



TACTICAL PARACHUTE DELIVERY SYSTEMS, Inc.

**HEAVY LOAD TACTICAL
(HLT)
BROCHURE**

2018

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HEAVY LOAD TACTICAL *by* Tactical Parachute Delivery Systems

HEAVY LOAD TACTICAL

Airborne Harness/Container System

The **Heavy Load Tactical** is a complete assembly of military equipment manufactured to the highest standards using the best **Military Specification** materials available in today's market. The **HLT** is manufactured in the United States in a facility that is Federal Aviation Administration (**FAA**) certified for manufacturing parachute equipment.

The **Heavy Load Tactical** is designed for HALO-HAHO operations and training with a single operator carrying full combat equipment and bundles or two individuals with or without the use of a drogue pilot chute.

The **Heavy Load Tactical** consists of a **Main Container** with a choice of Zero Porosity main parachutes and a **Reserve Container** with a choice of F-111 reserve parachutes.

The **Heavy Load Tactical** may be set up for **Static Line** or **Freefall** with or without a drogue pilot chute.

It is a designed to accommodate any size jumper with any aircraft commonly used in military operations.

Main Container Capabilities and Features:

Physical Specifications:

Materials:

Container- 1000 Denier Nylon Cordura

Deployment Bag- 1000 Denier Nylon Cordura

Webbing:

Main Lift Webbing-

1 23/32" (4.3 cm.) wide Type 7 Mil-W-4088

Tensile Strength **6000 lbs. / 2721 kg.**

Main Risers-

1 23/32" (4.3 cm.) wide Type 7 Mil-W-4088

Tensile Strength **6000 lbs. / 2721 kg.**

Reserve Risers-

1 23/32" (4.3 cm.) wide Type 13 Mil-W-4088

Tensile Strength **7000 lbs. / 3175kg.**

Leg Straps-

1 23/32" (4.3 cm.) wide Type 7 Mil-W-4088

Tensile Strength **6000 lbs. / 2721 kg.**

Chest Strap-

1 23/32" (4.3 cm.) wide Type 8 Mil-W-4088

Tensile Strength **4000 lbs. / 1814 kg.**

Laterals-

1 23/32" (4.3 cm.) wide Type 8 Mil-W-4088

Tensile Strength **4000 lbs. / 1814 kg.**



Materials cond. :**Hardware:****Main Canopy Release System-**

3-Ring Release System

Tensile Strength **5000 lbs. / 2270 kg.****Main Lift Webbing Adjusters-**

Quick Fit Ring w/Friction Lock #555-2

Tensile Strength **2500 lbs. / 1130 kg.****Lateral Adjusters-**

Locking Adapter PS 70124-1

Tensile Strength **2500 lbs. / 1130 kg.****Chest Strap Hardware-**B-12 PS 22044-1 / PS 22017 Quick Ejector or PS22040
with "V" Ring Quick Fit Bar PS 27765*Tensile Strength* **2500 lbs. / 1130 kg.***Tensile Strength* **2500 lbs. / 1130 kg.****Leg Strap Hardware-**B-12 PS 22044-1 / PS 22017 Quick Ejector or PS22040
with "V" Ring Quick Fit Bar PS 27765*Tensile Strength* **2500 lbs. / 1130 kg.***Tensile Strength* **2500 lbs. / 1130 kg.****Top Connector Point-**

"D" Ring PS 22046-1

Tensile Strength **5000 lbs. / 2270 kg.****Lower Connector Point-**

Accessory Ring

Tensile Strength **500 lbs. / 230 kg.****Static Line Snap Hook***Tensile Strength* **1750 lbs. / 800 kg.****Grommets**

#0 Stainless Steel

Size:**Container -**

24" high x 16" wide x 11" deep

61 cm. x 41 cm. x 28 cm.

Weight:**Container (without canopies) -**

20 lbs. (9 kg.)

Fabric Colors:

Black, Smoke, Desert Camouflage, Woodland Camouflage, Multi-Camouflage, Olive Drab Green and others upon request.

