



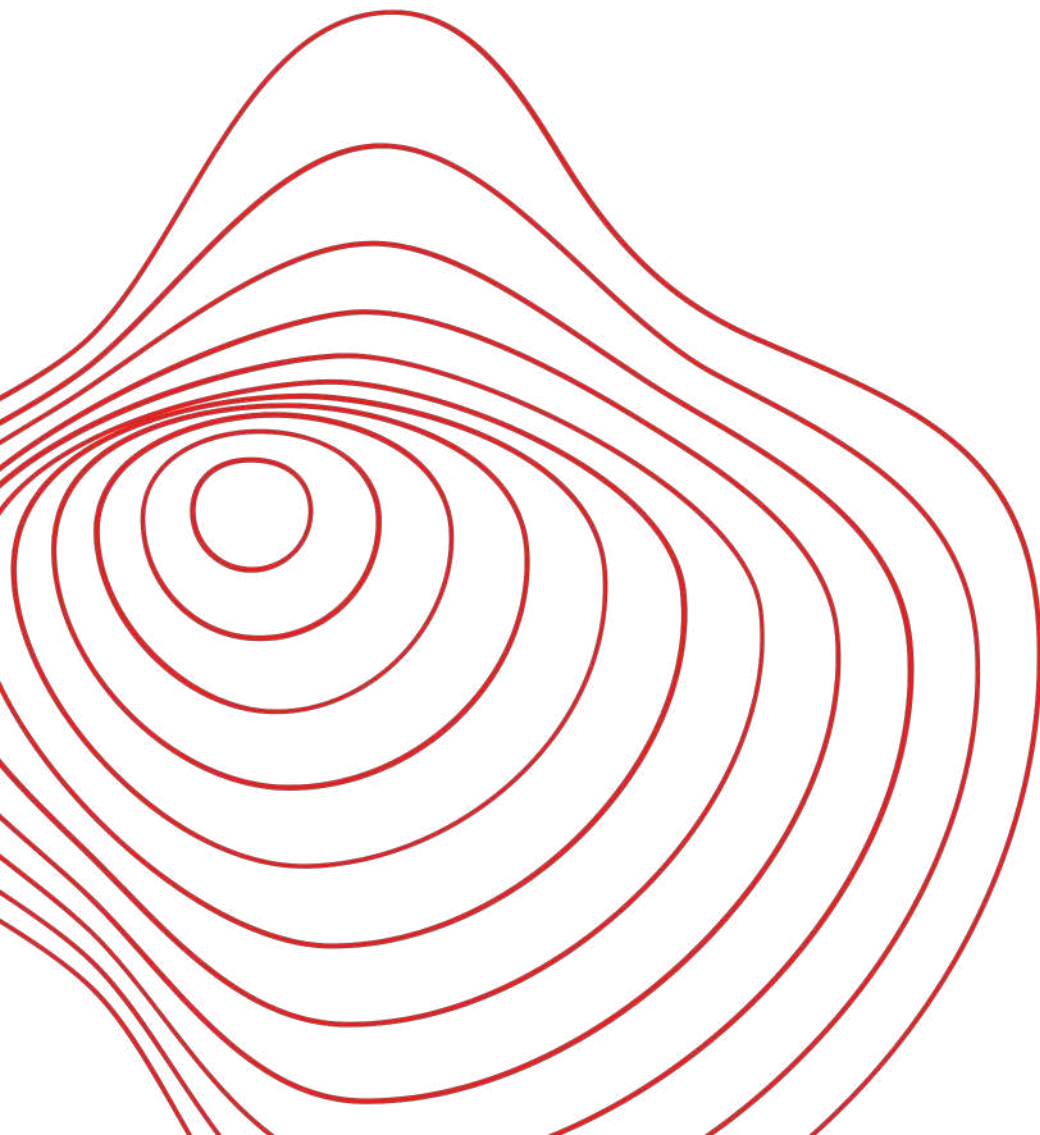
International Dunnage

Your Global Load Securement Partner

Company Presentation 2022

Contents

Overview



- 01 About us
- 02 Why Dunnage Bags?
- 03 Products
- 04 Services
- 05 Why Choose Us?
- 06 With and Without Dunnage Bags
- 07 Contact Us





About Us



Strong Experience

- International Dunnage (ID) is a global load securement company established in 2004 to manufacture and supply poly-woven dunnage airbags to the world market. Formed as a joint corporation of partners with over 35 years of extrusion and weaving and 25 years of dunnage bag manufacturing experience, in short time, International Dunnage has become a major player and a preferred brand in the industry.
- Over the years, with increasing demand for our products and services, we have added various other load protection and packaging materials to our product range to offer complete cargo protection solutions to our customers worldwide.
- Our integrated production encompasses product stages from raw material to finished goods. The total production area is 15,500 m² (166,800 sqft), and we have a total production capacity of 50,000 bags a day. Each bag is manufactured with special care; cutting, heat sealing, and sewing processes utilize the latest technology and equipment at state-of-the-art facilities of International Dunnage.



International Dunnage Highlights

- Manufacturer and Supplier of Dunnage Bags since 2004
- Strong Partnership with 35+ years of Experience in Extrusion and Weaving
- 25+ years of Experience in Dunnage Bag Manufacturing
- Member of AAR (Association of American Railroads)
- One-Stop Shopping for Complete Line of Dunnage Bags, Strapping, Rubber Mats and Desiccant Bags
- Multiple Manufacturing Centers and Warehouses for the Best Cost and Logistic Solutions
- Sales Offices around the World for Excellent Customer Service
- ISO 9001:2015 certified



