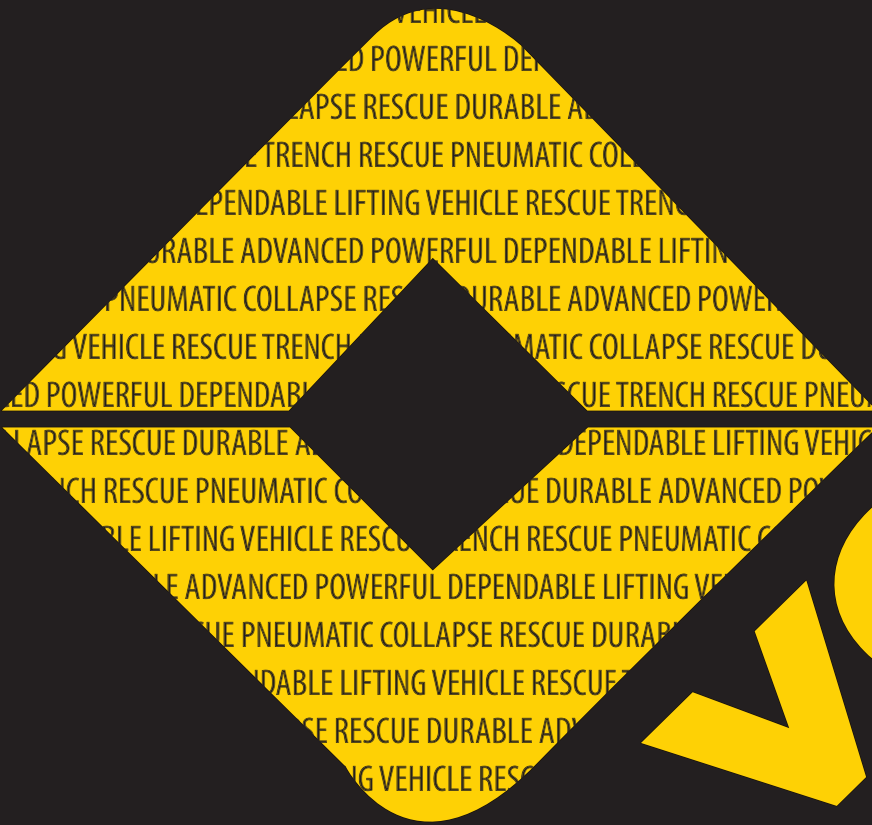


RESCUE PRODUCTS CATALOG: EMERGENCY PNEUMATICS



Vetter®

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Lifting bags

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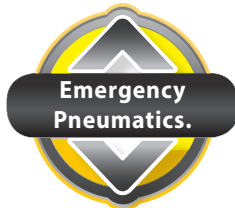
Accessories - Lifting bags Page 20

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Emergency Pneumatics.

Equipped for emergencies.



Vetter has been the leading supplier of emergency pneumatics for decades and still is. We offer you a product range for demanding professionals, developed especially for rescue operations. As a result, Vetter products guarantee you maximum functionality, even in extreme conditions. Count on it!



Experienced in rescue

50 years of international cooperation with fire brigades make Vetter a partner you can rely on. We apply our experience and expertise to the constant refinement of our products. Your benefit: Sophisticated emergency pneumatics help you to get everything under control. So, you can fully concentrate on your work.



Technology leader

Highly specialized pneumatics is our core business. Benefit from our complete range of emergency pneumatic rescue products – developed by our engineers in Germany. At Vetter, we are committed to a wide variety of pressure levels, materials and designs, and we always set the bar somewhat higher: Our 12-bar lifting bags already represent the next generation in rescue technology.



Expert advice worldwide

Vetter listens to you. Together with you, we will choose equipment exactly tailored to your rescue scenarios. Our worldwide dealer network is always at your service: before, during and after your purchase.

