

AIR LIFTING BAGS



RESCUE STARTS HERE

MAXIFORCE AIR LIFTING BAGS

Maximum Force Where You Need It Most!

The Maxiforce Air Lifting Bag is a thin, strong, molded envelope. It is made from a Neoprene covered Aramid reinforcement and has the power to lift, move or shift weights up to 70 tons.

Of course there is more to a lifting bag system than the bag itself. The control equipment and components play a

critical role in successful lifting bag use. Unlike other lifting bag systems, Paratech manufactures all of its major control components. This assures the quality of the lifting bag system from inflation to deflation.

What to look for when selecting a lift bag system.

- 1. Safety:** Maxiforce Air Lifting Bags are extremely tough, made of Neoprene, embedded with three (3) full layers of Aramid fiber reinforcement on each side, giving the bags tremendous strength at full inflation. Each Air Lifting Bag has been subjected to a stringent factory pressure test to assure maximum operator safety.
- 2. Capacity:** Does the height/weight capacity match the task? Non-emergency applications may only require one or two sizes. Emergency Service providers need a variety of lifting capacities.
- 3. Shape:** Match the shape of the bag to the contact area of the load to maximize your effectiveness. Use rectangular shaped bags against linear loads and when lifting on hills or inclines. Square bags are great for stacking on flat surfaces. Rescue crews should have both square and rectangular lifting bags.
- 4. Thickness:** The thinner the lift bag the better. The most notable feature of quality manufacturing is the ability to produce a thin, tough lifting bag. Maxiforce Air Lifting Bags range in thickness from 5/8" (1.6cm) to 1" (2.5cm).
- 5. Material:** Neoprene with Aramid reinforcement comprise most of the Lift Bag materials. These materials provide strength, durability, flexibility and chemical resistance. Maxiforce was the first Aramid reinforced high pressure lift bag.

- 6. Surface:** Small molded raised dimples provide an interlocking surface for stacking 2 lift bags. Once again Maxiforce was the first with an interlocking surface. Those larger "cleated" surfaces on other bags are not well suited to easy placement and should be avoided. Remember, it's not the size of the dimple, it's how many per square inch.
- 7. Positioning Eyelets:** At least 2 on all lift bags with a 10 ton rating or higher. A must for rescue work. Allows for vertical placement, safe retrieval and carrying.
- 8. Markings:** Technical data is molded into the bag surface. Warnings are permanently labeled. The famous "X" marks the center of the load.
- 9. Air Inlet:** Brass with maximum pull strength. The inlet is threaded to receive a brass inflation nipple. Why brass? No corrosion. Easy to repair.
- 10. Works Quietly:** Completely silent in use. There are no engine sounds or loud mechanical noises when Maxiforce is used.



OTHER FEATURES

Dual Pushbutton Safety Relief and Control Valve

This controller will “go anywhere.” It is compact and extremely portable. There are no protruding joysticks, no cumbersome enclosure.

Rescue personnel can crawl into collapse areas without hindrance. Pushbuttons must be depressed for inflation or deflation. Large, easy to read, color coded gauges. Built in relief valves and closed couplings for maximum safety. Available in single or dual outlets.

Piston Regulator

Adjustable piston regulator is standard and can be preset to operating pressure. Durability is unmatched. “Pressure creep” is minimized as air supply is reduced. Maximum inlet pressure is 6000 psi and inlet fittings are available for all compressed air cylinders.

Inline Relief Valves

Designed to relieve over-pressurization and allow a lift bag to remain inflated under a load. This is not simply a shut off valve. This valve will relieve excess pressure from an inflated bag caused by load shifts or temperature changes.

Air Hose

A full 3/8" (9.5mm) inside diameter in a wide range of colors. Couplings and nipples are field replaceable using simple hand tools. Working pressure of 300 psi assures reliability. Hose stays flexible over the full operating temperature range of the lift bag. Available in a wide variety of lengths. Closed couplings prevent air escape at disconnect (no blowing debris).

Approvals, Listing and Standards

Paratech’s Maxiforce Air Lifting Bags meet and exceed the intent of all known, recognized and published international standards* for the design, production and use of air lifting bags.

