML50-2 Separation System

A non-pyrotechnic, field-resettable separation system for low preload dispensing, utilizing shape memory alloy technology, with a higher voltage range.

Max release load	50 lbf (222 N)
Proof load	100 lbf (445 N)
Max torque	25 in-oz
Coupler kick-off force	7.5 lbf
Mass	.53 (15 g)

price on request [datasheet](#)



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

EBAD TiNi™ ejector

The EBAD TiNi™ ejector, also known as the microlatch and ejector release mechanism (ERM), is designed to support and release spacecraft deployables. It can accommodate attaching sc

Attaching screw thread size	4-40 to 3/8"-24
Preload range	50 lbf (222 N) to 4000 lbf (17800 N)
Erm qualified life	minimum 50 cycles
Micro latch qualified life	minimum 100 cycles
Actuation pulse (TiNi™ ERMs)	25 milliseconds or less (standard pyro pulse)

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

EBAD TiNi™ Pin Puller

The EBAD TiNi™ Pin Puller is a fast-acting device designed for a variety of Aerospace applications. It achieves pin retraction by combining the recovery characteristics of Shape Me

Pin puller pull force range	5 to 1000 lbf
Standard sizes offered	Five
Flight heritage	Mars Global Surveyor spacecraft (November 1996) and numerous other space applications
Minimum qualified life	100 cycles

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

NEA Model 9040 Miniature Hold Down & Release Mechanism (HDRM)

A non-pyrotechnic Hold Down & Release Mechanism (HDRM) for spacecraft, supporting release loads up to 250 lbf with ultra-low shock.

Proof load rating	300 lbf (1,300 N)
Release load rating	250 lbf (1,100 N)
Output shock @ preload	<300 g's @ 250 lbf (1,112 N)
Fuse wire resistance	0.8 - 1.8 Ω
Actuation current	3.0 Amps for 50 ms

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

NEA Model 9100 Hold Down & Release Mechanism

The NEA Model 9100 is an electrically initiated, one-shot non-pyrotechnic Hold Down & Release Mechanism (HDRM) designed to carry high tensile preloads until commanded to releas

Proof load rating	1,700 lbf (7,600 N)
Release load rating	1,360 lbf (6,000 N)
Shock @ preload	<300 g's @ 1,360 lbf (6,000 N)
Fuse wire resistance	1.2 to 2.0 Ω @ 25°C
Actuation current	4 Amps for 25 ms

price on request

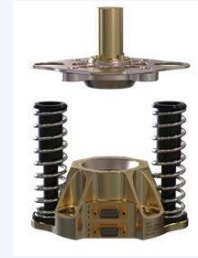


ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
NEA Model 9106B Hold Down & Release Mechanism (HDRM)

The NEA Model 9106B is a non-pyrotechnic, electrically initiated, one-shot Hold Down & Release Mechanism (HDRM) capable of supporting release loads up to 32,000 lbf (142,000 N)

Proof load rating	40,000 lbf (178,000 N)
Release load rating	32,000 lbf (142,000 N)
Shock @ preload	<1,000 g's @ 32,000 lbf (142,000 N)
Fuse wire resistance	1.2 to 2.0 Ω @ 25°C
Actuation current	4 Amps for 25 ms

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
NEA PRM 9103A Payload Release Module

The PRM 9103A is an ultra-low shock, electrically initiated, single-shot, and factory refurbishable release mechanism. It can carry a high tensile preload, which is applied through

Axial preload	Up to 15,000 lbf
Axial stiffness	9.28 E+5 lbf/in
Shear stiffness	5.98 E+6 lbf/in
Bending stiffness	2.38 E+6 in-lbf/rad
Shock output	<500 g's

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
NEA PRM 9104A Payload Release Module

The PRM 9104A is an ultra-low shock, electrically initiated, single-shot, and factory refurbishable release mechanism. It can carry a high tensile preload, which is applied through

Axial preload	Up to 8,500 lbf
Axial stiffness	2.02 E+6 lbf/in
Shear stiffness	9.0 E+5 lbf/in
Bending stiffness	7.5 E+5 in-lbf/rad
Shock output	<300 g's

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
NEA® 15" Payload Release Ring (PRR-15)

The NEA® 15" Payload Release Ring (PRR-15) is a flight-proven mechanism designed to release payloads from a launch vehicle, utilizing four NEA® release mechanisms and separation sp

Payload capability	250 kg
Shock output	<300 g's
Release time	<40 ms
Total mass	6.4 lb (2.9 kg)
Fly away mass	2.2 lb (1 kg)

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

NEA® 24" Payload Release Ring (PRR-24)

The NEA® 24" Payload Release Ring (PRR-24) is a payload release mechanism that utilizes the flight-proven technology of the NEA® mechanism product line to release payloads fr

Payload capability	500 kg
Shock output	<300 g's
Release time	<40 ms
Total mass	10.58 lb (4.8 kg)
Fly away mass	3.5 lb (1.6 kg)

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

NEA® 8" Payload Release Ring (PRR-8)

The NEA® 8" Payload Release Ring (PRR-8) is a low-shock, low-mass mechanism designed to release payloads up to 100 kg from a launch vehicle, utilizing four NEA® release mechanisms

Payload capability	100 kg
Shock output	<300 g's
Release time	40 ms
Total mass	4.7 lb (2.1 kg)
Fly away mass	1.6 lb (0.7 kg)

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

NEA® Model 2545 Pin Puller

A non-pyrotechnic pin puller for satellite applications, providing a pull force of 25 lbf (111 N) and actuated by a current of 4 Amps for 25 ms.