Our Global Network

**International Dunnage
LLC**

Savannah, USA
Sales Office

**International Dunnage
A.S.**

Istanbul, Turkey
Sales Office

**International Dunnage
A.S.**

Kastamonu, Turkey
Manufacturing Site

**International Dunnage
Nordic**

Aalborg, Denmark
Sales Office

**VoidTech
SRL**

San Pedro De Macoris, Dominican Republic
Manufacturing Site



Warehouses

USA

Savannah, GA
Portland, OR
Lima, OH

Canada

Toronto

Turkey

Istanbul
Tosya, Kastamonu

Dominican Republic

San Pedro de Macoris

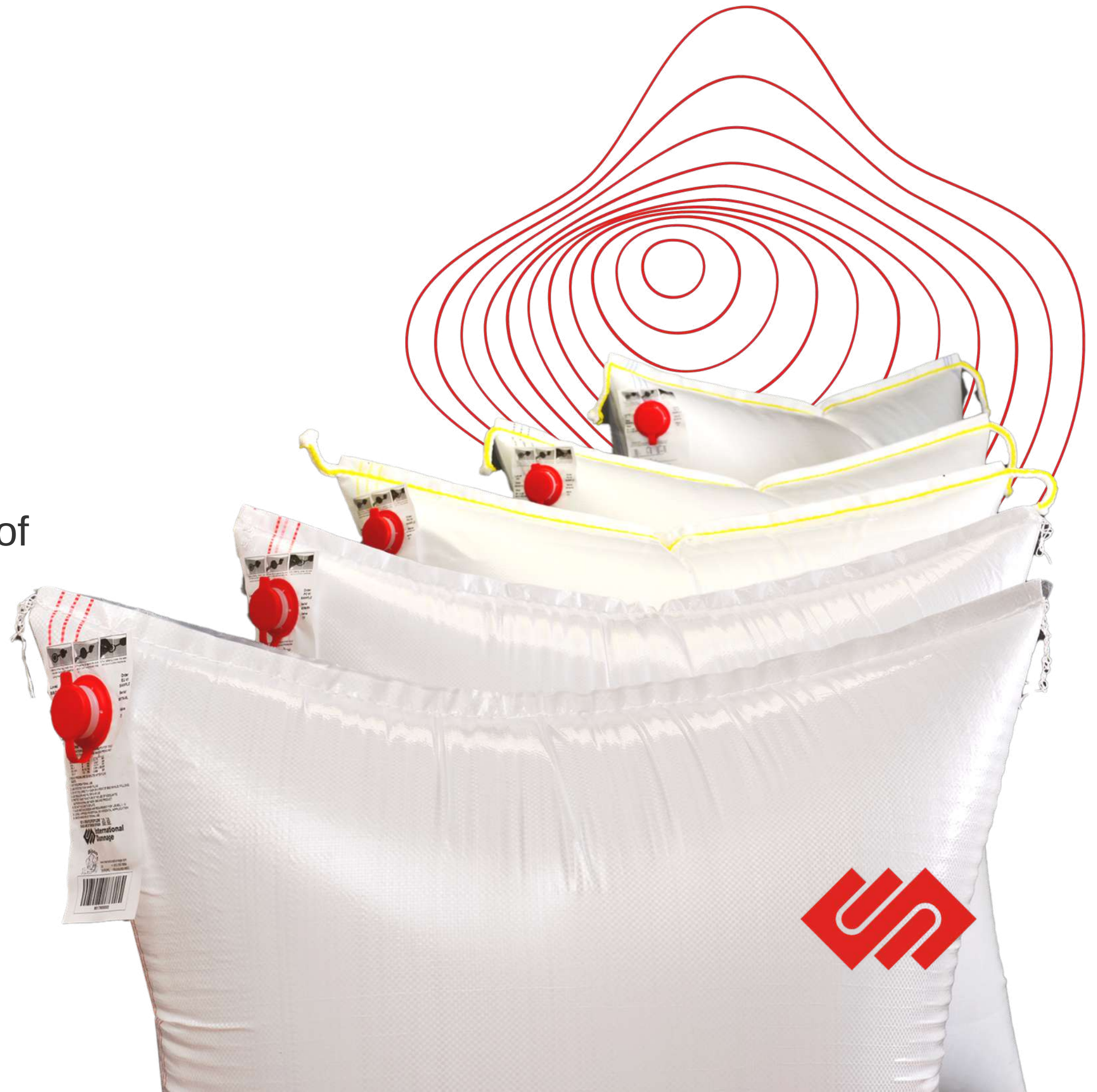
Denmark

Aalborg



About Dunnage Bags

Dunnage bags are load securement materials used for damage prevention of the products during transportation.



Dunnage Bags

- They are inflated between the loads to fill up the voids.
- They can be used in truck, sea container, rail wagon, ship hold (not suitable in air cargo).
- They are made of woven Polypropylene outer fabric, Polyethylene inner film and plastic inflation valve.
- They are used to prevent load shifting during transportation which may cause product damage or accidents.
- Potential users are trucking companies, food & beverage, consumer goods, paper, pulp, steel, furniture, chemicals, construction materials, household appliances and many more in various industries...



Why Better?

- Easy to install
- Versatile and practical
- No carpentry, construction or teardown time
- Improved load factor
- No stair-stepping
- Higher customer satisfaction
- Fast load securement
- Reduced line-haul or transportation cost
- Fills voids, braces loads and absorbs vibrations
- Allows fragile freight to be loaded anywhere in the trailer
- Re-usable, recyclable and eco-friendly
- Less expensive than other load securement products



Serving the World with a Bag of Options

5 Different Levels, 6 Different Widths, 15 Different Lengths, Over 200
Combinations of Flat Bags, 40 Square Bags, Twin Bags and Bladder Bags