These standards and listings include:

- National Coal Board (UK)
- NATO Stock Listings
- National Defense Supply Listing
- ISO 9001-2000 Certified
- Department of Industrial Relations (Australia)
- South African Board of Mine Safety
- Japan Standards Institute (JSI Compliance)
- GSA Contract Item

* *Standards established by a specific country as a trade restriction are not included in the above claim.*



Interlocking raised surface

Highly visible center marking



High visibility pressure Gauge



Brass inlet fitting and receiver

Two step safety locking coupling



Field replaceable “closed” coupling



The “thinner” lift bag is a better lift bag

Manuals meet U.S. Military specifications



MAXIFORCE WORKS

“Maxiforce airbags were used to lift a vehicle off a person struck while walking along the road at night. Car stopped and came to rest on the victim. Maxiforce airbags lifted the vehicle and freed the victim without further injury. Rescue time 10 minutes from start to finish.”

Training Officer Leroy Black Jr.
Hoke County Rescue Squad, North Carolina Incident Report



Maxiforce Strut and Air Lift Bags should be part of your road rescue equipment list.

“Maxiforce airbags were used to extricate a man whose arm was caught in a pizza dough kneading machine. The bags were used to stabilize and then separate the rollers to free the victim.”

Pete Lund “Man in a Machine”
Rescue 2, New York
Fire Engineering Magazine



Lift and level pipelines not accessible to heavy equipment.

“Fire departments responded to a plane crash with minor injuries and a large fuel spill. Maxiforce airbags were used to level the plane to stop remaining fuel from leaking and making the situation worse. Remaining fuel was off loaded.”

Firefighter Thomas Kenney
Hyannis Fire Department,
Massachusetts
Incident Report

“The rescue of a bulldozer operator trapped underneath his machine required the use of two 36" x 36" (KPI-74) bags. Placed on each end of the bulldozer, the bags were inflated in unison, allowing sufficient clearance to remove the operator of the bulldozer.”

Chief Ray Downey, FDNY
“The Rescue Company”
Fire Engineering Magazine



Hazmat tank recovery.

Vertical placement using positioning eyelets.



Maxiforce Lift Bags used to position "Air Casters" for machine tool positioning.



No heavy hydraulics required.



Raise loads to place industrial rollers.



Lifting a bridge. That's right; a bridge.



"The only way to effect his rescue was to lift the structure from his head. A 74 ton lifting bag was used. This allowed a vertical lift of five inches in conjunction with well placed cribbing"

Gerald L. Reinitz
Fire Engineering Magazine

"A subway train had pinned a woman by her left leg between the subway car and the subway platform. With the use of Maxiforce Air Lifting Bags, the train was lifted up freeing the victim."

Police Officer Dennis Healy
New York City Transit Police Incident Report

"A car was struck by a freight train at a rural crossing and was carried approximately 100 yards from the crossing before coming to rest on its roof. Maxiforce airbags were used to lift the car off of the trapped victim and free him without causing further injury."

Fire Chief Tom Nicolay
Sandoval Fire Protection District, Illinois Incident Report

COMPONENTS/ACCESSORIES

Maximum Force Where You Need It Most!



22-800200 Working Air Cart With Cylinders



22-890300 Master Control Package



22-890351 Control Package



890729 22 Piece Pneumatic Component/Adapter Kit



22-800400 Manual Foot Pump



22-890490 Inline Relief Valve



22-890506

22-890507

22-889510

Left to Right: Single Safety Relief and Control Valve with Bypass, Dual Industrial Safety Relief and Control Valve, Single Industrial Safety Relief and Control Valve.



22-890900 Dual Deadman Controller



22-895401 Pressure Regulator, Piston Type



*Air Hoses
Colors: Red, Yellow, Black,
Blue, Green, and Gray
Lengths: 16, 32 and 50 ft.*

PRE-DESIGNED LIFT BAG SETS



22-889048 48 Ton - 2 Lift Bag Set



22-889050 50 Ton - 3 Lift Bag Set - "Rural Rescue"



22-889092 92 Ton - 7 Lift Bag Set
"Rescue Engine or Truck"



22-889117 117 Ton - 5 Lift Bag Set - "Suburban Rescue"



22-889136 136 Ton - 8 Lift Bag Set - "Crash Crew"



22-889234 234 Ton - 7 Lift Bag Set - "All Terrain"



22-889245 245 Ton - 10 Bag Set - "Gotham City"



22-889346 346 Ton - 14 Lift Bag Set - "Heavy Rescue"