Pull force at end of stroke	25 lbf (111 N)
Fuse wire resistance	1.2 to 2.0 Ω @ 25°C
Actuation current	4 Amps for 25 ms
No-fire current (continuity)	250 mA
Release time	<50 ms

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

NEA® Model 9102G Hold Down & Release Mechanism (HDRM)

The NEA® Model 9102G is an electrically initiated, one-shot, non-pyrotechnic Hold Down & Release Mechanism capable of supporting restrained preloads up to 4,000 lbf (17,800 N)

Proof load rating	5,000 lbf (22,200 N)
Release load rating	4,000 lbf (17,800 N)
Shock @ preload	4,000 lbf (17,800 N)
Fuse wire resistance	1.2 to 2.0 Ω @ 25°C
Actuation current	4 Amps for 25 ms

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
NEA® Model 9103 Hold Down & Release Mechanism (HDRM)

The NEA® Model 9103 is an electrically initiated, one-shot non-pyrotechnic Hold Down & Release Mechanism (HDRM) capable of supporting release loads up to 7,868 lbf (35,000 N).

Proof load rating	9,217 lbf (41,000 N)
Release load rating	7,868 lbf (35,000 N)
Shock @ preload	<750 g's @ 7,868 (35,000 N)
Fuse wire resistance	1.2 to 2.0 Ω @ 25°C
Actuation current	4 Amps for 25 ms

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
NEA® Model 9108 Hold Down & Release Mechanism (HDRM)

The NEA® Model 9108 is an electrically initiated, one-shot hold down and release mechanism supporting release loads up to 72,000 lbf (320,000 N) with ultra-low shock.

Proof load rating	86,400 lbf (384,000 N)
Release load rating	72,000 lbf (320,000 N)
Shock @ preload	<1500 g peak at 76k lbf preload
Fuse wire resistance	0.75 Ω to 2.0 Ω @ 25°C
Actuation current	4 Amps for 60 ms

price on request

ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
NEA® Model 9107 Hold Down & Release Mechanism (HDRM)

The NEA® Model 9107 is an electrically initiated, one-shot hold down and release mechanism capable of carrying high tensile preload until commanded to release, offering extremely l

Proof load rating	58,500 lbf (260,000 N)
Release load rating	46,000 lbf (195,000 N)
Shock @ preload	<1,100 g's @ 46,000 lbf (195,000 N)
Fuse wire resistance	1.2 to 2.0 Ω @ 25°C
Actuation current	4 Amps for 60 ms

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
NEA® Payload Release Module PRM 9103A

The PRM 9103A is an ultra-low shock, electrically initiated, single-shot, and factory refurbishable release mechanism designed to carry a high tensile preload until commanded to re

Axial preload	Up to 15,000 lbf
Axial stiffness	9.28 E+5 lbf/in
Shear stiffness	5.98 E+6 lbf/in
Bending stiffness	2.38 E+6 in-lbf/rad
Shock output	<500 g's

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

NEA® Payload Release Module PRM 9104A

The PRM 9104A is an ultra-low shock, electrically initiated, single-shot, and factory refurbishable release mechanism designed to carry a high tensile preload until commanded to re

Axial preload	Up to 8,500 lbf
Axial stiffness	2.02 E+6 lbf/in
Shear stiffness	9.0 E+5 lbf/in
Bending stiffness	7.5 E+5 in-lbf/rad
Shock output	<300 g's

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

Payload Separation and Release Systems

Complete separation and release technology portfolio including linear shaped charges, frangible joints, separation bolts and nuts for launch vehicles and spacecraft stages.

Products	Linear shaped charges, frangible joints, separation bolts/nuts, TiNi ejectors, NEA devices
Max static load	Up to 100,000 lbf
Technologies	Pyrotechnic and non-pyrotechnic (non-energetic) options

Applications	Launch vehicle staging, satellite separation, payload deployment
--------------	--

Flight heritage	50+ years, invention of the Linear Shaped Charge
-----------------	--

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

Spacecraft Dispensing Systems

Flight-proven separation and dispensing systems for single payloads, secondary payloads, and large satellite constellation deployment from rideshare launch vehicles.

Payload range	Small CubeSat to 40 metric ton primary payloads
Applications	Single payloads, secondary rideshare, constellation deployment
Technologies	Pyrotechnic and non-pyrotechnic separation systems
Flight record	Zero in-orbit failures across all dispensing systems
Flight heritage	60+ years serving satellite and launch vehicle markets

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

TiNi Flat Pack FP50 Miniature Hold-Down Release Mechanism

The TiNi Flat Pack FP50 is a miniature, non-pyrotechnic, and field-resettable hold-down release mechanism utilizing shape memory alloy for low-load applications.