Products

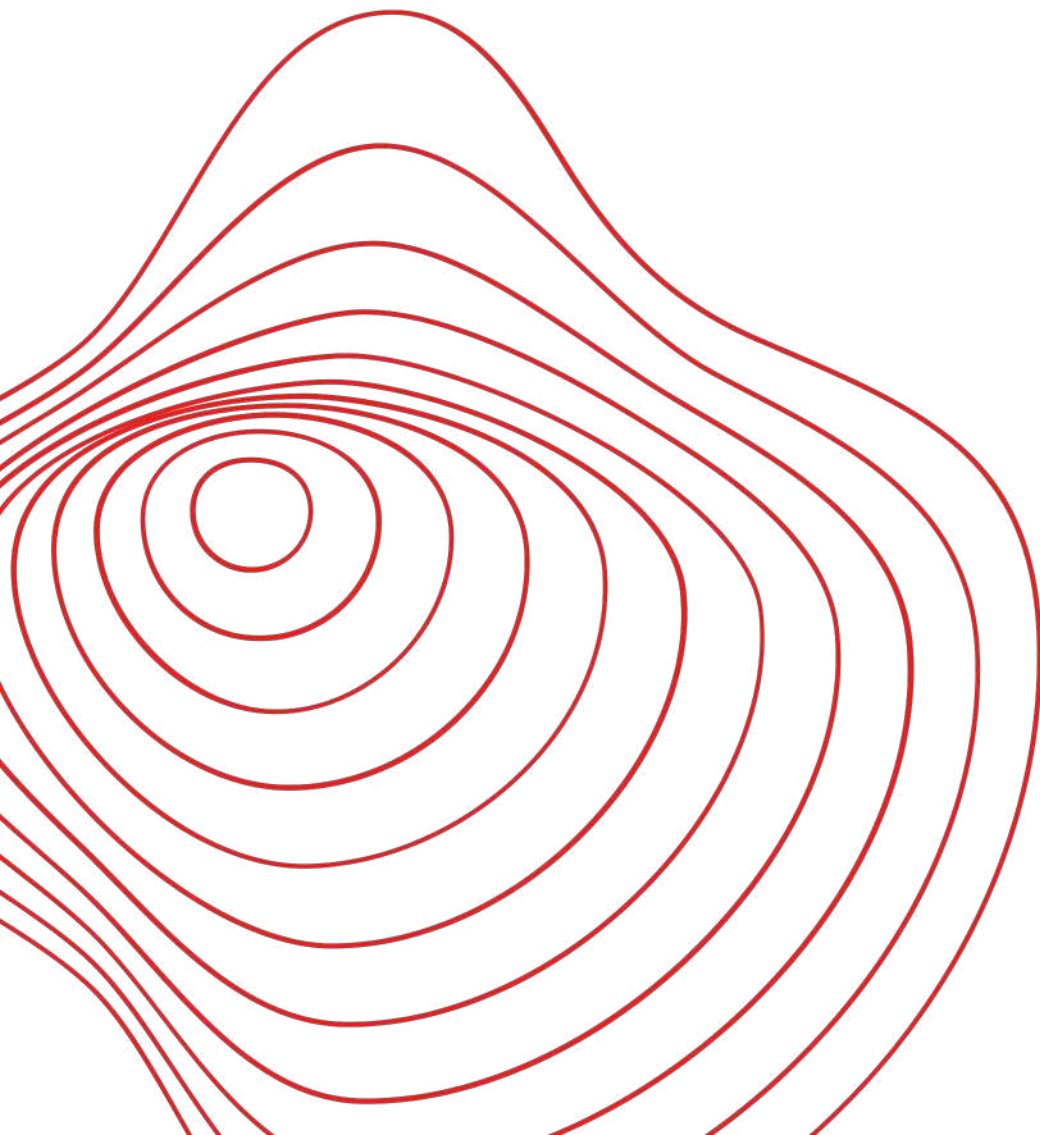


Products

- Dunnage Bags
- Inflator Tools
- Strapping
- Anti-slip Rubber Mats
- Desiccant Bags



Dunnage Bag Types



- 01 Level 0 (Bison) Dunnage Bags
- 02 Level 1 Dunnage Bags
- 03 Level 2 Dunnage Bags
- 04 Level 3-4 Dunnage Bags
- 05 Level 5 Dunnage Bags
- 06 Square Bags
- 07 Twin Bags
- 08 Bladder Bags



ID Dunnage Bags Level Chart

| LEVEL | USAGE AREA | AAR VERIFIED | Working Air Pressure | Min. Burst Pressure |
|-----------|-----------------------------------|--------------|----------------------|---------------------|
| Bison | Trucks and Sea Containers | X | 2-3 PSI | 5 PSI |
| Level 1 | Trucks and Containers | √ | 2-3 PSI | 8 PSI |
| Level 2 | Trucks, Containers and Vessels | √ | 6 PSI | 17 PSI |
| Level 3-4 | Rail Cars, Containers and Vessels | √ | 8 PSI | 30 PSI |
| Level 5 | Rail Cars and Vessels | √ | 10 PSI | 21 PSI |



ID Dunnage Bags Level Choice

Bison Level 0 They are designed for light duty mainly used in truck shipments.

International Dunnage Bags Levels 1 through 5 are all AAR-verified to fill voids up to 12 inch (30cm) wide.

Level 1 They are the most preferred types of our bags worldwide for their intermodal capability.

Level 2 They can be used in all shipping containers – either piggyback (container or trailer on the Railroad) or for ocean transport.

Level 3/4 They mainly used in rail cars with load weights from 75,000 LBS (34,000 kg) to 205,000 LBS (93,000 kg). They are used for almost all products, including paper rolls, plywood and bricks.

Level 5 They are used for especially heavy paper rolls and metal coils shipped in rail cars with load weights exceeding 205,000 LBS (93,000 kg) or for use in ship hulls.



Bags for Void Fill

Square Bag

Square bags were designed and created to serve as the primary function of bracing products with a void space greater than 12 inches (30 cm) wide which cannot be filled with other ID Dunnage Bags. They are reusable and AAR verified. However, they cannot be used for heavy-duty applications.



Twin Bag

Twin bags are designed to fill up large voids, between 15 – 39 inches (40-100 cm) wide. They are made by joining 2 separate dunnage bags together and have 2 inflation valves which are inflated simultaneously by a V-shape air hose.



Bladder Bag

Polyethylene Bladder bags are a cost friendly way to secure your lightweight cargos during the shipment process. While they are used for the same purpose as the PP dunnage bags, bladder bags are used for more delicate loads of less weight and smoother surfaces.



Inflator Tools



01

Mini Jetflow Venturi Air Tool



02

Milton Air Tool



03

Metal Pistol Air Tool

04

Cordless Air Blower



05

Electric Air Blower



Combo Valve (CV)

Air Tools

30 mm inner diameter for fast air flow

Spring loaded, can be used in all bag levels

Reusable, can be deflated

Has a protection cap to avoid dust

100% leak tested

Snap on tips, standard & heavy duty

Mini JetFlow gun with & without gauge

Pistol air gun with or without venturi

Milton tool with pencil or digital gauge

Battery-operated Cordless blower



Strapping



- 01 Composite Strapping
- 02 Hot-Melt
- 03 Woven
- 04 Buckles



Benefits

- Co-extruded high tenacity polyester yarns
- High quality polypropylene coating
- Light weight and portable
- High shock absorbing capacity
- Safe for users and receivers
- High resistance to weather conditions (-10 to 50 °C)
- Wide range of accessories such as tensioners, dispensers and lacing rod readily available
- High breaking strength
- Fast and easy to apply, handle and dispose
- High abrasion resistance
- Resistant to acid/alkali
- Resistant to corrosion
- Less expensive than other load securement products



Composite Strapping

Woven

They are primarily used for securing heavy and extra heavy loads in the bundling, metal and plastics industries as well as railroad load securement.

Composite Strapping is soft, pliable and will not rust, avoiding any casualties such as injuries or damages of valuable cargo. Our 1 1/4" composite straps are AAR verified!

