

Industrial Pneumatics.



Pneumatic Products for industrial applications

Product catalogue



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Special constructions

VETTER - Always one idea ahead!

- › different materials
- › precise regulation without stepping
- › many sizes and shapes possible
- › numerous application areas

It is precisely in the industrial sector that you will often find tool applications especially tailored to individual requirements.

In this respect such aspects as flexibility and versatility are in the forefront. Pneumatic constructions are developed and produced in cooperation with the customer.

The customer has numerous possibilities available with respect to material, operating pressure, size, shape, inflation connection, resistance etc.



Pipe grip with internal expansion



Pipe grip with external expansion



Gel packer with necking



Testing device for pipe tunnel

Industrial Bags 8bar/116psi - IKV and V series

Noiseless and bump-free tools.

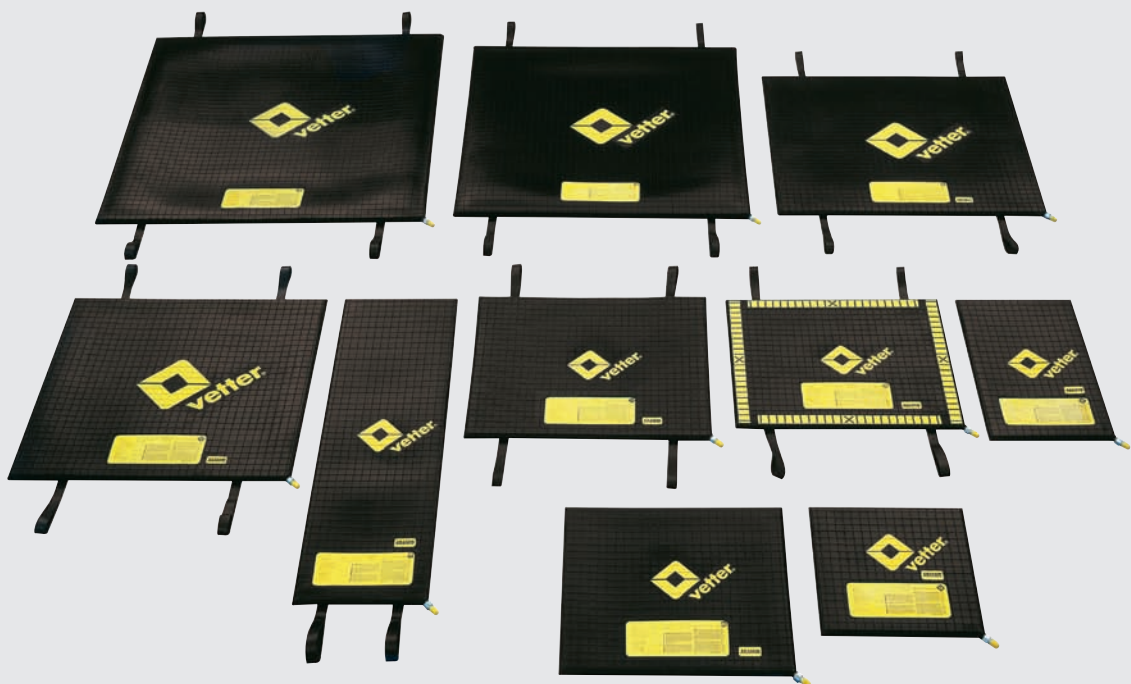
- › very rapid
- › Positioning accurate within millimetres
- › Type marking = lifting power
- › Inflation with water possible

Vetter industrial lifting bags 8 bar (116 psi) are characterized by their noiseless, bump-free and smooth lifting of the most heavy loads. They lift, press, compress, brace and cleave – even in angled positions.

The surface profile improves the gripping capability on slippery ground such as grass, sand etc. They have a multi-layer construction which widely extends over both sides of the bag. This is made of aramide.

Inflation of industrial lifting bags can be made with air as well as water. Accessories necessary for inflation can be individually put together.