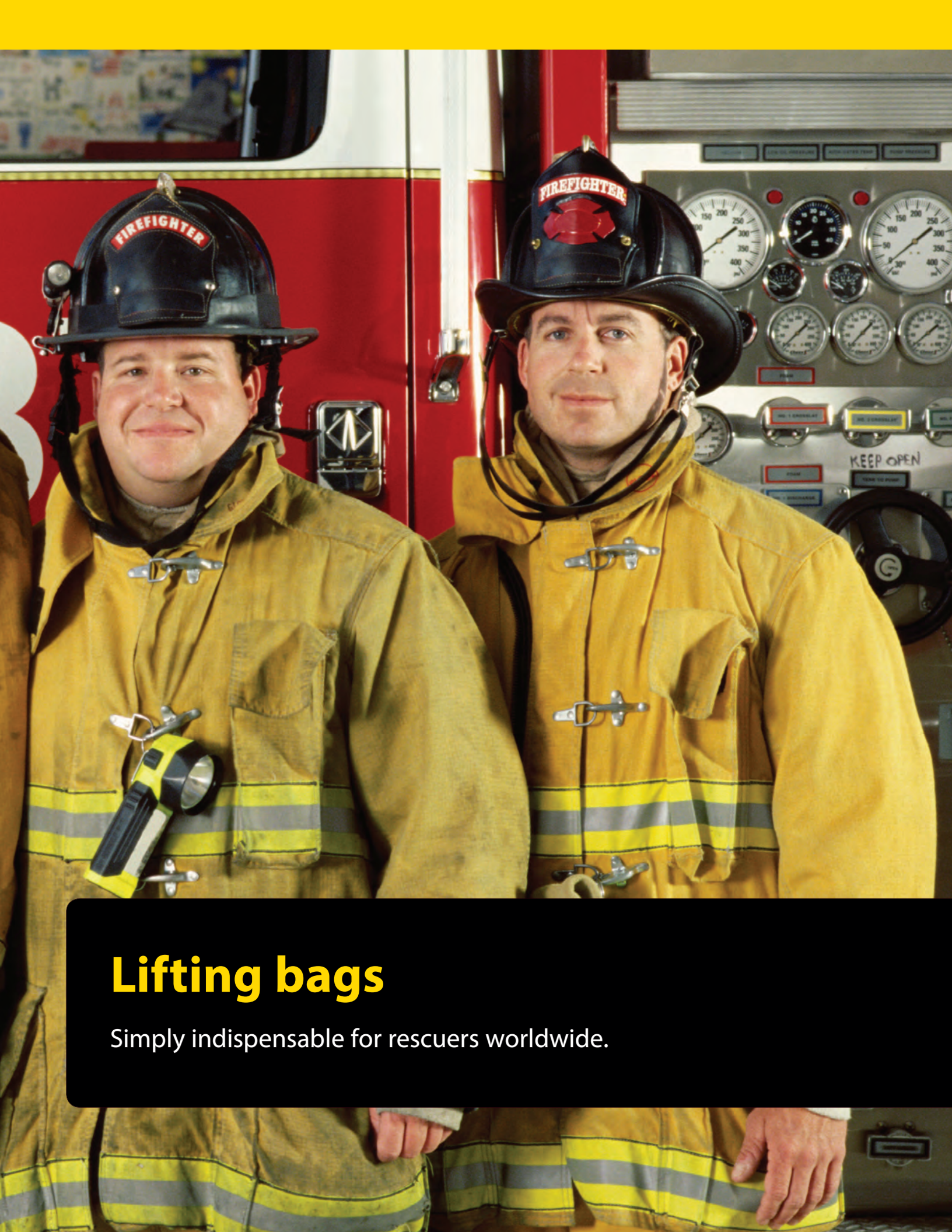


Highest quality – made in Germany

Put your trust in first-class rescue technology handmade by Vetter. Flawless materials and meticulous handwork are the foundation for the most dependable pneumatics on the market. So nothing can go wrong when it really counts. Our product range is produced almost entirely in Germany and every product is individually checked before delivery, as you can confirm by checking our test seal.







Lifting bags

Simply indispensable for rescuers worldwide.

S.Tec 12 Lifting Bags (12 bar / 174 psi)

The next generation of high-pressure lifting bags.

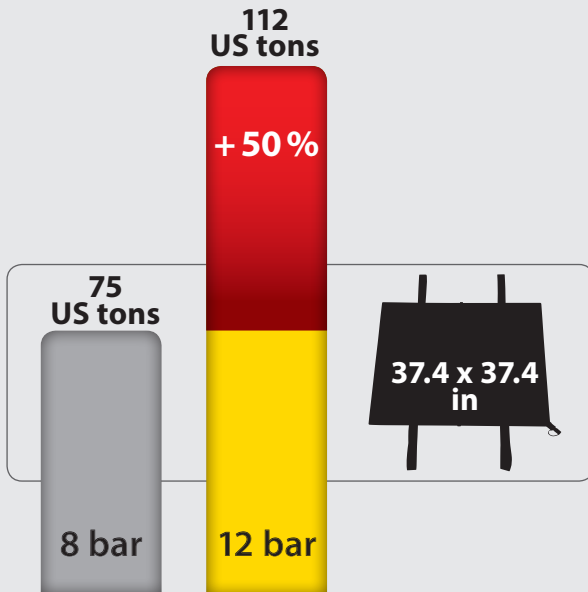
- › 50 % more performance*
- › up to 112 US tons (102 tons) lifting power
- › 0.98 inch (2.5 cm) insertion height
- › compatible with 8 and 10 bar accessories

Vetter has further innovated the popular mini lifting bags to create a new generation of lifting bags: Vetter S.Tec 12 Lifting Bags master every rescue operation with ease. Amazingly flat and uniquely powerful. Its dynamic 12-bar lifting power makes it the most impressive lifting bag on the market. With an insertion height of only 0.98 inch (2.5 cm), our S.Tec 12 Lifting Bag fits in even the narrowest gaps and openings. Thanks to its intelligent surface profile, you can safely stack two bags.



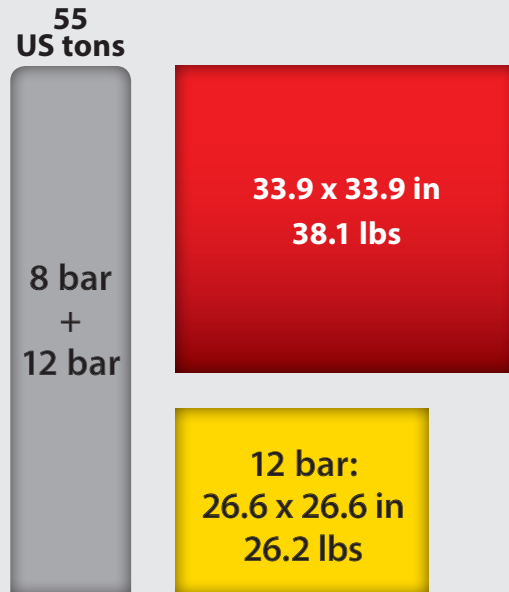
NEW

50 % performance increase with the same bag size.