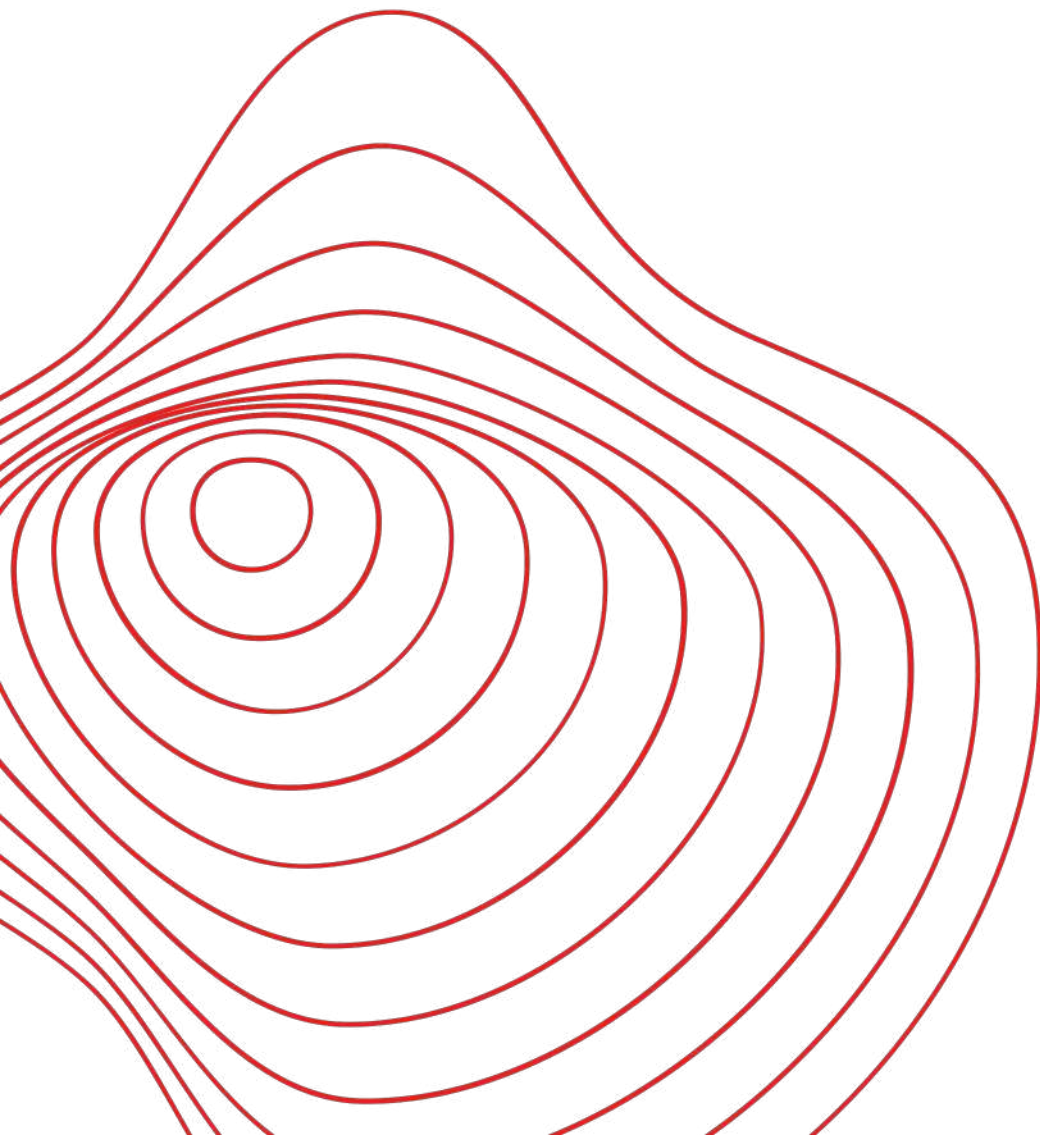
Hot Melt

They can be tensioned by hand or by simple tensioning tools. They are especially popular for manual strapping and bale pressing of non- abrasive products such as paper.



Anti-slip Rubber Mats

- 01 ANTI-SLIP RUBBER MAT T:2MM W:30" L:1000'
- 02 ANTI-SLIP RUBBER MAT T:2MM W:48" L:1000'
- 03 Recent Additions



30" Wide Roll

- Supplied in roll form on a 3" Hollow Core
- 2 Rolls per Pallet / 5000 SQ FT
- Roll Weight - 800 lbs Average / 1600 lbs per pallet
- Pallet Dimensions - 6ft x 4ft
- 24 Pallets per Truckload / 120.000 SQ FT

48" Wide Roll

- Supplied in roll form on a 3" Hollow Core
- 2 Rolls per Pallet / 8000 SQ FT
- Roll Weight -1280 lbs Average / 2580 lbs per pallet
- Pallet Dimensions - 6ft x 4ft
- 15 Pallets per Truckload / 120.000 SQ FT

New Additions

- New Roll Widths are being added as demand develops
- With the option/possibility to perforate at fixed length intervals (12" and up), most pre-cut sizes can be achieved
- Rubber Mat is reusable and is also 100% recyclable and must be disposed of as per State or Local Guidelines.



Desiccant Bags

- 01 ID Desiccant
- 02 ID Desiccant Plus
- 03 ID Silica Gel



ID Desiccant

- ID Desiccant bags have a moisture absorption capacity up to 100% of its weight. The bags can be produced between 0.5 kg to 2.0 kg absorption capacity based on your needs.

ID Desiccant Plus

- The new generation ID Desiccant Plus bags have a moisture absorption capacity up to 300% of its weight due to its special polymer formula. It works effectively by providing long term and delicate moisture protection of your cargo especially during overseas shipments.

ID Silica Gel

- ID Silica Gel packages offer a safe packaging environment thanks to its dehumidification capacity exceeding 35% of its weight, its performance in wide temperature and humidity range and its dust-tear resistant nonwoven package.



International
Dunnage



Services



Quality Guaranteed

Materials are inspected at our in-house test labs and controlled at every stage of the production.

- Valve crack test, thermal test and 100% leak test
- Film gauge control
- Heat seal tensile test
- Flat-wall leak test
Bison & L1: 10% , L2: 35% , L3&4: 40% , L5: 40%
- Bag burst test
- Traceability, identification barcode
- Fabric tensile and elongation tests
- Sewing yarn tensile strength test



Superior Service and A Dedicated Team to deliver Excellence

01

Service
Excellence

02

Long-term Relations
Customized Services

03

Our Customers,
Our Partners

04

Load Audits,
Technical Support

05

Online Training
Platform





Why Choose Us?



Why International Dunnage?

Best Quality with Competitive Pricing


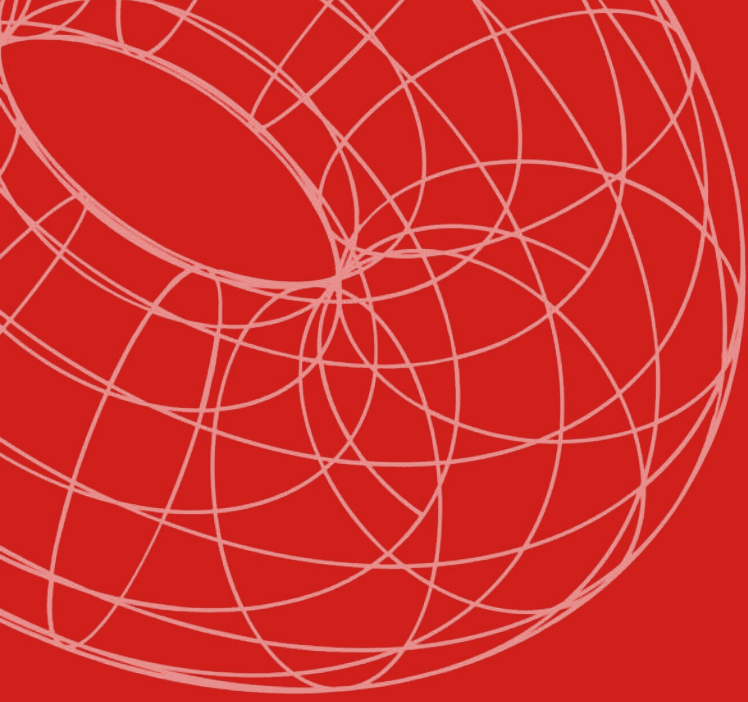
- Experienced and Committed
- Efficient and Reliable
- Committed to provide Best Quality
- Customer- and Eco-friendly



Strong Reputation

- Experienced Partners & Strong Executive Team
- Multiple Production Centers and Warehouses
- Integrated Production
- Wide Sales Network
- One-Stop Shopping with Wide Range of Products
- Genuine and Customized Customer Service
- On-site Technical Support
- Strong Emphasis on Compliance and Sustainability
- Low-Cost Manufacturing
- Extensive Testing
- Cost-Effective Solutions
- Fast Delivery & Short Lead Times





"Since we at Spliethoff Group obtained International Dunnage (ID) polywoven PP airbags, our sustainability has increased! They are light in weight, conform to the curvature of our various cargoes, and are able to withstand cold, heat and humidity. We like the fact they are re-useable/recyclable and environmentally friendly. ID has substantially contributed to our high standards in quality ocean carriage service for almost two decades and their products are highly recommended!"