Mass	1.17 oz (33 g) max
Power	1.25 W @ .75 A
Operational current	.4 A to 1.5 A
Resistance	3.3±.3 Ω @ 23°C
Max release load	50 lbf (222.4 N)

price on request

[datasheet](#)



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

TiNi™ Pin Puller P10

A non-pyrotechnic pin puller utilizing Shape Memory Alloy (SMA) wire, offering a 10 lbf (44 N) pull force and a minimum of 100 cycles.

Pull force	10 lbf (44 N)
Side load (actuation)	10 lbf (44.5 N)
Side load (non-actuation)	100 lbf (444.8 N)
Mass	1.06 oz (30 g)
Operating current	.4 to 1.5 A

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

TiNi™ Pin Puller P100

A non-pyrotechnic pin puller utilizing Shape Memory Alloy (SMA) wire, offering a 100 lbf (445 N) pull force and a minimum of 50 cycles.

Pull force	100 lbf (445 N)
Side load (actuation)	100 lbf (445 N)
Side load (non-actuation)	490 lbf (2,180 N)
Mass	5.3 oz (150 g)
Operating current	2.25 A to 6.5 A

price on request

ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

TiNi™ Pin Puller P1000

A non-pyrotechnic pin puller utilizing Shape Memory Alloy (SMA) wire, offering a 1,000 lbf (4,450 N) pull force and a minimum of 50 cycles.

Pull force	1,000 lbf (4,450 N)
Side load (actuation)	500 lbf (2,224 N)
Side load (non-actuation)	600 lbf (2,670 N)
Mass	17 oz (482 g)
Operating current	2.75 A to 8.75 A

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)

TiNi™ Pin Puller P25

A non-pyrotechnic pin puller utilizing Shape Memory Alloy (SMA) wire, offering a 25 lbf (111 N) pull force and a minimum of 100 cycles.

Pull force	25 lbf (111 N)
Side load (actuation)	20 lbf (89 N)
Side load (non-actuation)	330 lbf (1,468 N)
Mass	1.7 oz (48 g)
Operating current	.6 to 2 A

price on request



ENSIGN-BICKFORD AEROSPACE & DEFENSE (EBAD)
TiNi™ Pin Puller P50

A non-pyrotechnic pin puller utilizing Shape Memory Alloy (SMA) wire, offering a 50 lbf (222 N) pull force and a minimum of 50 cycles.

Pull force	50 lbf (222 N)
Side load (actuation)	50 lbf (222 N)
Side load (non-actuation)	400 lbf (1,823 N)
Mass	2.6 oz (75 g)
Operating current	1.25 A to 4.5 A

[price on request](#)

Exolaunch

GERMANY · 2008 · 4 PRODUCTS

Berlin-based launch and deployment services company providing end-to-end rideshare missions, satellite integration, and proprietary separation hardware for small satellites.



EXOLAUNCH
CarboNIX

Scalable shock-free microsatellite separation system for 10–500 kg satellites; 30 missions, 244 microsats flown.

Satellite mass range	10–500 kg
Available diameters	8", 11.732", 15", 18.25", 24" (custom available)
Tumbling rate post-release	< 1°/sec on all three axes
Deployment type	Entirely shock-free, linear
Flyaway mass	Half that of comparable separation systems

[price on request](#) [datasheet](#)



EXOLAUNCH
CarboNIX NEO

Next-gen shock-free separation system for satellites up to 1000 kg+, with new clamp ring and SpaceX Transporter full-mass range coverage.

Available sizes	8", 15", 24", 31.6", 38.81" (custom)
Maximum satellite mass	1000 kg+
Tumbling rate post-release	< 1°/s on all axes
Deployment type	Linear, shock-free
ITAR status	ITAR-Free

[price on request](#) [datasheet](#)



EXOLAUNCH

Quadro Arrow

Four-point shock-free separation system for satellites up to 250 kg;
Innovation in Space Award 2023 winner; 4 missions flown.

Satellite mass range	Up to 250 kg
Separation points	4
Tip-off rate	Average 0.6°/s on all three axes
Deployment type	Shock-free, no pyrotechnics
Actuation	Single signal releases all 4 points simultaneously

[price on request](#) [datasheet](#)



EXOLAUNCH

Quadro Versa

Scalable four-point separation system for satellites up to 1000 kg+ on SpaceX Rideshare plates, 24"x24" to 40"x40".

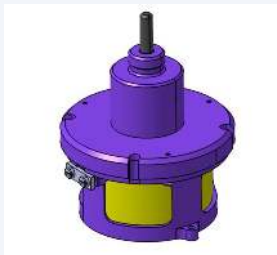
Satellite mass range	Up to 1000 kg (and beyond)
Separation points	4
Size range	24"x24" to 40"x40" (scalable)
Tip-off rate	Average 0.6°/s on all three axes
Deployment type	Shock-free, no pyrotechnics

[price on request](#) [datasheet](#)

Glavkosmos

RUSSIA · 1985 · 5 PRODUCTS

Glavkosmos coordinates international human spaceflight projects, facilitates satellite launches, develops and supplies rocket components, and provides equipment for space crews.



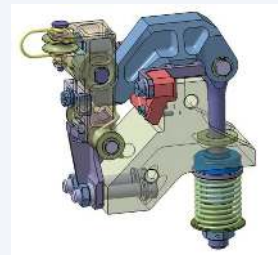
GLAVKOSMOS

Release Device (electromechanical, shock-free). Type 2

The Release Device (electromechanical, shock-free) Type 2 is designed to hold mechanical device hold-down locks in a cocked position, ensuring shock-free release.