Is valid for the following S.Tec 12 Lifting Bags
V 1, V 5, V 7, V 26, V 33L, V 35, V 59, V 83 and V 102

Same lifting power with smaller and lighter bags*



Is valid for the following S.Tec 12 Lifting Bags
V 10, V 12, V 20, V 40 and V 50



Uniform low insertion height of 0.98 inch (2.5 cm)
for all bag sizes.



In operation ...

- › Freeing trapped persons
- › Traffic accidents
- › Rockfalls or landslides
- › Collapsed buildings



Good reasons:

- › 50 % performance increase*
- › Stackable due to non-slip surface profile
- › Safety coupling
- › Aramid-reinforced
- › compatible with 8 + 10 bar inflation accessories



Guaranteed quality:

- › Individually tested (with dated inspection seal)
- › Safety factor greater than 4:1
- › Complies with EN 13731 (independently tested)
- › 3-year warranty



* when compared with conventional 8 bar (116 psi) lifting bags

S.Tec12 Lifting Bags sets (12 bar / 174 psi)

The world's most popular sets for any application:

Rescue Set: 47 US tons/418kN

106R147

This set is especially versatile and suitable for almost all road applications. Whether lifting vehicles when people are trapped underneath or freeing trapped limbs after traffic accidents, this set is a reliable helper.



The set includes:

- › Lifting bags V 10, V 12, V 20
- › 2 inflation hoses 12 bar, 5 m, yellow and red (174 psi, 16.4 ft.)
- › Air CU lighting, deadman controller
- › Pressure regulator: Inlet pressure 413 bar (6,000 psi)
Outlet pressure 13.78 bar (200 psi)

Emergency Rescue Set: 106 US ton/942 kN

106R148

The emergency rescue set is ideal for the rapid rescue of trapped persons. The multitude of lifting bags lets you react to the lifting weight with great versatility. Use the emergency rescue set to create free space during traffic accidents and natural catastrophes.



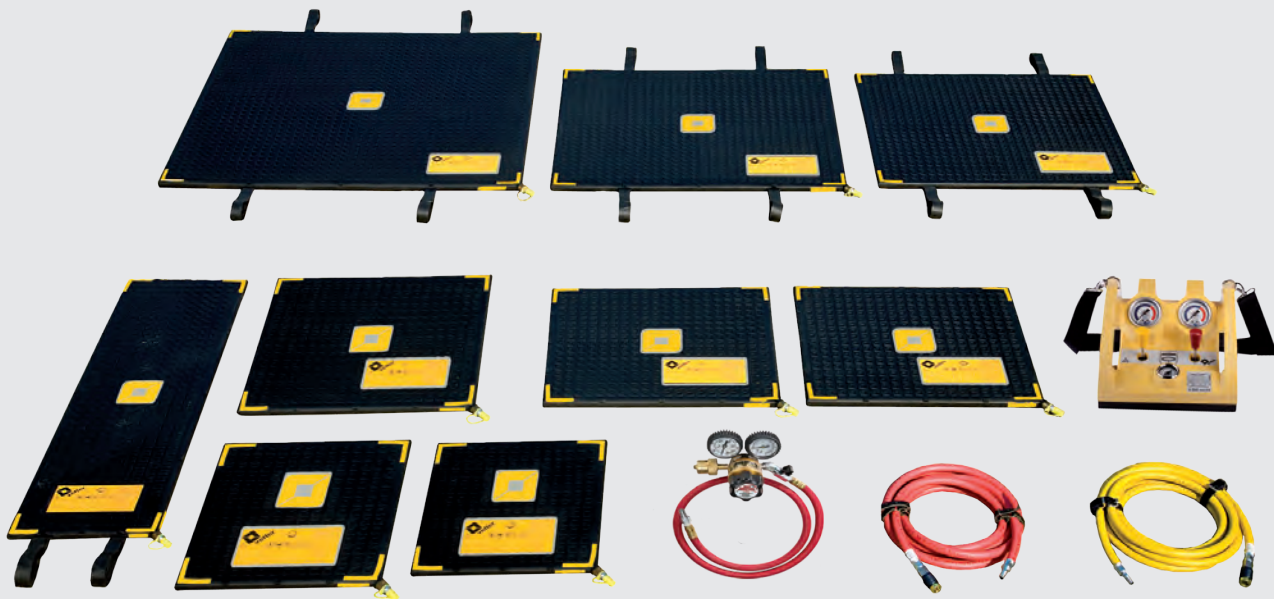
The set includes:

- › Lifting bags V 10, V 12, 2 x V 20, V 33L
- › 2 inflation hoses 12 bar, 5 m, yellow and red (174 psi, 16.4 ft.)
- › Air CU lighting, deadman controller
- › Pressure regulator : Inlet pressure 413 bar (6,000 psi)
Outlet pressure 13.78 bar (200 psi)

Heavy Rescue Set : 320 US ton/2848 kN

106R149

With the heavy rescue set, you have 9 bags in 7 different sizes at your disposal, from little helpers to the big bag with up to 65 US tons (59 tons) of lifting power. With this set, you are ready for everything: traffic accidents with heavy trucks, collapsed buildings and even natural disasters. The heavy rescue set should be available at every major rescue operation.