Peter Herkemij, Spliethoff Transport B.V.



Strong Track Record Over the Last Two Decades



50+

Countries served
around the World



2 mn

Shipments
protected



30mn+

Tones of Cargo
Secured



US\$15bn+

Total value of
Cargo Secured



US\$75mn+

Claims
saved



30K+

Happy
Customers





Loads with and without Dunnage Bags

- Reduce Product Damage
- Reduce Cost
- Save Money
- Save Time
- Stay Eco-friendly



WITH



WITHOUT



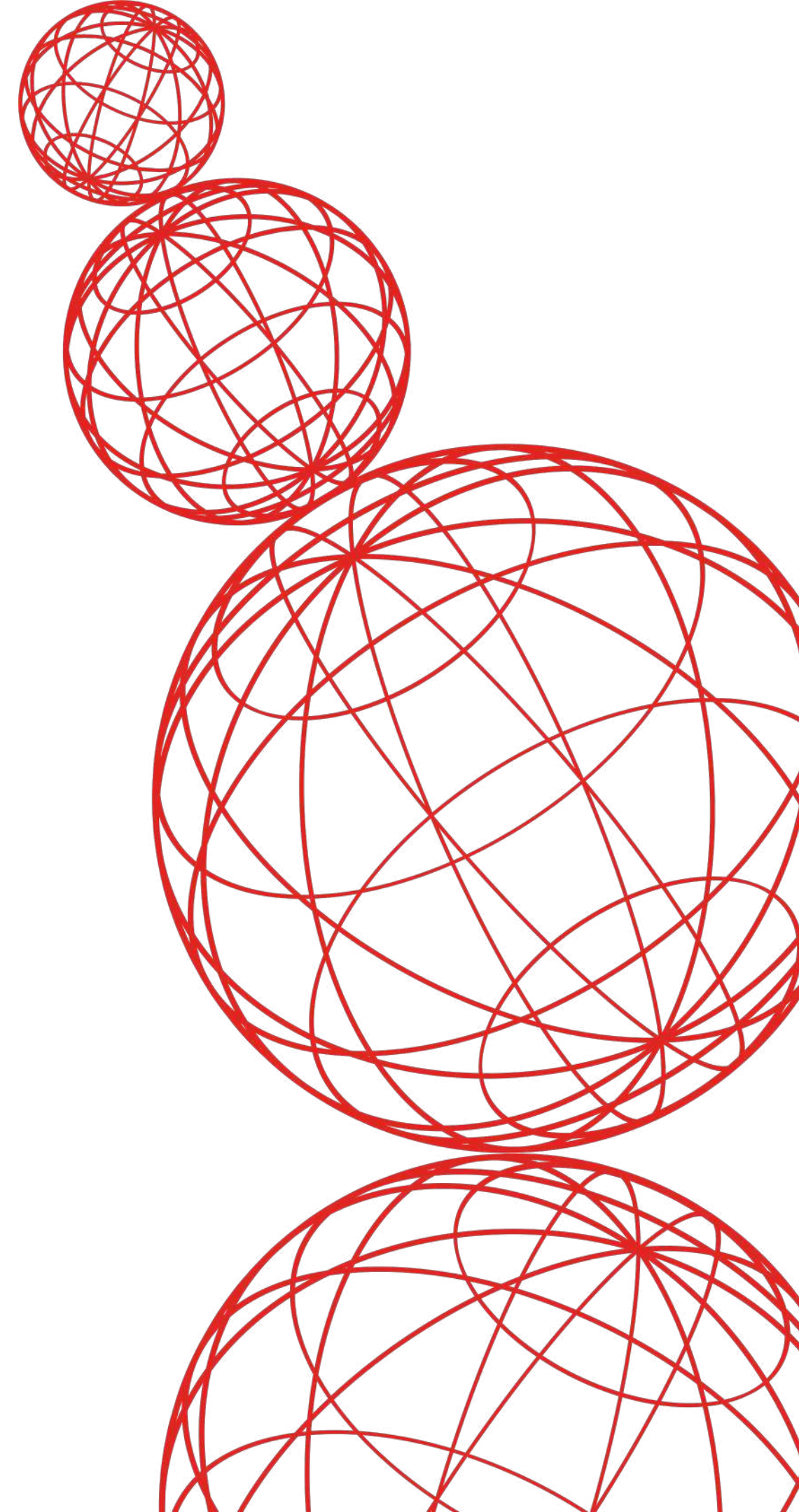
Contact

We're looking forward to working with you!
Please visit our web-site for further details,
FAQs, Tips & Advices.

www.internationaldunnage.com

info@internationaldunnage.com

     [/intdunnage](https://www.facebook.com/intdunnage)





**International
Dunnage**

Dunnage Air Bags



International Dunnage (ID) Bags are the convenient way to protect your goods from being damaged during transportation. They have an outstanding load-stabilizing capacity and resistance to load shifting. ID Bags can withstand tons of pressure. The durability of ID Bags lies in their well-designed structure. They are composed of an air-tight polyethylene inner layer with a reusable valve and a polywoven outer layer. They are made to fill voids up to 12" (30cm) wide. ID Bags come in 5 different levels: Bison, L1, L2, L3&4, and L5 with a wide range of dimensions.



**International
Dunnage**

Dunnage Air Bags

ID Level Chart

| LEVEL | USAGE AREA | AAR Verified | Working Air Pressure | Min. Burst Pressure |
|-----------|-----------------------------------|--------------|----------------------|---------------------|
| Bison | Trucks and Sea Containers | X | 2-3 PSI | 5 PSI |
| Level 1 | Trucks and Containers | J | 2-3 PSI | 8 PSI |
| Level 2 | Trucks, Containers and Vessels | J | 6 PSI | 17 PSI |
| Level 3-4 | Rail Cars, Containers and Vessels | J | 8 PSI | 30 PSI |
| Level 5 | Rail Cars and Vessels | J | 10 PSI | 21 PSI |