Year of release	2017
Design life	9 years
Lead time	4 months
Brief history of flight qualification	2019-2020
Rod load	4 kg

[price on request](#)



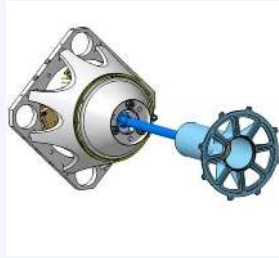
GLAVKOSMOS

Separation Device Clamp Band

A clamp band separation device designed for shock-free spacecraft separation from an adapter, activated by a command from the booster control unit.

Purpose	Spacecraft attachment to the adapter for the period of their joint operation; shock-free s
Year of release	2011
Design life	6 years
Lead time	4 months
Brief history of flight qualification	Amos-5, Yamal-300K, Express-AT1, Express-AT2, Express-AM8, KazSat-3, Loutch-5V, Express-AM

[price on request](#)



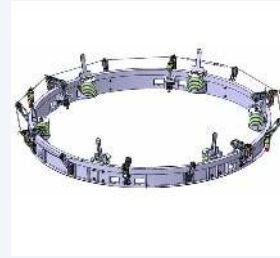
GLAVKOSMOS

Solar Panels Hold-down Lock (mechanical)

A mechanical hold-down lock designed to secure solar panels in their stowed position during launch and early orbital operations, featuring a robust clamping force and extensive flight history.

Year of release	2007
Design life	15 years
Lead time	4 months
Brief history of flight qualification	Amos-5, Yamal-300K, Express-AT1, Express-AT2, Express-AM8, KazSat-3, Luch-5V, Express-AM
Clamping force	2500 kg

price on request



GLAVKOSMOS

Spacecraft Separation Device

A mechanical device designed for the shock-free separation of spacecraft from an adapter, featuring locks, spring-loaded pushrods, a clamp-band with explosive pins, separation connection, and a shock absorber.

Purpose	Spacecraft attachment to the adapter for the period of their joint operation; shock-free separation
Year of release	2011
Design life	6 years
Lead time	12 months
Brief history of flight qualification	Amos-5, Yamal-300K, Express-AT1, Express-AT2, Express-AM8, KazSat-3, Luch-5V, Express-AM

price on request



GLAVKOSMOS

Systems for Separating Small, Medium, Heavy Spacecraft

These systems are designed for the separation of small, medium, and heavy spacecraft from launch vehicles, utilizing cumulative charges, small explosive locks, and exciters to ensure safe separation.

Purpose	Design, manufacture and testing of spacecraft separation systems for structural elements of launch vehicles and spacecraft
Flight qualification of the product	Yes
Brief history of flight qualification	Vast work experience.
Possibility to adapt the product to customer requirements	Yes

price on request

CubeSat deployers, antennas, EPS and small-satellite systems.



ISISPACE GROUP

Microsatellite Separation System (M3S)

Three-point microsatellite launch adapter for satellites up to 120 kg: shock-free deployment, Falcon 9 / PSLV / Vega compatible.

Maximum satellite mass	120 kg
Interface type	Three-point launch adapter
Deployment features	Shock-free deployment, low tip-off rates
Launch vehicle compatibility	Falcon 9, PSLV, Vega and others
Customisation	Tailored to customer satellite interface requirements

price on request

KOSMOLAB Launch Services

CubeSat & small-satellite rideshare brokerage — integration, paperwork, launch insurance on PSLV, Falcon 9 Transporter, Ariane 6 and Soyuz.



KOSMOLAB LAUNCH SERVICES

Deployment Sequencer BU-12

The Deployment Sequencer BU-12 receives an activation signal from a launch vehicle to initiate a mission cyclogram, providing output signals for satellite deployment and returning

Dimensions (L×W×H)	300 × 235 × 145 mm
Mass	4.5 kg
Payload supply voltage	28 V
Current per channel	2 A
Max total current	4 A

€1 500 000

[datasheet](#)



KOSMOLAB LAUNCH SERVICES

Deployment Sequencer BU-36

The Deployment Sequencer BU-36 receives an activation signal from a launch vehicle and initiates a mission cyclogram to deploy satellites, while also providing telemetry feedback.

Dimensions (L×W×H)	300 × 235 × 145 mm
Mass	5.5 kg
Payload supply voltage	28 V
Current per channel	2 A
Max total current	4 A

€2 000 000

[datasheet](#)



KOSMOLAB LAUNCH SERVICES

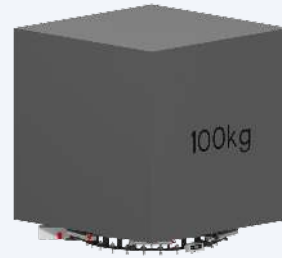
Deployment System 100 kg

The Deployment System 100 kg is a non-pyrotechnic separation mechanism designed for space satellites weighing up to 100 kg, ensuring smooth and shockless deployment.

Mass	8.0 kg
Max. satellite mass	100 kg
Separation time	≤ 1 s
Separation velocity	0.5 – 2.0 m/s
Angular separation velocity	≤ 2 °/s

€7 500 000

[datasheet](#)



KOSMOLAB LAUNCH SERVICES

Deployment System 100 kg

The KosmoLab Deployment System 100 kg is designed for space satellites up to 100 kg, providing smooth, shockless deployment without pyrotechnics.