The set includes:

- › Lifting bags V 10, V 12, 2 x V 20, V 33L, V 35, 2 x V 50, V 59
- › 2 inflation hoses 12 bar, 5 m, yellow and red (174 psi, 16.4 ft.)
- › Air CU lighting, deadman controller
- › Pressure regulator : Inlet pressure 413 bar (6,000 psi)
Outlet pressure 13.78 bar (200 psi)

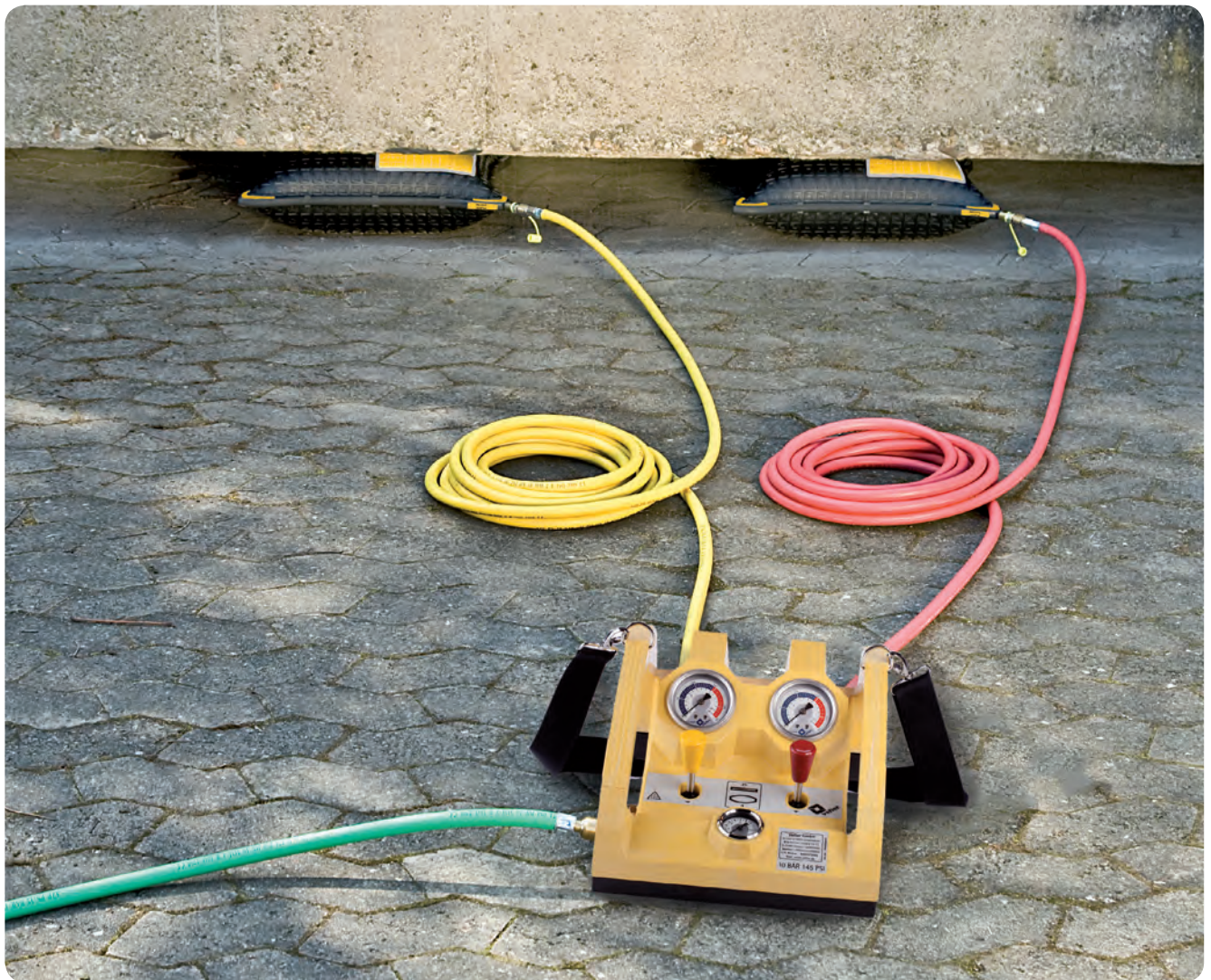
S.Tec12 Lifting Bags (12 bar / 174 psi)

**You want a set of lifting bags perfectly tailored to your requirements?
Just ask us. We'll be pleased to advise you.**

Your choice:

- › 14 different lifting bag sizes (square or rectangular shaped) with lifting power up to 112 US tons (102 tons)
- › 4 controllers (2 deadman versions, 2 fitting)
- › many different compressed air sources including compressed air cylinder, compressor, compressed air connection on vehicles

For the right accessories to assemble custom sets, see page 24.



Technical data*

S.Tec 12 Lifting Bags (12 bar / 174 psi)	Lifting power, max. ** US tons	Lifting height, max. inch	Size inch	Air requirement, at 12 bar / 174 psi cu. ft.	Weight, approx. lbs
V 1 1316000200	1.5	2.9	5.5 x 5.1	0.2	1.1
V 5 1316000300	5.1	4.8	10 x 7.9	0.8	2.9
V 7 1316000400	8.3	6.2	11 x 11	1.9	4.4
V 10 1316000500	11.1	7.0	12.6 x 12.6	4.3	5.8
V 12 1316000600	13.5	7.7	13.8 x 13.8	6.8	6.7
V 20 1316000700	22.2	9.6	17.3 x 17.3	10.5	10.6
V 26 1316003300	28.5	10.6	18.5 x 20.5	9.9	13.7
V 33L 1316000800	36.7	7.6	12.2 x 40.2	11.4	17.6
V 35 1316000900	38.2	11.8	20.5 x 24.4	16.9	18.2
V 40 1316003500	44.5	13.2	24 x 24	21.3	20.5
V 50 1316001000	55.2	14.8	26.6 x 26.6	28.2	26.2
V 59 1316001100	65.5	15.5	30.7 x 27.2	39	30.6
V 83 1316001200	91.1	18.3	33.9 x 33.9	58.1	42.1
V 102 1316001300	112.0	20.3	37.4 x 37.4	81.3	50.9