**International
Dunnage**

ID Size Chart

| SIZE (IN) | | SIZE (CM) | | LEVELS | | | | |
|-----------|--------|-----------|--------|--------|---|---|-----|---|
| FACE | LENGTH | FACE | LENGTH | BISON | 1 | 2 | 3&4 | 5 |
| 23,5 | 23,5 | 60 | 60 | x | x | | | |
| 23,5 | 30 | 60 | 76 | x | x | | | |
| 23,5 | 36 | 60 | 91 | x | x | | | |
| 23,5 | 43 | 60 | 110 | x | x | | | |
| 23,5 | 48 | 60 | 122 | x | x | | | |
| 23,5 | 60 | 60 | 152 | x | x | | | |
| 23,5 | 66 | 60 | 167 | x | x | | | |
| 23,5 | 72 | 60 | 183 | x | x | | | |
| 23,5 | 84 | 60 | 213 | x | x | | | |
| 23,5 | 96 | 60 | 244 | x | x | | | |
| 23,5 | 102 | 60 | 259 | x | x | | | |
| 23,5 | 108 | 60 | 274 | x | x | | | |
| 23,5 | 115 | 60 | 292 | x | x | | | |
| 23,5 | 120 | 60 | 305 | x | x | | | |
| 30 | 30 | 76 | 76 | | | x | x | x |
| 30 | 36 | 76 | 91 | | | x | x | x |
| 30 | 48 | 76 | 122 | | | x | x | x |
| 30 | 60 | 76 | 152 | | | x | x | x |
| 30 | 72 | 76 | 183 | | | x | x | x |
| 30 | 84 | 76 | 213 | | | x | x | x |
| 30 | 96 | 76 | 244 | | | x | x | x |
| 30 | 102 | 76 | 259 | | | x | x | x |
| 30 | 108 | 76 | 274 | | | x | x | x |
| 30 | 120 | 76 | 305 | | | x | x | x |
| 36 | 36 | 91 | 91 | x | x | x | x | x |
| 36 | 48 | 91 | 122 | x | x | x | x | x |
| 36 | 60 | 91 | 152 | x | x | x | x | x |
| 36 | 66 | 91 | 168 | x | x | x | x | x |
| 36 | 72 | 91 | 183 | x | x | x | x | x |
| 36 | 84 | 91 | 213 | x | x | x | x | x |
| 36 | 86 | 91 | 220 | x | x | x | x | x |
| 36 | 96 | 91 | 244 | x | x | x | x | x |
| 36 | 102 | 91 | 259 | x | x | x | x | x |
| 36 | 108 | 91 | 274 | x | x | x | x | x |
| 36 | 120 | 91 | 305 | x | x | x | x | x |
| 36 | 132 | 91 | 335 | x | x | x | x | x |
| 46,5 | 48 | 118 | 122 | x | x | x | x | x |
| 46,5 | 60 | 118 | 152 | x | x | x | x | x |
| 46,5 | 72 | 118 | 183 | x | x | x | x | x |
| 46,5 | 84 | 118 | 213 | x | x | x | x | x |
| 46,5 | 86 | 118 | 220 | x | x | x | x | x |
| 46,5 | 90 | 118 | 228 | x | x | x | x | x |
| 46,5 | 91 | 118 | 230 | x | x | x | x | x |
| 46,5 | 96 | 118 | 244 | x | x | x | x | x |
| 46,5 | 102 | 118 | 259 | x | x | x | x | x |
| 46,5 | 108 | 118 | 274 | x | x | x | x | x |
| 46,5 | 120 | 118 | 305 | x | x | x | x | x |
| 46,5 | 132 | 118 | 335 | x | x | x | x | x |
| 57,5 | 60 | 146 | 152 | x | x | x | x | x |
| 57,5 | 72 | 146 | 183 | x | x | x | x | x |
| 57,5 | 84 | 146 | 213 | x | x | x | x | x |
| 57,5 | 96 | 146 | 244 | x | x | x | x | x |
| 57,5 | 102 | 146 | 259 | x | x | x | x | x |
| 57,5 | 108 | 146 | 274 | x | x | x | x | x |
| 57,5 | 120 | 146 | 305 | x | x | x | x | x |
| 57,5 | 132 | 146 | 335 | x | x | x | x | x |



**International
Dunnage**

Square Bag

ID square bag was designed and created to serve the primary function of bracing products with a void space greater than 12" (30cm) wide, which cannot be filled with standard dunnage air bags. They are also reusable like the rest of ID air bags.



- Braces loads without the need for additional dunnage material
- Recommended for voids between 12" - 33.5" (30-85cm) wide
- Reusable
- Moisture resistant, with an extremely durable outer shell
- 100% Recyclable
- AAR Verified

ID Square Bag Size Chart

| SIZE (IN) | | | SIZE (CM) | | |
|-----------|------|--------|-----------|------|--------|
| GUSSET | FACE | LENGTH | GUSSET | FACE | LENGTH |
| 17 | 24 | 30 | 43 | 61 | 76 |
| 17 | 24 | 36 | 43 | 61 | 91 |
| 17 | 24 | 39 | 43 | 61 | 100 |
| 17 | 24 | 60 | 43 | 61 | 152 |
| 17 | 24 | 79 | 43 | 61 | 200 |
| 17 | 24 | 84 | 43 | 61 | 213 |
| 17 | 24 | 96 | 43 | 61 | 244 |
| 17 | 36 | 48 | 43 | 91 | 122 |
| 17 | 36 | 60 | 43 | 91 | 152 |
| 17 | 36 | 84 | 43 | 91 | 213 |
| 17 | 36 | 87 | 43 | 91 | 220 |
| 17 | 36 | 96 | 43 | 91 | 244 |
| 17 | 36 | 180 | 43 | 91 | 457 |
| 17 | 48 | 48 | 43 | 122 | 122 |
| 17 | 48 | 60 | 43 | 122 | 152 |
| 17 | 48 | 96 | 43 | 122 | 244 |
| 17 | 55 | 100 | 43 | 140 | 254 |
| 24 | 36 | 31 | 61 | 91 | 80 |
| 24 | 36 | 39 | 61 | 91 | 100 |
| 24 | 36 | 48 | 61 | 91 | 122 |
| 24 | 36 | 60 | 61 | 91 | 152 |
| 24 | 36 | 84 | 61 | 91 | 213 |
| 24 | 36 | 96 | 61 | 91 | 244 |
| 24 | 48 | 48 | 61 | 122 | 122 |
| 24 | 48 | 60 | 61 | 122 | 152 |
| 24 | 48 | 72 | 61 | 122 | 183 |
| 24 | 48 | 96 | 61 | 122 | 244 |

For custom sizes, please contact ID Sales Department.



**International
Dunnage**

Twin Bag

Twin Bags are designed by International Dunnage to fill voids up to 40" (100cm) wide. They are made by joining two separate bags together and has two inflation valves which are inflated simultaneously by a V-shape air hose.



- Braces loads without the need for additional dunnage material
- Recommended for voids between 12" - 40" (30-100cm) wide
- Reusable
- Moisture resistant, with an extremely durable outer shell
- 100% Recyclable

ID Twin Bag Size Chart

| SIZE (IN) | | SIZE (CM) | |
|-----------|--------|-----------|--------|
| WIDTH | LENGTH | WIDTH | LENGTH |
| 46,5 | 48 | 118 | 122 |
| 46,5 | 60 | 118 | 152 |
| 46,5 | 72 | 118 | 183 |
| 46,5 | 86 | 118 | 220 |
| 57,5 | 48 | 146 | 122 |
| 57,5 | 60 | 146 | 152 |
| 57,5 | 72 | 146 | 183 |
| 57,5 | 86 | 146 | 220 |

For custom sizes, please contact ID Sales Department.