Mass	8.0 kg
Max. satellite mass	100 kg
Separation time	≤ 1 s
Separation velocity	0.5 – 2.0 m/s
Angular separation velocity	≤ 2 °/s

[price on request](#)

[datasheet](#)



KOSMOLAB LAUNCH SERVICES

Deployment System 200 kg

The Deployment System 200 kg is a non-pyrotechnic separation system designed for space satellites up to 200 kg, ensuring smooth and shockless deployment.

Mass	13.5 kg
Max. satellite mass	200 kg
Separation time	≤ 1 s
Separation velocity	0.5 – 2.0 m/s
Angular separation velocity	≤ 2 °/s

€9 500 000

[datasheet](#)



KOSMOLAB LAUNCH SERVICES

Deployment System 200 kg

The Deployment System 200 kg (LSO-200) provides smooth, shockless deployment of space satellites weighing up to 200 kg from the upper stage of a launch vehicle, utilizing a pyrotec

Mass	13.5 kg
Max. satellite mass	200 kg
Separation time	≤ 1 s
Separation velocity	0.5 – 2.0 m/s
Angular separation velocity	≤ 2 °/s

[price on request](#)

[datasheet](#)



KOSMOLAB LAUNCH SERVICES

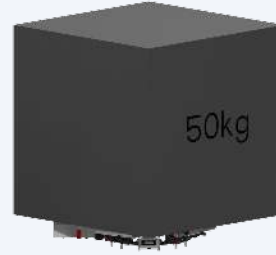
Deployment System 50 kg

A non-pyrotechnic deployment system designed for 50 kg space satellites, ensuring smooth and shockless separation from the launch vehicle's upper stage.

Mass	4.0 kg
Max. satellite mass	50 kg
Separation time	≤ 1 s
Separation velocity	0.5 – 2.0 m/s
Angular separation velocity	≤ 2 °/s

€6 000 000

[datasheet](#)



KOSMOLAB LAUNCH SERVICES

Deployment System 50 kg

The Deployment System 50 kg (LSO-050) provides smooth, shockless deployment of space satellites weighing up to 50 kg from the upper stage of a launch vehicle.

Mass	4.0 kg
Max. satellite mass	50 kg
Separation time	≤ 1 s
Separation velocity	0.5 – 2.0 m/s
Angular separation velocity	≤ 2 °/s

price on request

[datasheet](#)



KOSMOLAB LAUNCH SERVICES

Deployment System 500 kg

The Deployment System 500 kg (LSO-500) provides smooth, shockless deployment of space satellites weighing up to 500 kg at the moment of separation from the upper stage of a launch

Mass	17 kg
Max. satellite mass	500 kg
Separation time	≤ 1 s
Separation velocity	0.5 – 2.0 m/s
Angular separation velocity	≤ 2 °/s

price on request

[datasheet](#)

KOSMOLAB LAUNCH SERVICES

Deployment System 500 kg

The Deployment System 500 kg is a non-pyrotechnic separation system designed for space satellites up to 500 kg, ensuring smooth and shockless deployment.

Mass	17 kg
Max. satellite mass	500 kg
Separation time	≤ 1 s
Separation velocity	0.5 – 2.0 m/s
Angular separation velocity	≤ 2 °/s

€12 000 000

[datasheet](#)

Maverick Space Systems

UNITED STATES · 2019 · 2 PRODUCTS

End-to-end small satellite launch integration and mission management for university, government, and commercial customers; San Luis Obispo, CA.



MAVERICK SPACE SYSTEMS

Maverick 4-Point Lightweight Separation System (M4P-L)

4-point separation system for ESPA class payloads up to 400 kg, with tunable spring rates, low shock and flight-proven heritage.

Type	4-point separation system
Payload class	ESPA class, up to 400 kg
Spring rates	Tunable, to minimize tipoff
Shock	Low shock
Status	Fully qualified, flight-proven heritage

price on request

MAVERICK SPACE SYSTEMS

Maverick 4-Point Medium-duty Separation System (M4P-M)

4-point separation system for ESPA class payloads up to 840 kg, with tunable spring rates, low shock and flight-proven heritage.

Type	4-point separation system
Payload class	ESPA class, up to 840 kg
Spring rates	Tunable, to minimize tipoff
Shock	Low shock
Status	Fully qualified, flight-proven heritage

price on request

Nimesis Technology

2008 · 7 PRODUCTS

Nimesis Technology designs and manufactures space actuators and mechanisms using shape memory alloys for satellites, launchers, and other space applications.



NIMESIS TECHNOLOGY

GRIPPER — SMA Hold-Down Release Actuator

Ultra-thin HDRA-type SMA actuator for gradual, shock-free release of threaded fasteners with up to 1500 N preload — TRL 9 with flight heritage on rover missions.

Technology	Shape memory alloy (SMA) HDRA actuator
TRL	9 (flight heritage)
Max preload	1500 N
Release	Gradual, shock-free (jaw-spreading mechanism)
Platforms	Satellites, launchers, rovers

price on request



NIMESIS TECHNOLOGY

HARPER — Ultra-Flat SMA Locking Actuator for Launchers

Ultra-flat HDRA-type shape memory alloy locking/unlocking actuator optimized for launcher stage and cap separation — compact jaw-release mechanism, TRL 5.