S.Tec 12 Lifting Bags (12 bar / 174 psi):

Working pressure: 12 bar (174 psi)

Test pressure: 18 bar (261 psi)

Burst pressure, at least: 48 bar (696 psi)

L = rectangular shaped lifting bag

Standard insertion height of only 0.98 inch (2.5 cm).

* Technical changes reserved.

** Actual lifting power after subtraction of the edge area.

Your choice of S.Tec 12 Lifting Bags depends on the weight to be lifted as well as the necessary lifting height. We'll be pleased to advise you.

Connectable Bags C.Tec12 (12 bar/174 psi)

Alone or combined - always a powerful team

- › High level of stability with lift heights up to 82 inches
- › Connect up to three bags together
- › No tools required
- › Up to 16 different combinations possible

Vetter Connectable Bags C.Tec12 are the perfect solution for enabling critical situations to be dealt with rapidly. They combine the lifting power of the Mini lifting bag and the lifting height of the known Vetter 1 bar lifting bag. As a result, the possibility exists to be able to react at all times to variable heights up to 82 inches. Thanks to the tool-free connection technology, the bags are ready for action in a few seconds. The load plate integrated into the bag guarantees a high level of stability and load-bearing capacity during the lifting procedure. The lifting of point loads and objects with sharp or pointed surfaces is possible without additional adapters.



Technical Data

Note: Each part number below contains (2) protection caps

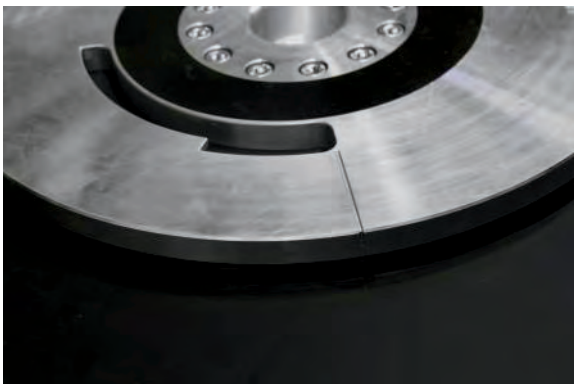
Connectable Bags VCB C. Tec (12 bar)	Diameter <i>inch</i>	Insertion height <i>inch</i>	Lifting height max. <i>inch</i>	Weight approx <i>lbs</i>	Lifting power max. <i>US ton</i>	Minimum lifting air requirement capacity <i>US ton</i>	at 12 bar / 174 psi. <i>cu. ft.</i>
VCB 30 C.Tec 12 106R162	22.2	3.5	11.5	39.7	33.2	7.0	14.8
VCB 75 C.Tec 12 106R163	35.0	3.5	18.1	75.2	82.3	13.0	52.0
VCB 172 C.Tec 12 106R164	53.2	4.5	27.2	128.1	189.3	16.0	178.0

Connectable Bags C.Tec 12 (12 bar / 174 psi):

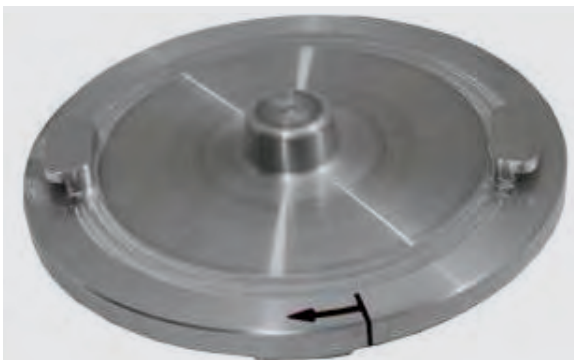
Operating pressure: 12 bar (174 psi)

Test pressure: 18 bar (261 psi)

Burst pressure, at least: 48 bar (696 psi)



Integrated load plate



Connection plate



In operations by ...

- › Rescuing trapped persons
- › Creating accesses
- › Natural catastrophes, building collapses and accidents



Good reasons:

- › Simple handling
- › Tool-free bag connection
- › Bags can be used individually or combined



Guaranteed quality:

- › Individually tested (with dated inspection seal)
- › Safety factor more than 4:1
- › EN Complies with EN 13731 (independently tested)
- › 2-year warranty



Connectable Bags C.Tec12 (12 bar)