US&R LIFT BAG SET



US&R Lift Bag Set 22-889350		
Qty.	Part No	Description
4	22-888110	KPI-1
4	22-888120.....	KPI-3
4	22-888130.....	KPI-5
4	22-888140.....	KPI-12
2	22-888150.....	KPI-17
2	22-888165.....	KPI-28
2	22-888180	KPI-35L
2	22-888190.....	KPI-44
4	22-888200.....	KPI-74
2	22-890300	Master Control Package
20	22-890490	Inline Relief Valve



22-888150 KPI-17 Qty. 2 22-888140 KPI-12 Qty. 4



22-888110 KPI-1 Qty. 4



22-888120 KPI-3 Qty. 4



22-888130 KPI-5 Qty. 4



22-888180 KPI-35L Qty. 2



22-890490
Inline Relief Valve
Qty. 20



22-888165 KPI-28 Qty. 2



22-888190 KPI-44 Qty. 2



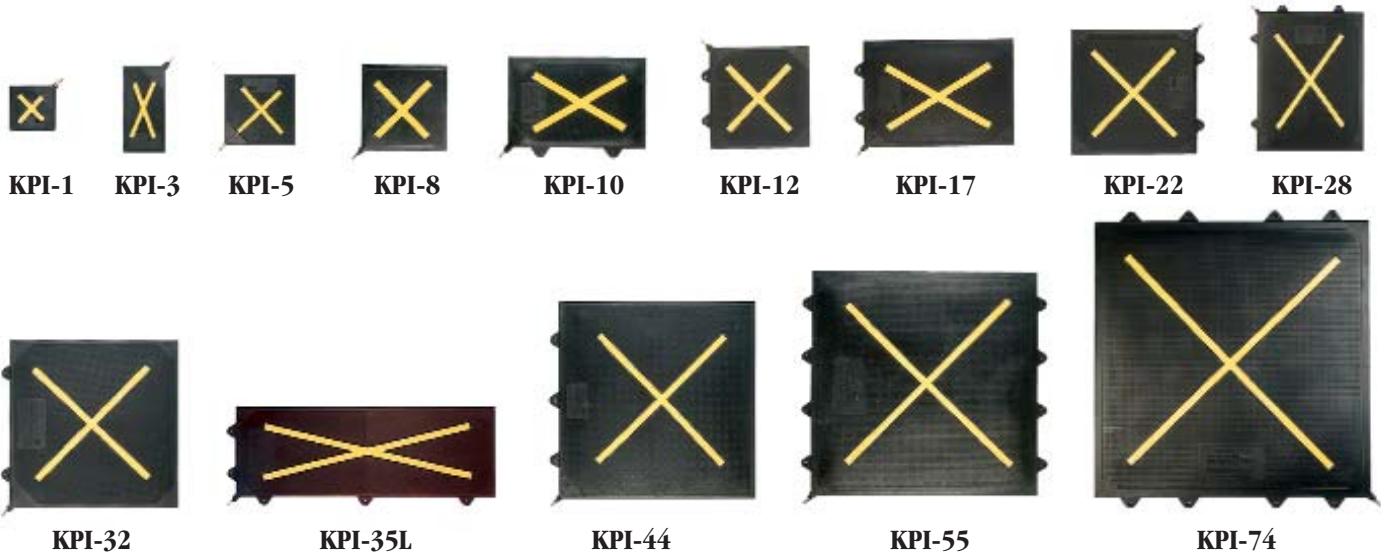
890300
Master Control
Package
Qty. 2



22-888200
KPI-74
Qty. 4



SPECIFICATIONS



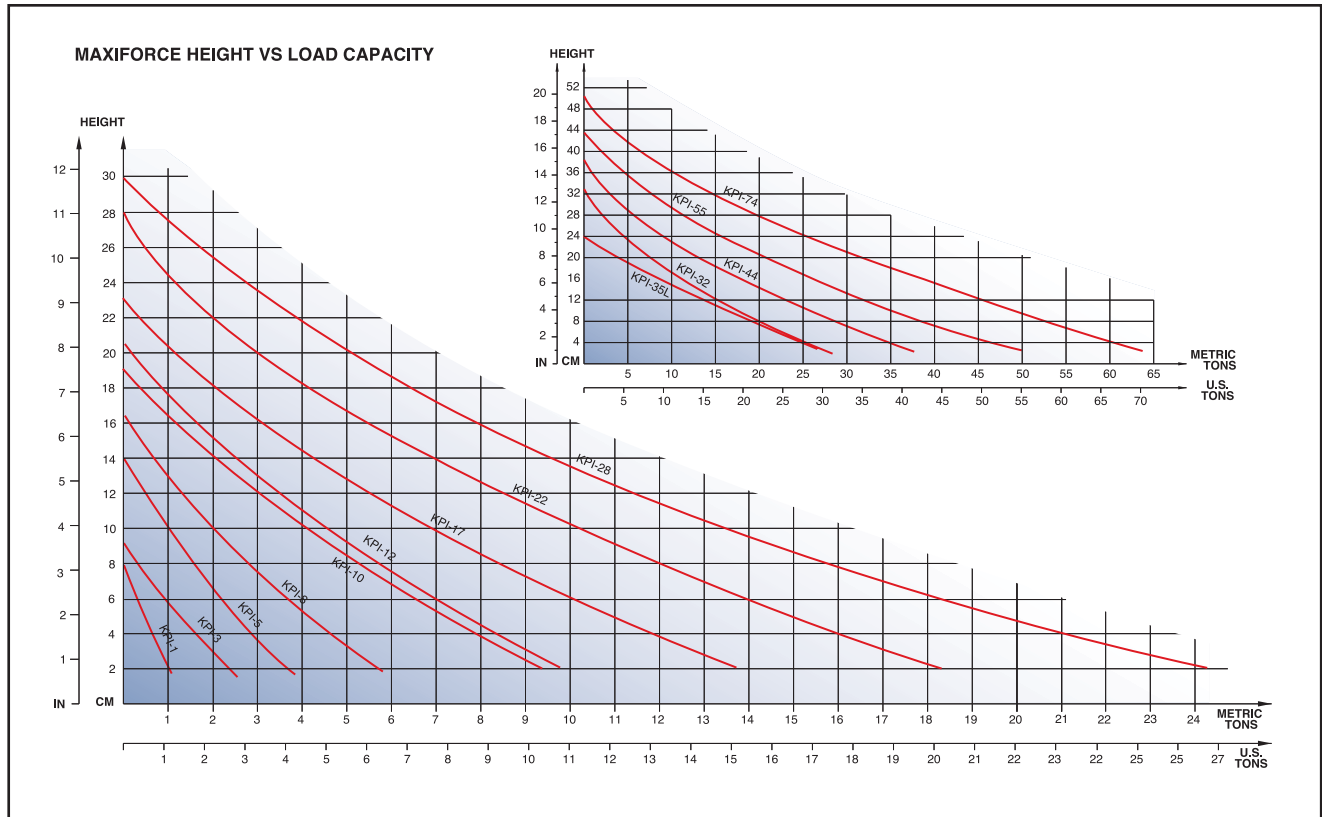
PART NO.	MODEL	DIMENSIONS ¹	CAPACITY	HEIGHT	WEIGHT
22-888110	KPI-1	6" X 6" X 5/8" 15.2 cm. X 15.2 cm. X 1.6 cm.	1.2 Tons 1.1 M Ton	3.0 in. 76 mm.	2 lbs 0.9 Kg.
22-888120	KPI-3	6" X 12" X 5/8" 15.2 cm. X 30.5 cm. X 1.6 cm.	2.8 Tons 2.5 M Ton	3.5 in. 90 mm.	3 lbs 1.4 Kg.
22-888130	KPI-5	10" X 10" X 5/8" 25.4 cm. X 25.4 cm. X 1.6 cm.	4.3 Tons 3.9 M Ton	5.4 in. 137 mm.	4 lbs 1.8 Kg.
22-888135	KPI-8	12" X 12" X 3/4" 30.5 cm. X 30.5 cm. X 1.9 cm.	6.5 Tons 5.9 M Ton	6.4 in. 163 mm.	5 lbs 2.3 Kg.