Technology	Shape memory alloy (SMA) HDRA-type actuator
TRL	5
Mechanism	Jaw separation release
Form factor	Ultra-flat
Applications	Launchers — stage separation, fairing/cap release

price on request



NIMESIS TECHNOLOGY

JACK — SMA Pin-Puller Actuator for Satellites and Rovers

Compact shape memory alloy pin-puller for satellite and rover deployment — 10 mm stroke, 30 N pulling force, operable from -120°C to +120°C, user-resettable. TRL 3.

Technology	Shape memory alloy (SMA) pin-puller
TRL	3
Stroke	10 mm
Pulling force	30 N
Shear force resistance	> 50 N

price on request



NIMESIS TECHNOLOGY

LARA — SMA Release Nut for Launch Vehicle Stage Separation

High-load SMA hold-and-release nut for mini/micro launcher stage and cap separation — handles up to 45 kN structural load, actuates in <100 ms, synchronized across multiple unit

Technology	Shape memory alloy (SMA) release nut
TRL	4
Maximum load	45 kN
Actuation time	< 100 ms
Multi-unit synchronization	< 30 ms dispersion

price on request



NIMESIS TECHNOLOGY

MURPHY — Re-entry Triggered Dismantling Fastener

SMA breakable fastener for spacecraft dismantling triggered by atmospheric re-entry heating — enables controlled structural disintegration at a pre-set altitude. TRL 7.

Technology	Shape memory alloy (SMA) fastener with re-entry thermal activation
TRL	7
Activation trigger	Atmospheric re-entry heating (no electrical command required)
Configurable	Activation temperature tunable to target re-entry altitude

Optional sensor	Integrated temperature sensor for re-entry data logging
-----------------	---

price on request



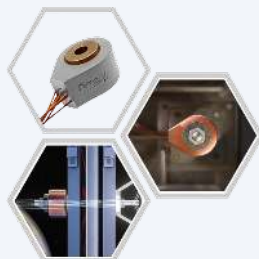
NIMESIS TECHNOLOGY

SATLATCH — Shock-Free Deployment and Latching Mechanism

High-performance SMA-based deployment and latching mechanism for space structures and payloads — operates from -120°C to +120°C with zero shock, TRL 8.

Technology	Shape memory alloy (SMA) deployment and latching mechanism
TRL	8
Operating temperature	-120°C to +120°C
Shock	Zero shock on deployment
Platforms	Satellites, rovers

price on request



NIMESIS TECHNOLOGY

TRIGGY — Shape Memory Alloy Breakable Fastener

Space-qualified shape memory alloy (SMA) breakable fastener for deploying, locking/unlocking, releasing, or dismantling spacecraft mechanisms — TRL 9 with flight heritage, available

Technology	Shape memory alloy (SMA) actuator
TRL	9 (flight heritage)
Applications	Locking/unlocking, deployment, release, dismantling
Platforms	Satellites, launchers, rovers, CubeSats
Size range	M2 to M12

price on request

PacSci EMC

UNITED STATES · 1975 · 1 PRODUCT

PacSci EMC designs and manufactures mission-critical pyrotechnic and energetic material devices and integrated systems for aerospace, defense, energy and space applications.



PACSCI EMC

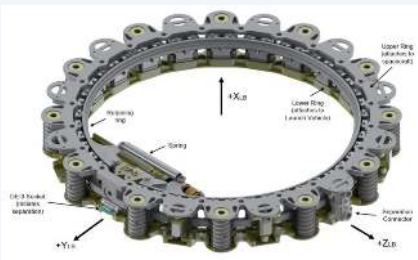
Satellite Payload Release & Sequencing System (PRSS)

The Satellite Payload Release & Sequencing System (PRSS) is a high-reliability, precision timing system for deploying hundreds of satellites with microsecond repeatability and

Flight qualified	74 One-Web Satellite Separation
Flight qualified (2)	space SRM Attitude Control/Delta V ignition system for Cubesats
Timing and simultaneity	<1 ms
Demonstrated events on one vehicle	Up to 384
Communication options	RS422 (example)

price on request

Manufacturer of the Lightband family of spacecraft separation systems and Canisterized Satellite Dispensers, acquired by Rocket Lab in December 2021 and now operating as PSC by Rocket Lab.



PLANETARY SYSTEMS CORP (ROCKET LAB)
Advanced Lightband (ALB)

Lightweight next-generation spacecraft separation system, one-third the weight and half the height of a typical clamp band.

Bolt circle diameters available	8.000", 11.732", 13.000", 15.000", 18.250", 19.848", 23.250", 24.000" (in)
Fastener counts by size	12 to 36 fasteners depending on diameter
Tip-off rate	Tunable to < 1 deg/sec
Separation delta-v	Tunable to < 1.0 in/sec
Integration time	< 30 minutes

[price on request](#) [datasheet](#)



PLANETARY SYSTEMS CORP (ROCKET LAB)
Mark II Motorized Lightband (MLB)

Motorized spacecraft/launch-vehicle separation ring with 100+ on-orbit separations and a 100% flight success record.