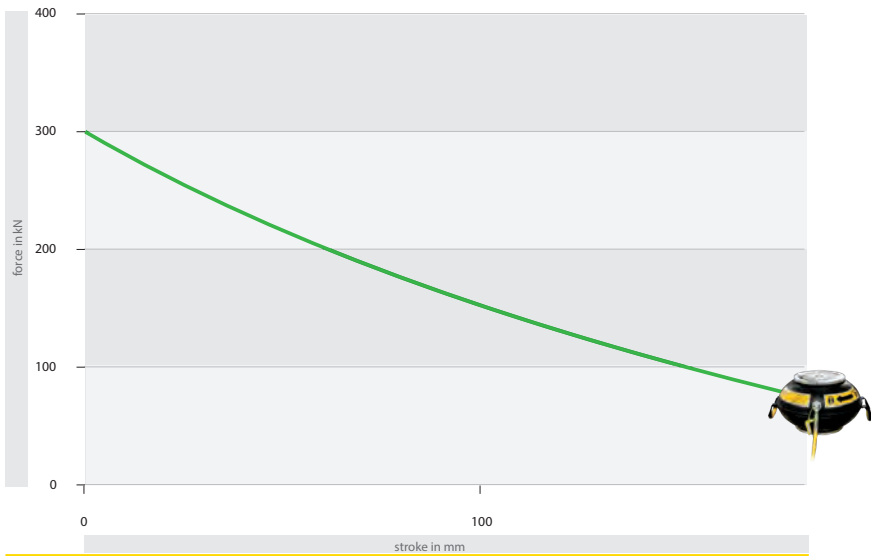
Are you looking for a lifting-bag set which is perfectly coordinated to your requirements? Contact us. We will be glad to advise you!

You have the following selection:

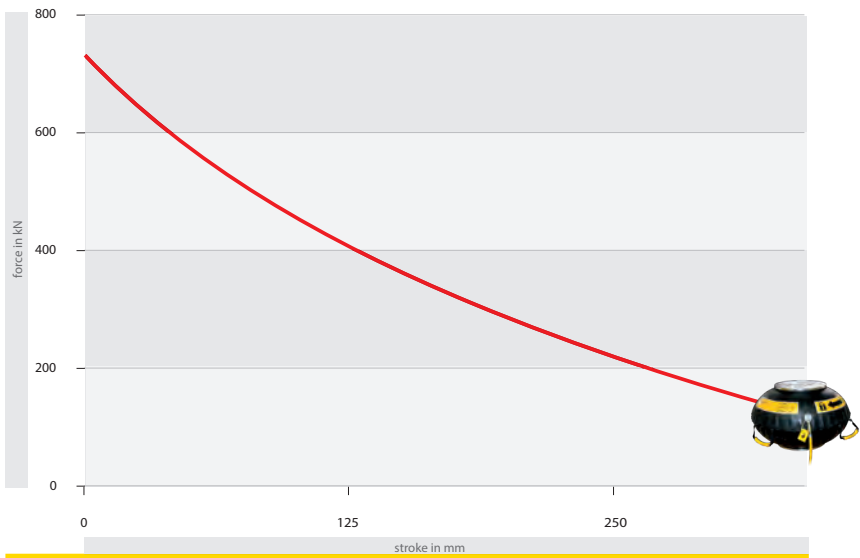
- › 3 different lifting-bag sizes with up to 189 US tons lifting power
- › 4 control devices (2 deadman versions, 2 fitting)
- › Many different compressed air sources, e.g. compressed air bottle, compressor, compressed air connection to the vehicle

You can find the right accessories for combining the individual sets from pages 20 & 21.

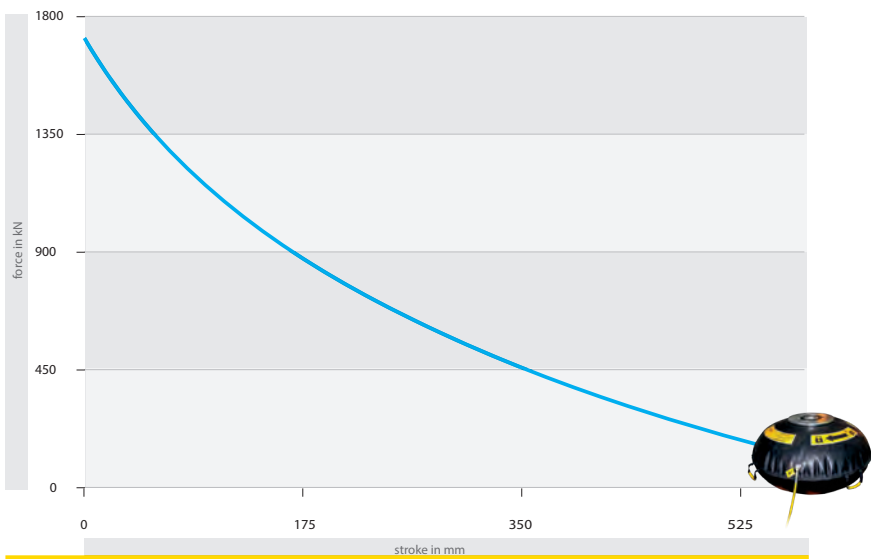




Load path diagram VCB 30



Load path diagram VCB 75



Load path diagram VCB 172



Case for accessories



Valise

Lifting bags (1 bar / 14.5 psi)

Versatile classic with great lifting height.

- › High stability
- › Minimal pressure point loading
- › Lifting height up to 43 inch (1.10 m)
- › Insertion height only 1.2 inch (3 cm)

Our classic lifting bag has proven itself in 40 years of service. Trust in handwork made in Germany and rely on the pneumatics professionals. Internal stabilizing straps keep the lifting bag from bulging and provide a flat contact area over the entire lifting height. Vetter lifting bags are distinguished by an ideal pressure distribution. In effect, they can also lift thin-walled coachwork such as lorries, vans or small airplanes without damaging them. On soft or slippery surfaces, the clever anti-slip dimples on the extremely tough top and bottom sides provide a firm hold.





Efficient lifting of overturned vehicles.



Stabilizing straps for a flat contact area.



Gentle lifting of sensitive structures.