22-888138	KPI-10	12" X 18" X 3/4" 30.5 cm. X 45.7 cm. X 1.9 cm.	10.2 Tons 9.3 M Ton	7.5 in. 190 mm.	9 lbs 4.1 Kg.
22-888140	KPI-12	15" X 15" X 3/4" 38.1 cm. X 38.1 cm. X 1.9 cm.	10.8 Tons 9.8 M Ton	8.2 in. 208 mm.	10 lbs 4.5 Kg.
22-888150	KPI-17	15" X 21" X 3/4" 38.1 cm. X 53.3 cm. X 1.9 cm.	15.0 Tons 13.6 M Ton	9.0 in. 230 mm.	13 lbs 5.9 Kg.
22-888160	KPI-22	20" X 20" X 3/4" 50.8 cm. X 50.8 cm. X 1.9 cm.	20.2 Tons 18.3 M Ton	11.0 in. 280 mm.	16 lbs 7.3 Kg.
22-888165	KPI-28	20" X 26" X 3/4" 50.8 cm. X 66.0 cm. X 1.9 cm.	26.8 Tons 24.3 M Ton	11.7 in. 297 mm.	20 lbs 9.1 Kg.
22-888170	KPI-32	24" X 24" X 3/4" 61.0 cm. X 61.0 cm. X 1.9 cm.	29.9 Tons 27.1 M Ton	13.0 in. 330 mm.	22 lbs 10.0 Kg.
22-888180	KPI-35L	15" X 42" X 3/4" 38.1 cm. X 106.7 cm. X 1.9 cm.	31.1 Tons 28.2 M Ton	9.3 in. 236 mm.	23 lbs 10.4 Kg.
22-888190	KPI-44	28" X 28" X 3/4" 71.1 cm. X 71.1 cm. X 1.9 cm.	41.5 Tons 37.6 M Ton	15.0 in. 381 mm.	30 lbs 13.6 Kg.
22-888195	KPI-55	32" X 32" X 1" 81.3 cm. X 81.3 cm. X 2.5 cm.	54.9 Tons 49.8 M Ton	17.0 in. 432 mm.	40 lbs 18.1 Kg.
22-888200	KPI-74	37" X 37" X 1" 93.9 cm. X 93.9 cm. X 2.5 cm.	70.2 Tons 63.7 M Ton	20.0 in. 508 mm.	60 lbs 27.2 Kg.