*ID Twin Bags are not AAR Verified.



**International
Dunnage**

International Dunnage Air Bag Advantages

Avoids Accidents

Load shifting is one of the main causes of accidents during transportation. You can minimize the risks by bracing the loads in place with dunnage bags. International Dunnage (ID) Bags protect your goods from first point of packing onto their destination, thus ensuring customer satisfaction.



Cost Saving

Dunnage bags are inexpensive compared to other load securing techniques. In addition, ID bags are reusable (for non-rail applications in USA).



Easy To Use

ID bags can easily be inflated within few seconds by using compressed air and an inflator tool. No special skills are required, simply follow instructions printed on the bag labels. Minimum physical effort is required. They can easily be deflated by opening the valve, without needing to puncture.



Safe

ID bags are produced under ISO 9001 standards and verified by the Association of American Railroads (AAR). Strict quality controls are carried out at every stage of production.



Ligthweight & Water Proof

ID bags are easy to handle, light in weight, takes up less space and are resistant to moisture and water ingress.



Takes Shape of Odd Canfigurations

ID Bags are flexible, allowing you the advantage of filling every shape and odd spaces without damaging your goods.



Environmentally Friendly

ID bags are produced from 100% recyclable virgin materials.



Liability

ID bags are covered by a liability insurance against product damages and third party injuries.



Innovation

ID R&D Team employs a continuous improvement program and is dedicated to develop new product designs for the need of its customers.





**International
Dunnage**

Quality

Quality is our highest priority and is carried out at every stage of production. ID bags are produced under the strict ISO 9001 standards, tested and verified by AAR (Association of American Railroads). In early stages, tapes and fabrics are tested for their tensile strengths. All valves are tested before use. Flat-wall leakage test is applied to finished bags, determined by levels. Each bag is tagged with a barcode label to ensure the traceability during and after production. ID is fully registered to GS1 system, as well as IPS barcoding system, which can be easily integrated with ERP and MRP softwares.

Certifications

CERTIFICATE



**for the management system
according to ISO 9001:2015**

The proof of the conforming application with the regulation was furnished and in accordance with certification procedure it is certified for the company



**International
Dunnage**

**INTERNATIONAL DUNNAGE
SAN. VE TİC. A.Ş**
Head Office: Barbaros Mh. Çiğdem Sok.
MY Office Apt. No: 1 Kat: 6 Daire: 28-29
Ataşehir - İstanbul / Turkey
with the branch (see enclosure)

Scope

**Manufacture of dunnage bag, sales of
dunnage bag and load securement materials**

Certificate Registration No.: TIC 15 100 150429

Valid until: 2021-11-19
Valid from: 2018-11-20

Audit Report No.: 3330 2197 D0

This certification was conducted in accordance with the TIC auditing and certification procedures and is subject to regular surveillance audits.

Michael
TUV Thüringen e.V.
Certification body for
systems and personnel



Jena, 2018-10-23



The issued certificates can be downloaded at www.tic-cert.com
Dokumentations- und Zertifikatsmanagement-System (DZMS) v. 1.0.0.0 (2018-10-23) - 1.0.0.0 (2018-10-23) - 1.0.0.0 (2018-10-23)



**ASSOCIATION
OF AMERICAN
RAILROADS**

Product Performance Profile for Pneumatic Dunnage Product Verification List

The pneumatic dunnage products (air bags) listed below have completed testing and have been verified for a period of three years from the date indicated. Pneumatic dunnage that has successfully completed testing, as noted in the Product Performance Profile for Pneumatic Dunnage, will require Association of American Railroads re-verification every three years. Any change to a verified bags' material composition or method of manufacture, including valve type or location, requires re-verification. The Product Performance Profile for Pneumatic Dunnage can be found in AAR General Information Bulletin No. 9, available at www.aar.com

Beginning in 2014, suppliers, vendors and distributors have the opportunity to have pneumatic dunnage products that have been verified by a manufacturer listed in this Product Verification List under a separate trade or brand name. To qualify, a supplier must provide written confirmation from the manufacturer identifying their company as an authorized representative of that manufacturer's products, and that the product is the same in both material and method of manufacture as the product verified. Contact DPLS@aar.com for details.

| | Level of Verification | General Description |
|-----------------------|-----------------------|---|
| International Dunnage | Level 1 | Polyethylene/Polypropylene with Safe Lock Valve |
| International Dunnage | Level 2 | Polyethylene/Polypropylene with Safe Lock Valve |
| International Dunnage | Level 3&4 | Polyethylene/Polypropylene with Safe Lock Valve |
| International Dunnage | Level 5 | Polyethylene/Polypropylene with Safe Lock Valve |



**International
Dunnage**

INFLATOR TOOLS

Cordless Blower



ID Cordless Blower is a rechargeable, portable inflator tool which comes together with special connection to inflate International Dunnage combo valves. It is simple to assemble the parts and easy to use.

Technical Data

| | |
|------------------------------|--|
| Voltage | : 18V Europe Plug |
| Rated input power | : 400W |
| Charge time | : 3-5 Hours |
| Power | : Li-ion, 1*3000mAh |
| No-load speed | : 0-1800rpm |
| Maximum air volume | : 2.6 m3 / min |
| Operating time per battery | : 30 min |
| Total battery operating time | : 30 min x 2 (pcs.) |
| Max. operating pressure | : 2 PSI |
| Accessories | : 2 pc 3000 mah battery & 1 pc charger |

Monster Air Gun



Optional aluminum tip

ID Monster Air Gun; the fastest air tool in the industry.
It has many advantages due to its advanced design.

Technical Data

- Shorter filling time increases productivity
- Ergonomic grip design
- Robust plastic body
- Swivel hose
- Optional digital pressure gauge

ID Inflators Filling Comparison Chart

| Test Pressure (PSI/BAR) | 2/0,14 | 3/ 0,21 | 4/ 0,28 | 8/ 0,55 | 10/ 0,69 |
|---------------------------|--------|---------|---------|---------|----------|
| Monster Gun | 19 sec | 20 sec | 22 sec | 27 sec | 30 sec |
| Cylinder Air Gun | 21 sec | 22 sec | 23 sec | 28 sec | 31 sec |
| Pistol Air Gun | 48 sec | 51 sec | 53 sec | 67 sec | 74 sec |
| Pistol Air Gun w/ Venturi | 23 sec | 27 sec | 42 sec | NA | NA |
| Mini JetFlow w/Gauge | 37 sec | 41 sec | 47 sec | 64 sec | 75 sec |
| Mini JetFlow | 30 sec | NA | NA | NA | NA |

* Test bag size 36 x 72 in (91 x 183cm)