Harness Colors:

Black, Smoke, Silver, Olive Drab Green and others upon request.



TPDS Heavy Load Tactical



Product Information

Special Features

- Reserve Container and all pertaining parts are tested under **TSO C23d**.
- Bridle and Riser cover protection - Zero exposed riser or main drogue bridle exposure ensures proper function in any manner of orientation or use.
- Reserve Static Line (**RSL**) - A lanyard connecting the left main riser and reserve ripcord cable which allows minimum altitude loss on the reserve opening during the event of a main canopy cutaway.
- **“Reserve Boost”** - Main Assisted Reserve Deployment (**M.A.R.D.**) System. The fastest system available.
- Adjustable Harness - the **TPDS (HLT)** main container lift webbing and laterals are available with adjusting hardware.
- Cut-in Laterals for added comfort and fit.
- Type-13 Reserve Risers for added safety.
- Comfortable Yoke and Leg Padding for long wear and heavy payloads .
- Dual Loop Main Steering Toggles for assisted canopy flight training.
- Left and Right Hacky Drogue Release Handles for better grip and familiarity.
- Center Point Drogue Attachment for controlled drogue freefall.
- All Mil-SPEC Hardware.
- Automatic Activation Device (**AAD**) with the Control Unit in the Reserve Top Cover Flap.

Field Replaceable Parts for Easy Maintenance

- Anti-Line Twist Main Deployment Bag.
- Drogue Kill Line, 2000 lbs. Spectra Line.
- Type 8 Drogue Riser w/ Mini 3-Ring System.
- Magnets in Riser Covers and Drogue Handle.
- Leg Pads with Reinforced Ballistic Cloth.
- Main Closing Pin.
- RSL Clasp and Lanyard.
- Drogue Release Lanyards.
- Drogue Release Pin and Elastic.
- Drogue Release Hacky Handles.

TPDS Heavy Load Tactical



Product Information

Container Options

- Adjustable Main Lift Webbing.
- Adjustable Laterals.
- Pillow or Loop Style Main Canopy Release Handle.
- Bent Metal Style Reserve Handle, Loop or Pillow Style Handle.
- Custom 1000 Denier colors.
- Quick Ejector or B-12 Snaps on Chest Strap and Leg Straps.

Deployment Options

All-In-One

The **TPDS-HLT** Heavy Load Tactical Airborne Harness/Container is a versatile combat/training Parachute Assembly with the ability to be converted to any one of several Deployment Methods quickly and easily.

- Drogue Freefall with two (2) release handles.
- Static Line Drogue.
- Throw-out Pilot Chute.
- Static Line with Throw-out Pilot Chute Assist.
- Direct Bag Static Line.
- Spring-Loaded Ripcord.
- Spring-loaded Pilot Chute Static Line Assist.
- Double Bag Main Deployment for HAHO.