Note: Dimensions do not include eyelets. Lifting Capacity and Height Will Vary According to Air Pressure and Bag Contact Area.



Air Lifting Bags

Aramid Reinforced Type			KPI-1	KPI-3	KPI-5	KPI-8	KPI-10	KPI-12	KPI-17	KPI-22	KPI-28	KPI-32	KPI-35L	KPI-44	KPI-55	KPI-74	
Part Number			22-888110	22-888120	22-888130	22-888135	22-888138	22-888140	22-888150	22-888160	22-888165	22-888170	22-888180	22-888190	22-888195	22-888200	
*Lifting Capacity at 118 PSI (8 Bar)	U.S. Tons		1.2	2.8	4.3	6.5	10.2	10.8	15.0	20.2	26.8	29.9	31.1	41.5	54.9	70.2	
	Metric Ton		1.1	2.5	3.9	5.9	9.3	9.8	13.6	18.3	24.3	27.1	28.2	37.6	49.8	63.7	
Size	Length	Inches (mm)	6(152)	6(152)	10(254)	12(305)	18(457)	15(381)	21(533)	20(508)	20(508)	24(609)	42(1066)	28(711)	32(812)	37(940)	
	Width	Inches (mm)	6(152)	12(305)	10(254)	12(305)	12(305)	15(381)	15(381)	20(508)	26(660)	24(609)	15(381)	28(711)	32(812)	37(940)	
	Thickness	Inches (mm)	.6(15)	.6(15)	.6(15)	.8(20)	.8(20)	.8(20)	.8(20)	.8(20)	.8(20)	.8(20)	.8(20)	.8(20)	.8(20)	1(25)	1(25)
*Lifting Heights:		Inches (mm)	3.0(76)	3.5(90)	5.4(137)	6.4(163)	7.5(190)	8.2(208)	9.0(230)	11.0(280)	11.7(297)	13.0(330)	9.3(236)	15.0(381)	17.0(432)	20.0(508)	
Maximum Working Pressure:	PSI (Bar)		118(8)	118(8)	118(8)	118(8)	118(8)	118(8)	118(8)	118(8)	118(8)	118(8)	118(8)	118(8)	118(8)	118(8)	
Test Pressure:	PSI (Bar)		236(16)	236(16)	236(16)	236(16)	236(16)	236(16)	236(16)	236(16)	236(16)	236(16)	236(16)	236(16)	236(16)	236(16)	
Bursting Pressure Minimum:	PSI (Bar)		700(47.6)	700(47.6)	700(47.6)	700(47.6)	700(48)	700(47.6)	700(47.6)	700(47.6)	600(40.8)	600(40.8)	600(40.8)	475(32.3)	475(32.3)	475(32.3)	
Air Requirement at 118 PSI (8 Bar)	Cubic Ft. (liters)		.14(4)	.35(10)	.77(22)	1.8(51)	2.8(79)	3.0(84)	4.9(138)	7.3(208)	11(311)	13.8(390)	11.7(332)	21.6(613)	34(969)	47.0(1329)	
Inflation Time	Seconds		1	1	2	2	3	3	4	7	10	11	12	20	35	53	
Weight (approx.)	Lbs (KG)		1.1(.5)	2.2(1)	3.1(1.4)	6(2.8)	9(4.1)	8(3.6)	11(5)	15(6.8)	19(8.6)	21(9.5)	22(10)	29(13)	40(18)	60(27)	
Short Term Temperature Range	°F																-75 to +220
	°C																-60 to +105
Continuous Duty Temperature Range	°F																-40 to +150
	°C																-40 to +65
Material	Neoprene with Aramid Reinforcement																
No. of Reinforcing Layers Each Side	3																
Replaceable Nipple	yes																
Molded Non-Slip Surface	yes																
Bright Yellow "X" Molded into Sides	yes																
Made in U.S.A.	yes																
One Year Limited Warranty Against Defects in Materials and Workmanship																	
*Lifting Capacity and Height Will Vary According to Air Pressure and Bag Contact Area.																	