All Vetter lifting bags (1 bar / 14.5 psi) have an insertion height of only 1.2 inch (3 cm).



In operation ...

- › Freeing trapped persons
- › Traffic accidents
- › Uprighting vehicles with thin-walled coachwork



Features:

- › Low pressure point loading
- › Constant lifting power over the entire lifting height
- › Working pressure adjustable from 0.1 to 1 bar (1.45 to 14.5 psi)
- › Side walls of high-quality aramid



Guaranteed quality:

- › Individually tested (with inspection seal)
- › Safety factor at least 3:1
- › Complies with EN 13731 (independently tested)
- › 2-year warranty



Lifting bag sets (1 bar / 14.5 psi)

Vetter lifting bags are available with deadman or fitting control.

The deadman control returns to the zero position automatically, preventing uncontrolled inflation of the lifting bag. The fitting control is operated with a ball valve. Careful: The air supply does not stop automatically.

The set described here include the following standard components:

- 2 inflation hoses 1 bar, 5 m, yellow and red (14.5 psi, 16.4 ft.)
- Air CU lighting, deadman controller
- Pressure regulator:
Inlet pressure 413 bar (6,000 psi)
Outlet pressure 13.78 bar (200 psi)
- Packing bag
- Repair material

Set with deadman controller

**Set up to 6.6 US tons
(6 tons)** **106R153**

2 lifting bags, type 1 / 6, 1 bar (14.5 psi)*

**Set up to 9.9 US tons
(9 tons)** **106R154**

2 lifting bags, type 1 / 9, 1 bar (14.5 psi)*

**Set up to 14.3 US tons
(13 tons)** **106R155**

2 lifting bags, type 1 / 13, 1 bar (14.5 psi)*

**Set up to 24.9 US tons
(23 tons)** **106R156**

2 lifting bags, type 1 / 23, 1 bar (14.5 psi)*



Technical data ***

Set with deadman control Note: All kits have Quick Action Couplings

Lifting bags (1 bar / 14.5 psi)		Lifting power <i>US tons</i>	Lifting height, max. <i>inch</i>	Air requirement, at 1 bar / 14.5 psi <i>cu. ft.</i>	Folded size (ø x h) <i>inch</i>	Weight, approx. <i>lbs</i>
Set 1 / 6	106R153	6.6	22	23	25.6 x 8.7	55
Set 1 / 9	106R154	9.9	30	47	31.5 x 8.7	71
Set 1 / 13	106R155	14.3	32	73	37 x 8.7	88
Set 1 / 23	106R156	24.9	50	213	49 x 8.7	128

Single bags Note: All bags have Quick Action Couplings

Lifting bags (1 bar / 14.5 psi)		Lifting power <i>US tons</i>	Lifting height, max. <i>inch</i>	Diameter <i>inch</i>	Air requirement, at 1 bar / 14.5 psi <i>cu. ft.</i>	Weight, approx. <i>lbs</i>
1 / 6 3110002301		3.3	22	24	12	15
1 / 9 3110002001		5.0	30	30	24	20
1 / 13 3110001601		7.2	32	36	37	26
1 / 23 3110000901		12.5	50	47	107	46

Lifting bags (1 bar / 14.5 psi):
Working pressure: 1 bar (14.5 psi)
Test pressure: 1.5 bar (21.75 psi)






**Standard insertion height
of only 1.2 inch (3 cm).**






** In accordance with EN 13731, these items are not approved for fire brigade use in the EU.





*** Technical changes reserved.






Accessories – Lifting Bags


12 bar (174 psi)


Inflation hose 12 bar (174 psi)	16.4 ft.	
		1200002000
		1200002100
		1200002200
		1200002300

Shut-off unit 12 bar (174 psi)	16.4 ft.	32 ft.	
		1200003000	1200003500
		1200003100	1200003600
		1200003200	1200003700
		1200003300	1200003800






Controller 12 bar (174 psi)	Dual	Single
Air CU lighting, Deadman controller, plastic housing		
	1200001700	--
Fitting controller		
	1200001800	1200001900
Deadman Controller, connectable, aluminum		
	1200005000	
Pressure Regulator (6000 psi)		
	266R178	






Shut-off unit 12 bar (174 psi),		
		1200004000
		1200004050
		1200004150
		1200004100

Shut-off unit 12 bar (174 psi)	
	1200004200

Pressure Reducer (12 bar-10 bar)	
	1200004300


10 bar (145 psi)

Inflation hose 10 bar (145 psi)	16.4 ft.	
		1000001801
		1000001901
		1000002001
		1000002101


Shut-off unit 10 bar (145 psi)	16.4 ft.	32 ft.	
		1000003100	1000003600
		1000003400	1000003900
		1000003500	1000004000
		1000003200	1000003700

Controller 10 bar (145 psi)	Dual	Single
-----------------------------	------	--------