Bolt circle diameters available	8.000", 11.732", 13.000", 15.000", 18.250", 19.848", 23.250", 24.000", 31.600", 38.810" (in)
Fastener counts by size	12 to 60 fasteners depending on diameter
Max payload capacity	1,200 lb
Release mechanism	Dual-redundant electric release motor, non- pyrotechnic, pyro-pulse compatible
Material	Aluminum alloys

[price on request](#) [datasheet](#)

Redwire Corporation

Redwire is an integrated aerospace and defense company that designs and manufactures advanced technologies for space and defense, including optical imaging, sun sensors, solar arrays, and spacecraft p

REDWIRE CORPORATION
LoFF Low-Shock Separation System

Low-shock frangible separation system delivering significantly reduced pyrotechnic shock versus traditional bolt-cutters, with fully redundant initiation for launch vehicle stage s

Type	Low-shock frangible separation system
Shock output	Significantly reduced vs. traditional pyrotechnic systems
Redundancy	Fully redundant initiation
Application	Launch vehicle / spacecraft separation
Scalability	Multiple payload mass classes

[price on request](#)

US commercial space company; Dream Chaser® cargo spaceplane, LIFE™ inflatable habitat modules, in-space manufacturing, and defense space systems spun off from Sierra Nevada Corporation.



SIERRA SPACE	
Fast-Acting Shockless Separation Nut (FASSN) 30K	
The FASSN 30K is a space-qualified, low-shock separation nut designed for restraining and releasing preloaded structural joints in satellites and launch vehicles.	
Load rating	5K
Mechanism	Toggle bolt with mechanically redundant latch
Type	Reusable, low-shock
Dimensions	127 mm x 127 mm x 127 mm (Nut), 127-mm diameter x 178-mm tall (Bolt Retractor)
Mass	2.9 kg max. (Nut), 2.0 kg max. (Bolt Retractor (EVA feature))

[price on request](#) [datasheet](#)

Czech company (Brno) developing non-explosive, rapidly resettable hold-down and release actuators and initiation electronics for ground testing and qualification of spacecraft mechanisms.



SPACERACE S.R.O.	
ATLAS Hold Down and Release Actuator	
ATLAS is a rapidly resettable non-explosive release actuator designed for ground testing of space mechanisms, offering efficiency, ergonomics, and reliability.	
Mechanical interface	User customizable (to match NEA, Glenair, Eaton, Arquimea)
Release bolt thread	User customizable up to M8
Max. release preload	22 kN
Design limit load	33 kN



SPACERACE S.R.O.	
UNIKA HDRM Preload Device	
Compact, electronically-controlled 50 kN preload/tensioning device for Hold Down and Release Mechanisms, cleanroom-safe.	
Mechanical interface	User customized mating head
Release bolt thread	User customized up to M10
Generated preload	Up to 50 kN @ max 3 mm travel
Mass	2 kg (without harness and power source)

Mass	270 g (without harness and connector)
price on request	datasheet

Preload control	Handheld display, regulation by built-in load cell
price on request	datasheet

SpaceTech GmbH

GERMANY · 2004 · 1 PRODUCT

German space company designing, developing and producing solar arrays, laser-optical instruments and space electronics for satellite missions.



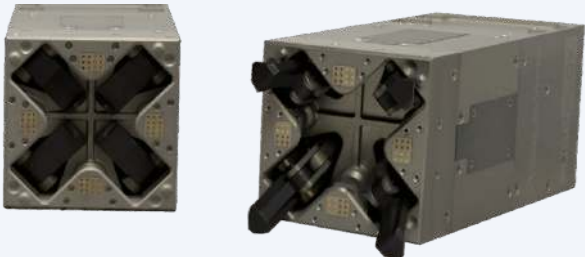
SPACETECH GMBH	
SpaceTech Pyro Drive Module (Actuator Drive Unit)	
Single-point-failure-free actuator drive electronics for triggering thermal knife and non-explosive actuator (NEA) release devices.	
Bus interface	Satellite primary power, 28 V nominal
Command interface	OBC command & control; NEA fire control including safe- and-arming functions
Implementation	Fully realized in hardware without soft- or firmware
Command concept	Safe command concept: pre-arm, arm, fire
Drive stage	Switched current source to drive the actuators

price on request

SpaceWorks Enterprises

UNITED STATES · 2000 · 1 PRODUCT

US aerospace engineering firm designing and building hypersonic reentry capsules, spacecraft docking hardware, in-space propulsion stages, and aerospace design software.



SPACEWORKS ENTERPRISES	
FuseBlox Small Satellite Docking Mechanism	
2U patented small satellite docking mechanism enabling structural coupling, power transfer, and data transfer between on-orbit spacecraft.	
Form factor	2U
TRL	6

Functions	Structural docking + power transfer + data transfer
Flight heritage	DARPA and AFRL sponsored development
price on request	

UARX Space

SPAIN · 2020 · 2 PRODUCTS

Spanish in-space logistics company; OSSIE rideshare spacecraft, RAMI deployer, and LOLA/LUCAS lunar platforms for non-standard orbit delivery.



UARX SPACE

Reliable and Advanced Mission Injector (RAMI)

RAMI is an advanced satellite deployment system for CubeSats, featuring multiple actuator redundancies and an optional interface for battery charging and communication.