Maxiforce Lift Bag Sets			
Part No.	Description	Capacity U.S. Tons (Metric Tons)	Weight Lbs. (KG)
22-889346	Model 346, 14 Lift Bag Set "Heavy Rescue"	346 (313.9)	245 (111.1)
22-889255	Model 255, 6 Lift Bag Set	255 (231.3)	176 (79.8)
22-889245	Model 245, 10 Lift Bag Set "Gotham City"	245 (222.3)	171 (77.6)
22-889236	Model 236, 4 Lift Bag Set	236 (214.1)	156 (70.8)
22-889234	Model 234, 7 Lift Bag Set "All Terrain"	234 (212.3)	162 (73.5)
22-889174	Model 174, 4 Lift Bag Set	174 (157.9)	124 (56.2)
22-889136	Model 136, 8 Lift Bag Set "Crash Crew"	136 (123.4)	100 (45.4)
22-889131	Model 131, 5 Lift Bag Set	131 (118.8)	91 (41.3)
22-889117	Model 117, 5 Lift Bag Set "Suburban Rescue"	117 (106.1)	84 (38.1)
22-889100	Model 100, 4 Lift Bag Set	101 (91.6)	74 (33.6)
22-889097	Model 97, 6 Lift Bag Set	97 (88)	73 (33.1)
22-889092	Model 92, 7 Lift Bag Set "Rescue Engine or Truck"	92 (83.5)	70 (31.8)
22-889052	Model 52, 3 Lift Bag Set	52 (47.2)	38 (17.2)
22-889050	Model 50, 3 Lift Bag Set "Rural Rescue"	50 (45.4)	39 (17.7)
22-889048	Model 48, 2 Lift Bag Set	48 (43.5)	35 (15.9)
22-889039	Model 39, 6 Lift Bag Set	39 (35.4)	33 (15)
22-889101	Model 9, 3 Lift Bag Set	9 (8.2)	9 (4.1)

Quantities Per Maxiforce Lift Bag Set														
Sets	KPI-1	KPI-3	KPI-5	KPI-8	KPI-10	KPI-12	KPI-17	KPI-22	KPI-28	KPI-32	KPI-35L	KPI-44	KPI-55	KPI-74
346 TON	1	1	1	1	1	1	1	1	1	1	1	1	1	1
255 TON								1	1	1		1	1	1
245 TON	1	1	1			1	1	1		1	1	1		1
236 TON												2		2
234 TON						1	1	1		1	1	1		1
174 TON										2			2	
136 TON	1	1	1			1	1	1		1		1		
131 TON		1					1			1	1	1		
117 TON						1	1	1		1	1			
101 TON				1	1				1				1	
97 TON				1	1	1	1	1	1					
92 TON	1	1	1			1	1	1		1				
52 TON		1					1			1				
50 TON						1	1	1						
48 TON							1			1				
39 TON	1	1	1	1	1	1								
9 TON	1	1	1											

Use This Chart To Design Your Own Lift Bag Set

PPE must be worn at all times



PARATECH®

Rescue Starts Here

When the call comes, you're ready you're tough, you're committed, and you're passionate. At Paratech we understand. For over 40 years our people have been working to make sure that you have the most reliable, innovatively designed and well manufactured rescue tools and equipment to do your job. From engineering, to manufacturing, to training...failure is not an option.



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