Air CU lighting, Deadman controller, plastic housing		
--	--	--


	1000009100	--
---	------------	----

Deadman controller, connectable, aluminium		
--	--	--

	1000004800	
---	------------	--


Connection technology		
-----------------------	--	--

Connection plate		
------------------	--	--


	1000012100	
--	------------	--

Transportation		
----------------	--	--


Valise 25/30 C.Tec		
--------------------	--	--

	1000012500	
---	------------	--


Valise 62/75 C.Tec		
--------------------	--	--

	1000012600	
---	------------	--






Valise 143/72 C.Tec		
---------------------	--	--

	1000012700	
---	------------	--

Case with accessories		
-----------------------	--	--

	1200006300 1000013100 Case only	
---	------------------------------------	--

Shut-off unit 10 bar (145 psi)		
--------------------------------	--	--

		1000002900
		1000002950
		1000003050
		1000003000

Shut-off unit 10 bar (145 psi)		
--------------------------------	--	--


	1000002800	
--	------------	--

Pressure Regulator (6000 psi)		
-------------------------------	--	--


	266R178	
---	---------	--

Protection cap		
----------------	--	--


Protection cap VCB 25/30		
--------------------------	--	--

	1000012800	
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Protection cap VCB 62/75		
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	1000012900	
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Protection cap VCB 143/72		
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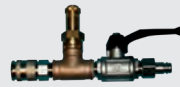
	1000013000	
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Accessories – Lifting Bags

1 bar (14.5 psi)

Inflation hose 1 bar (14.5 psi)	16.4 ft.	32 ft.
	 0100004100	0350007401
	 0100004000	0350033500
Controller 1 bar (14.5 psi)	Dual	Single
Air CU Deadman controller, lighted plastic housing		
	0100005000	--
Fitting controller*		
	0100001803	0100001503

Shut-off unit 1 bar (14.5 psi)*









0100000301

Pressure Regulator (6000 psi)



266R178

Inflation with alternative air source*

Air-supply hose, green	10 m (32 ft.), with shut-off valve
	1600013601
Adapter for truck tire inflation system	
	1600007800
Truck brake line	
Truck compressed air connector, 2 way	
	1600007500
Sealing-off cap	
	1600012600
Compressor	
Adapter for construction-site compressor	
	1600012000
Adapter for portable compressor	
	1600008200

Commercially available hand and foot pump

Truck tire valve



1600008000

Truck tire valve connector



1600012900

Stationary compressed air network

Pre-pressure regulator, maximum inlet pressure 16 bar (232 psi)**



1600014500

Inflation with Vetter hand and foot pump, no further adapters or hoses needed.

Hand pump, 520 cc/stroke



1600008700

Foot pump, 420 cc/stroke



1600009400

Adapter set for all compressed air sources



1600012501

* In accordance with EN 13731, these items are not approved for fire brigade use in the EU.
 ** Note: If the outlet pressure of the compressed air network exceeds the allowed inflation pressure of the controller, then the adapter must be replaced with the pre-pressure regulator.

Vetter resistance charts

Durable leak seal for high-pressure pipes.

Since your products have to withstand thermal as well as chemical requirements, Vetter gives you detailed resistance information.

The data is based on laboratory tests, experience and are influenced by such factors as temperature, intensity, length of exposure etc.

These symbols indicate degrees of resistance:

- + resistant o conditionally resistant
 – not-resistant n. d. no details

Temperature resistance limits

Products	Cold resistance	Cold flexible	Heat resistance, long term	Heat resistance, short term
Connectable Bags C.Tec 12 bar (174 psi) S.Tec 12 Lifting Bags 12 bar (174 psi) Ultra flat bags S. Tec 10 bar				
Wedge lifting bags and lifting bags 1 bar (14.5 psi)	- 40 °C	- 20 °C	+ 70 °C	+ 85 °C

Please notice:

An expanding material reacts to chemicals a lot quicker than when it is in the non-operative condition. This means, the greater the expansion, the lower the chemical resistance. Resistance also depends on material thickness, which is attributable to diffusion. Because of that, our resistance list can only give you points of reference.

We will gladly provide material samples to users wishing to conduct their own chemical resistance tests.

Material list

Products	Material	Support material
Lifting bags 1 bar (14.5 psi) Wedge lifting bags 1 bar (14.5 psi) (Bottom and top)	CR	Aramide / Polyester
Connectable Bags C.Tec 12 bar (174 psi) S.Tec 12 Lifting Bags 12 bar (174 psi) Ultra flat bags S.Tec 10 bar (145 psi)	CR	Aramide
Wedge lifting bags 1 bar (14.5 psi) (Sidewalls)	PVC	Polyester
Inflation hoses and air supply hoses (outside)	EPDM	Polyester

Chemical Resistance

Description of material	CR	Description of material	CR	Description of material	CR
Aceton	o	Petroleum	o	Mineral oil	+
Acetylene	+	Acetic acid	o	Sodium carbonate	+
Alum, watery	+	Fatty acid	+	Ozone	+
Aluminium chloride	+	Formaldehyde	+	Paraffin	+
Anilene	-	Glucose	+	Perchloric acid	o
ASTM-oil 1	o	Heating oil	+	Phenol (watery)	-
Petrol	o	Potassium chloride	+	Phosphoric acid (concentrated)	-
Benzene	-	Calcium chloride	+	Mercury	+
Boric acid	+	Calcium nitrate	+	Nitric acid (fuming)	-
Bromine (moist)	-	Carbon dioxide	+	Sulphur dioxide (dry)	-
Butyric acid	-	Carbon monoxide	+	Sulphur acid (50 %)	+
Chlorine gas (moist)	-	Copper sulphate	+	Nitrogen	+
Chlorine (wet)	o	Adhesive	+	Carbon tetrachloride	-
Diesel fuel	o	Methyl chloride	-	Animal fat	+
Iron chloride	+	Sea water	+	Toluene	-

+ resistant o conditionally resistant - not-resistant n. d. no details

*Technical changes reserved.



VETTER USA. A MEMBER OF THE HURST
JAWS OF LIFE FAMILY OF RESCUE BRANDS



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