Supported form factors	0.25U, 0.5U, 1U, 1.5U, 2U, 3U, 6U, 12U
Actuator redundancy	Multiple redundant actuation lines
Optional interface	Battery charging and communication with CubeSat
Mission orbits	LEO and interplanetary
Bay configuration options	1x 12U, 2x 6U, 1x 6U + 2x 3U, 4x 3U

price on request [datasheet](#)



UARX SPACE

SAU&RON

SAU&RON (Separation Adapter Unit & Ride-ON) is a family of low-shock separation ring systems for small satellites, qualified in 8", 15", and 24" ESPA-compatible interfaces.

Total mass	Starting from < 1.4 kg
Ride-on mass (flyaway)	< 0.35 kg
Rocket side ring interface	12 x 1/4 inch bolts, according to the 8-inches ESPA interface (or 12 x M6)
Payload side ring interface	12 x 1/4 inch bolts, according to the 8-inches ESPA interface (or 12 x M6)
Actuation response time	< 100 ms

price on request [datasheet](#)

Manufacturers in this sector

Arquimea

Spain · 2007 · 6 products

Spanish space technology company founded 2007 in Leganes, developing MEMS relay switches, SiC power devices, and miniaturized power conditioning units for satellite applications.

Beyond Gravity (ex-RUAG Space)

Switzerland · 1993 · 7 products

Swiss-Swedish space components manufacturer providing satellite structures, thermal control products, payload electronics, and antennas for commercial and institutional programs.

Clutch Space Systems

United Kingdom · 2018 · 1 product

Clutch Space Systems develops software-defined ground station solutions that dramatically reduce the cost and complexity of satellite communications, enabling ground operators to multiply ca

Dcubed

Germany · 5 products

German manufacturer of space deployables using patented Shape Memory and Origami technologies — release actuators, solar arrays, and antenna deployables for CubeSats and microsattellites.

Ensign-Bickford Aerospace & Defense (EBAD)

United States · 27 products

US manufacturer of non-explosive actuators (TiNi FrangiBolt, pin pullers, ejectors) and energetic hold-down and release systems.

Exolaunch

Germany · 2008 · 4 products

Berlin-based launch and deployment services company providing end-to-end rideshare missions, satellite integration, and proprietary separation hardware for small satellites.

Glavkosmos

Russia · 1985 · 5 products

Glavkosmos coordinates international human spaceflight projects, facilitates satellite launches, develops and supplies rocket components, and provides equipment for space crews.

ISISPACE Group

Netherlands · 2006 · 1 product

CubeSat deployers, antennas, EPS and small-satellite systems.

KOSMOLAB Launch Services

Russia · 2018 · 10 products

CubeSat & small-satellite rideshare brokerage — integration, paperwork, launch insurance on PSLV, Falcon 9 Transporter, Ariane 6 and Soyuz.

Maverick Space Systems

United States · 2019 · 2 products

End-to-end small satellite launch integration and mission management for university, government, and commercial customers; San Luis Obispo, CA.

Nimesis Technology

2008 · 7 products

Nimesis Technology designs and manufactures space actuators and mechanisms using shape memory alloys for satellites, launchers, and other space applications.

PacSci EMC

United States · 1975 · 1 product

PacSci EMC designs and manufactures mission-critical pyrotechnic and energetic material devices and integrated systems for aerospace, defense, energy and space applications.

Planetary Systems Corp (Rocket Lab)

United States · 1998 · 2 products

Manufacturer of the Lightband family of spacecraft separation systems and Canisterized Satellite Dispensers, acquired by Rocket Lab in December 2021 and now operating as PSC by Rocket Lab.

Redwire Corporation

United States · 2020 · 1 product

Redwire is an integrated aerospace and defense company that designs and manufactures advanced technologies for space and defense, including optical imaging, sun sensors, solar arrays, and sp

Sierra Space

United States · 2021 · 1 product

US commercial space company; Dream Chaser® cargo spaceplane, LIFE™ inflatable habitat modules, in-space manufacturing, and defense space systems spun off from Sierra Nevada Corporation.

SPACERACE s.r.o.

Czech Republic · 2022 · 2 products

Czech company (Brno) developing non-explosive, rapidly resettable hold-down and release actuators and initiation electronics for ground testing and qualification of spacecraft mechanisms.

SpaceTech GmbH

Germany · 2004 · 1 product

German space company designing, developing and producing solar arrays, laser-optical instruments and space electronics for satellite missions.

SpaceWorks Enterprises

United States · 2000 · 1 product

US aerospace engineering firm designing and building hypersonic reentry capsules, spacecraft docking hardware, in-space propulsion stages, and aerospace design software.

UARX Space

Spain · 2020 · 2 products

Spanish in-space logistics company; OSSIE rideshare spacecraft, RAMI deployer, and LOLA/LUCAS lunar platforms for non-standard orbit delivery.

Need a quote?

Open any product on newspacemarket.com and send one request — it goes straight to the manufacturer. Comparing several? Add them to a list and send a single bulk request.

<https://newspacemarket.com/catalogues/separation-systems/>

© 2026 NewSpace Market. Product data belongs to the respective manufacturers. This catalogue may be shared freely.