**Main Container Harness
3-Ring System**

**Main Canopy
Release Handle**

**Lower Attachment
Ring**

**Right Side Drogue
Release Hacky**

**Upper Passenger
Attachment Ring**

**Reserve Ripcord
Handle**

Chest Strap

**Lower Attachment
Ring**

Leg Strap



**Reserve Pin
Inspection Window**

Main Pin Cover Flap

Reserve Pin Cover Flap

Reserve Pilot Chute Cap

**Static-Line
Stow Retainers**

**Right Side Drogue
Release Hacky**

**Drogue Pilot Chute
in Pouch**





Drogue Pilot Chute Handle

Upper Passenger Attachment Ring

Main Canopy Release Handle

Adjustable Main Lift Webbing Hardware

Right Hand Drogue Release Hacky

Main Container Harness 3-Ring System

Reserve Ripcord Handle

Lower Attachment Ring

Left Hand Drogue Release Hacky





Examiner's Cutaway Handle

Passenger Upper Attachment Butterfly Snaps

Passenger Chest Strap

Examiner's Reserve Ripcord Handle

Passenger Belly Band

Passenger Lower Attachment Straps

Passenger Leg Strap Adjusters



Examiner's Reserve Ripcord Handle

Passenger Upper Attachment Butterfly Snaps

Emergency Hook Knife

Air-Sickness Bag Pouch

Passenger Back Pad

Lower Back Strap

Butt Strap

Lower Connector Quick Ejector Tabs





TPDS Heavy Load Tactical (HLT)
Loop Cutaway and Reserve Handles



TPDS Heavy Load Tactical (HLT)
Pillow Cutaway and Metal Reserve Handles



TPDS Heavy Load Tactical (HLT)
Freefall Drogue Deployment



TPDS Heavy Load Tactical (HLT)
Static Line Drogue Deployment



TPDS Heavy Load Tactical (HLT)
Throw-out Pilot Chute Deployment



TPDS Heavy Load Tactical (HLT)
Spring-loaded Pilot Chute Deployment



TPDS Heavy Load Tactical (HLT)
with Replaceable 3-Ring Drogue Riser.



TPDS Heavy Load Tactical (HLT)
Magnetic Riser Covers with Replaceable Magnets.



Heavy Load Tactical Specifications

Main Container Harness Specs:

- Harness is tested under **TSO C23d**.
- Main Lift Webbing, Type 7 Mil-W-4088 Tensile Strength, 6000 lbs.
- Leg Straps and Laterals, Type 7 Mil-W-4088 Tensile Strength, 6000 lbs.
- Chest Strap, Doubled Type 8 Mil-W-4088 Tensile Strength, 4000 lbs.
- Reserve Risers, Type 13 Mil-W-4088 Tensile Strength, 7000 lbs.
- Main Harness Riser Ring, No.10 Proof Load , 5000 lbs.
- Upper Passenger Harness Attachment Ring, Angled "D" Ring, Proof Load, 5000 lbs.
- Adjustable Hip Ring, 555-2 Ring.
- Leg Strap Hardware, PS 22040-1 Tensile Strength, 2500 lbs.
- Chest Strap Hardware, PS 70101-1
- Lower Passenger Attachment Ring, RW 8
- Large Ring Main Risers, Type 7 Mil-W-4088, Proof Load, 6000 lbs.

Main Container Assembly Specs:

- Reserve Container and all pertaining parts are tested under **TSO C23d**.
- Automatic Activation Device (AAD) with the Control Unit in the Reserve Top Cover Flap.
- 1000 Denier Cordura lined w/ 1/4" Para-pack nylon backed black foam.
- Outboard Reserve and Cutaway Handles.
- 0# Stainless Steel Grommets.
- All Stainless Steel Housings
- .040 Nylon Stiffeners
- .062 Aluminum Reserve Floor Plate
- 1000 Denier Cordura Anti-Line Twist Main Deployment Bag.
- 600 lbs. Dacron Locking Loop for Main and Reserve Control Toggles.
- 1" Tubular Nylon Main Steering Toggles, Tensile Strength, 4000 lbs.
- 1" Type 17 Nylon Reserve Toggles, Mil-W-4088 Tensile Strength, 2500 lbs.
- Stainless Steel Reserve Ripcord Handle.
- Left Riser Reserve Static Line (RSL).



Passenger Harness Specs:

- Passenger Harness is **TSO C23d**
- Main Lift Webbing, Type 7 Mil-W-4088 Tensile Strength, 6000 lbs.
- Leg Straps , Type 7 Mil-W-4088 Tensile Strength, 6000 lbs.
- Lower Attachment Straps, Type 8 Mil-W-4088 Tensile Strength, 4000 lbs.
- Diagonals, Chest Strap, Belly Band, Back Strap and Butt Strap, Doubled Type 8 Mil-W-4088, Tensile Strength, 4000 lbs.
- Upper Attachment Butterfly Snaps, PS 22042-1 Proof Load, 5000 lbs.
- MLW Adjustable Slider, PS 70114-1 Proof Load, 2500 lbs.
- Large Articulating Hip Junction Ring, C5010.
- Adjustable Leg Strap, Chest Strap and Belly Band Hardware , PS 70101-1
- Adjustable Diagonal, Back Strap, and Butt Strap Hardware, PS 70114-1 Proof Load 2500 lbs.
- Lower Attachment - Adjustable Quick Ejector Snaps, PS 22018 Proof Load, 2500 lbs.
- Back Pad and Leg Pads 1000 Denier Cordura w/ 1/4" white foam.
- 3/4" Binding Tape, Mil-T-5038 Tensile Strength 400 lbs.
- 1" Type 4 Support Tape, Mil-T-5038 Tensile Strength 1000 lbs.
- 5 cord Nylon Harness Thread, Tensile Strength 40 lbs.
- "E" Nylon Thread, No.69 Tensile Strength 8.5 lbs.