Cylinder Air Gun

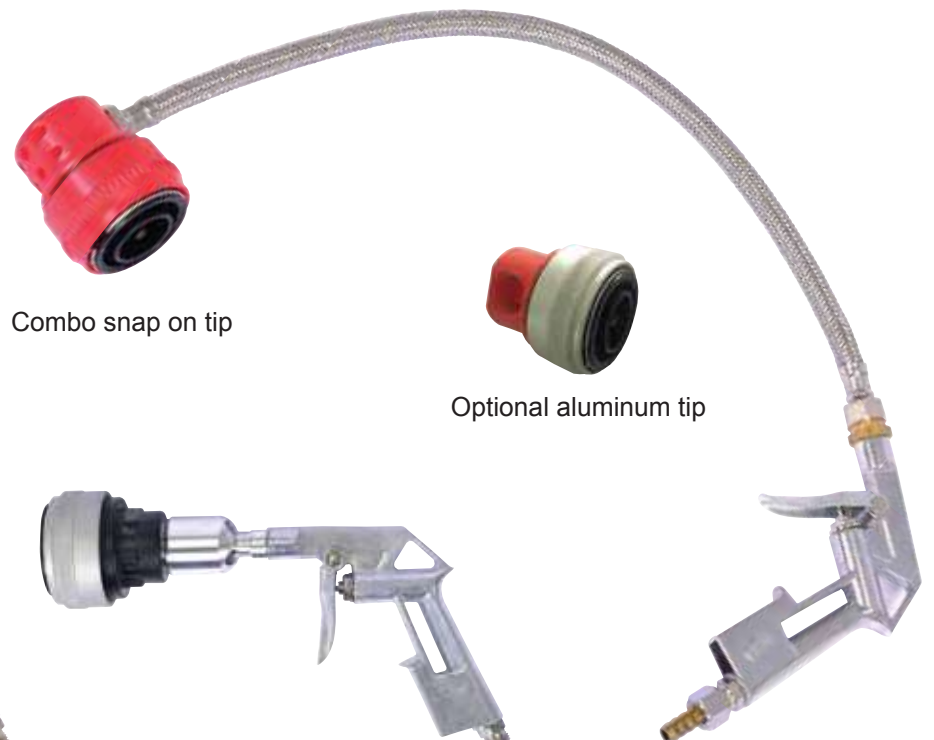


Optional aluminum tip

ID Cylinder Air Gun; Strong, Fast and Reliable. It is made of aluminum body and can withstand tough conditions.

- Inflates much faster than most air guns
- Long lasting
- Optional pencil pressure gauge is available

Pistol Air Gun



Combo snap on tip

Optional aluminum tip

Venturi + Combo adapter
Version

Venturi + Combo snap on tip
Version

Standard Version

Pistol Air Guns are the most commonly used inflator tools in the industry.

Lightweight

Durable aluminum body

Cost effective

Venturi inflator has max. 4 psi (0.28 bar) air pressure

Mini JetFlow Air Gun



ID Mini JetFlow Air Gun has many advantages compared to other fast fill guns. The weak points of all fast fill guns have been evaluated and improved in this unique design. Mini JetFlow Air Gun will make the inflating job safe and easy.

Fits into narrow voids - shorter in length

More robust body - supported pistol design

Longer life time - made with high performance materials

User friendly - ergonomic trigger design

Better grip - anti-slip handle

Trigger Lock

Light Weight

Options

Analogue pressure gauge + closure flap

Snap on tip

* For higher pressure control, analogue gauge, closure flap and snap on tip options are recommended to use.



**International
Dunnage**

Desiccants

International Dunnage offers a wide range of desiccant solutions for containers, trucks (short-haul) and in-the-box applications. Desiccant bags come in three major forms: **ID Desiccant**, **ID Desiccant Plus** and **ID Silica Gel**.



ID Desiccant

ID Desiccant bags have a moisture absorption capacity up to 100% of its weight. The bags can be produced between 0.5 kg to 2.0 kg absorption capacity based on your needs. With a specially designed hook system that prevents unhooking during transportation, ID Desiccants provide a reliable, dry and healthy shipping environment for your products. It provides a strong sense of trust to your customers by keeping your products dry and by providing a healthy shipping environment.

ID Desiccant Plus

The new generation **ID Desiccant Plus** bags have a moisture absorption capacity up to 300% of its weight due to its special polymer formula. It works effectively by providing long term and delicate moisture protection of your cargo especially during overseas shipments. **ID Desiccant Plus**'s unique formulation prevents condensation in the container and keeps your product within required moisture levels. **ID Desiccant Plus** is available in different sizes, 190 gr - 380 gr - 760 gr with side or rear suspension. Thanks to its smaller size, this product provides advantages in transportation, in stocking and in application areas.

For custom sizes, please contact ID Sales Department.



**International
Dunnage**

Desiccants

ID Silica Gel

Sil-Pack silica gel packages offer a safe packaging environment thanks to its dehumidification capacity exceeding 35% of its weight, its performance in wide temperature and humidity range and its dust-tear resistant nonwoven package.

In our desiccant silicagel packages, white or optional type silicagels that provide color change when moisture is taken can be used. ID Silica Gel can be produced in different sizes and contents from 100 gr to 500 gr. Our products are produced in accordance with MIL-D-3464E and DIN 55473 standards.



We can offer different compositions based on your need. For custom printing and other inquiries please contact our sales team via info@internationaldunnage.com

Placing ID Anti-Slip Rubber Mats underneath the loads considerably reduces the cost of loading safety. These mats are still used as the standard friction-increasing surface material by many transport companies and shipping agents today.



Continuous acceleration and braking during transportation combined with lateral centrifugal force and/or vibration generates almost as much force as the actual weight of the load. As a result, the load can shift and can cause severe damage, or even worse, can cause possible accidents with severe injuries.

The use of anti-slip rubber mats will eliminate these potential hazards, provide labor safety, and protect your company from financial damage.

International Dunnage offers anti-slip mats with various specifications.



**International
Dunnage**

Straps

ID Straps are manufactured from co-extruded high tenacity polyester yarns. International Dunnage provides three major forms of straps: **Composite Strap**, **Hot Melt Strap** and **Woven Strap**.



ID Straps which eliminates the sharp edges cutting the cargo, is a stiff but flexible product that can be easily used on various packaging applications. It is highly resistant to severe weather conditions and unlike PET and Steel strapping, it does not break instantly from a single point during impact.

Composite Strap

- Minimum 66% Joint Efficiency
- Optimal Protection Against Sharp Edges
- High Weather Resistance
- No Rust
- Easy Manual Application
- Similar Strength as Steel Straps

For custom sizes, please contact ID Sales Department.



**International
Dunnage**

Straps

Hot Melt Strap

- Soft and flexible, ideally suited for all-round strapping
- No damage and soiling of the packaged goods and cardboard
- Soft material, without sharp edges
- Processing with manual and pneumatic devices
- No additional edge protection required
- Customer-specific printing is possible

Woven Strap

- Cross-woven polyester filaments
- Cold Glue Coating makes the strap stiffer
- Cold Glue Coating enables high system strength with phosphated buckles