The **TPDS, Inc. Heavy Load Tactical (HLT)** is built under the **TSO C23d**.

The Maximum Combined Operating Weight (the total gross weight of the personnel and equipment including the parachute assembly) shall be **550 lbs. (249.5 kg.)** at **195 KEAS** (361.1 km/h).

NOTE: The Actual Maximum Combined Weight shall not exceed the Maximum Weight limit of the Reserve Parachute.

The **TPDS Heavy Load Tactical (HLT)** weights 45-60 lbs. fully packed.



CANOPY FABRIC SPECIFICATIONS

<u>TEST NAME</u>	<u>COMMERCIAL</u>	<u>TEST METHODS</u>	
		<u>FEDERAL STANDARD 191</u>	
MATERIAL	<ul style="list-style-type: none"> ■ 30 Denier, High Tenacity, Bright Nylon, Heat and Light Inhibitors 	<ul style="list-style-type: none"> ■ AATCC 20 	Method 1530
TWIST	<ul style="list-style-type: none"> ■ Producers Warp and Fill 	<ul style="list-style-type: none"> ■ ASTM-D-1423 	Method 4050
MELTING POINT	<ul style="list-style-type: none"> ■ 489°F + or - 10°F 	<ul style="list-style-type: none"> ■ AATCC-20 	Method 1534
WEAVE PATTERN	<ul style="list-style-type: none"> ■ Rip Stop 7.5 Minimum Repeats Per Inch 	<ul style="list-style-type: none"> ■ Visual 	(Visual)
WEIGHT (max.)	<ul style="list-style-type: none"> ■ 1.17 OSY 	<ul style="list-style-type: none"> ■ ASTM-2376 Opt. C 	Method 5041
THICKNESS(max.)	<ul style="list-style-type: none"> ■ .0030 Inches 	<ul style="list-style-type: none"> ■ ASTM-D-1777 	Method 5030
STRENGTH (min.) 1"strip	<ul style="list-style-type: none"> ■ 47 x 47 Pounds 	<ul style="list-style-type: none"> ■ ASTM-D-50351 R 	Method 5104
ELONGATION (min.)	<ul style="list-style-type: none"> ■ 25% 	<ul style="list-style-type: none"> ■ ASTM-D-50351 R 	Method 5104
TEAR STRENGTH (min.)	<ul style="list-style-type: none"> ■ 5 x 5 Pounds 	<ul style="list-style-type: none"> ■ ASTM 	Method D 2261 or 2262 (1983)
AIR PERMEABILITY	<ul style="list-style-type: none"> ■ .5-3.0 CFM 	<ul style="list-style-type: none"> ■ ASTM-D737 	Method 5450
CONSTRUCTION (min.)	<ul style="list-style-type: none"> ■ 130 x 132 	<ul style="list-style-type: none"> ■ ASTM-D-3775 	Method 5050
pH	<ul style="list-style-type: none"> ■ 5.5-9.0 	<ul style="list-style-type: none"> ■ AATCC-81 	Method 2811
COLOR FASTNESS	<ul style="list-style-type: none"> ■ Good (Regular colors) 	<ul style="list-style-type: none"> ■ AATCC-61 ■ AATCC-107 ■ AATCC-16 A ■ AATCC-8 	Method 5614 - Laundering Method 5630 - Cold Water Method 5660 - Light (20 hrs.) Method 5651 - Crocking (3.4 or better)
WIDTH (min.)	<ul style="list-style-type: none"> ■ 48 Inches or 65 Inches 	<ul style="list-style-type: none"> ■ FED STD 191A 	Method 5020
HEAT/LIGHT RESISTANCE	<ul style="list-style-type: none"> ■ Max. 25% Change 	<ul style="list-style-type: none"> ■ MIL C 44378 	Para. 4.5.3.1 Light Para. 4.5.3.2. Heat
BIAS/BOW (max.)	<ul style="list-style-type: none"> ■ 2 Inches on 48": ■ 2^{1/2} Inches on 65" 	<ul style="list-style-type: none"> ■ ASTM-D-3882 	Method 5060

Specification	Yarn	Construction	Weave	Widths**	Weight	Thickness	Air Perm	Tear W/F	Break W/F	pH
	<i>denier</i>	<i>count/inch</i>	<i>pattern</i>	<i>inches</i>	<i>oz/sq yd</i>	<i>inches</i>	<i>Cfm</i>	<i>lbs</i>	<i>lbs</i>	
PIA C 44378										
Type 1	30d	114 X 132	Ripstop	48"/65"	1.17	0.003	0-5	5/5	45/45	5.5-9.0
Type 2	30d	126 X 132	Ripstop	36"/48"/72"	1.11	0.003	30-50	5/5	42/42	5.5-9.0
Type 3	30d	114 X 132	Ripstop	48"/65"	1.17	0.003	30-50	5/5	45/45	5.5-9.0

**MAIN CANOPIES
9 CELL ELLIPTICAL**

CANOPY CLASS		TACTICAL PARACHUTE DELIVERY SYSTEMS, Inc.		MAIN CANOPY SPECIFICATIONS				
				SPAN	CHORD	ASPECT	LOAD	Wmax
		Part Number	Model	feet	feet	:1	lbs/ft^2	lbs. / kgs.
HLT Vectran Lines	Fabric							
	Hybrid	TPDS-HLT-M-300	M-300H	28.76	10.01	2.87	1.475	443 / 201
		TPDS-HLT-M-325	M-325H	29.94	10.42	2.87	1.51	491 / 223
		TPDS-HLT-M-350	M-350H	31.07	10.81	2.87	1.545	541 / 245
		TPDS-HLT-M-375	M-375H	32.16	11.19	2.87	1.58	593 / 269
		TPDS-HLT-M-400	M-400H	33.21	11.56	2.87	1.615	646 / 293
	Z-P	TPDS-HLT-M-300	M-300Z	28.76	10.01	2.87	1.475	443 / 201
		TPDS-HLT-M-325	M-325Z	29.94	10.42	2.87	1.51	491 / 223
		TPDS-HLT-M-350	M-350Z	31.07	10.81	2.87	1.545	541 / 245
		TPDS-HLT-M-375	M-375Z	32.16	11.19	2.87	1.58	593 / 269
		TPDS-HLT-M-400	M-400Z	33.21	11.56	2.87	1.615	646 / 293

**SQUARE RESERVE CANOPIES
DACRON LINES**

CANOPY CLASS		TACTICAL PARACHUTE DELIVERY SYSTEMS, Inc.		RESERVE CANOPY SPECIFICATIONS				
				SPAN	CHORD	ASPECT	LOAD	Wmax
		Part Number	Model	feet	feet	:1	lbs/ft^2	lbs. / kgs.
HLT 9 CELLS	Fabric F-111	TPDS-HLT-R9-300	R9-300	30	10	3	1.412	424 / 192
		TPDS-HLT-R9-320	R9-320	30.98	10.33	3	1.41	451 / 205
		TPDS-HLT-R9-340	R9-340	31.94	10.65	3	1.408	479 / 217
		TPDS-HLT-R9-360	R9-360	32.86	10.95	3	1.406	506 / 230
		TPDS-HLT-R9-380	R9-380	33.76	11.25	3	1.404	534 / 242
		TPDS-HLT-R9-400	R9-400	34.64	11.55	3	1.402	561 / 254
		TPDS-HLT-R9-420	R9-420	35.5	11.83	3	1.4	588 / 267