As an alternative the industrial bags 8 bar (116 psi) can also be supplied with smooth surfaces, other inflation connections (e.g. in the centre), in special sizes or shapes or with other maximum operating pressures.



Industrial bags belonging to the **IKV series** have been especially developed for applications having high frequency rates, e.g.:

- › Securing devices in presses or other types of machines
- › Regular pressing or lifting of loads
- › Shape ejection out of production lines.

Industrial bags belonging to the **V series** are best suited for temporary operations, e.g.:

- › Assembly and maintenance work on machines and other types of equipment
- › Conversion and adjustment of heavy loads.

Technical data

Industrial Bags 8 bar (116 psi)		Lifting power to / US tons	Lifting height, max. cm / inch	Size cm / inch	Air requirement litres / cu.ft.	Weight, approx. kg / lbs
IKV 1	V 1	1.0	7.5	14 x 13	2.7	0.5
5100010800	1314009300	1.1	3.0	5.5 x 5.1	0.1	1.1
IKV 3	V 3	3.3	12.0	25.5 x 20	15.8	1.0
5100010900	1314009500	3.6	4.7	10 x 7.9	0.6	2.2
IKV 5	V 5	5.7	14.5	28 x 28	28.4	1.4
5100011000	1314018200	6.3	5.7	11 x 11	1.0	3.1
IKV 6	V 6	6.4	16.5	29.5 x 29.5	39.6	1.9
5100011100	1314009600	7.0	6.5	11.6 x 11.6	1.4	4.2
IKV 10	V 10	9.6	20.3	37 x 37	82.8	3.3
5100011200	1314002200	10.6	8.0	15 x 15	2.9	7.3
IKV 12	V 12	12.0	20.0	32 x 52	96.3	3.9
5100010600	1314002400	13.2	7.9	13 x 20	3.4	8.6
IKV 18	V 18	17.7	27.0	47 x 52	195.3	5.7
5100011300	1314002500	19.5	10.6	19 x 20	6.9	12.6
IKV 20	V 20	19.4	28.0	48 x 58	224.1	6.2
5100011400	1314011800	21.4	11.0	19 x 23	7.9	13.7
IKV 24	V 24	24.0	30.6	52 x 62	296.1	7.2
5100011500	1314002600	26.5	12.0	20 x 24	10.4	15.9
IKV 24 L	V 24 L	24.0	20.1	31 x 102	211.5	6.8
5100011600	1314002700	26.5	7.9	12 x 40	7.5	15.0
IKV 31	V 31	31.4	37.0	65 x 69	517.5	10.1
5100011700	1314002800	34.6	14.6	26 x 27	18.0	22.3
IKV 35 L	V 35 L	35.8	31.0	43 x 115	349.4	10.0
5100011800	1314018300	39.5	12.2	17 x 45	12.3	22.1
IKV 40	V 40	39.6	40.2	78 x 69	675.0	12.2
5100011900	1314002900	43.7	15.8	31 x 27	23.6	26.9
IKV 48	V 48	49.3	45.5	82 x 82	900.0	14.4
5100012000	1314028300	54.3	17.7	32 x 32	31.8	31.8
IKV 54	V 54	54.4	47.8	86 x 86	1,117.8	17.3
5100012100	1314003000	60.0	18.8	34 x 34	39.5	38.1
IKV 68	V 68	67.7	52.0	95 x 95	1,457.1	20.7
5100012200	1314003100	74.6	20.5	37 x 37	51.4	45.6

Industrial Bags (8 bar/116 psi): L = rectangular shaped lifting bag
 Operating pressure: 8 bar (116 psi)
 Test pressure: 14 bar (203 psi)
 Burst pressure at least.: 32 bar (464 psi)

Sizes IKV 1 (V 1) – IKV 40 (V 40) have an insertion height of 2.5 cm (0.98 inch), IKV 48 (V 48) – IKV 68 (V 68) 2.8 cm (1.1 inch).

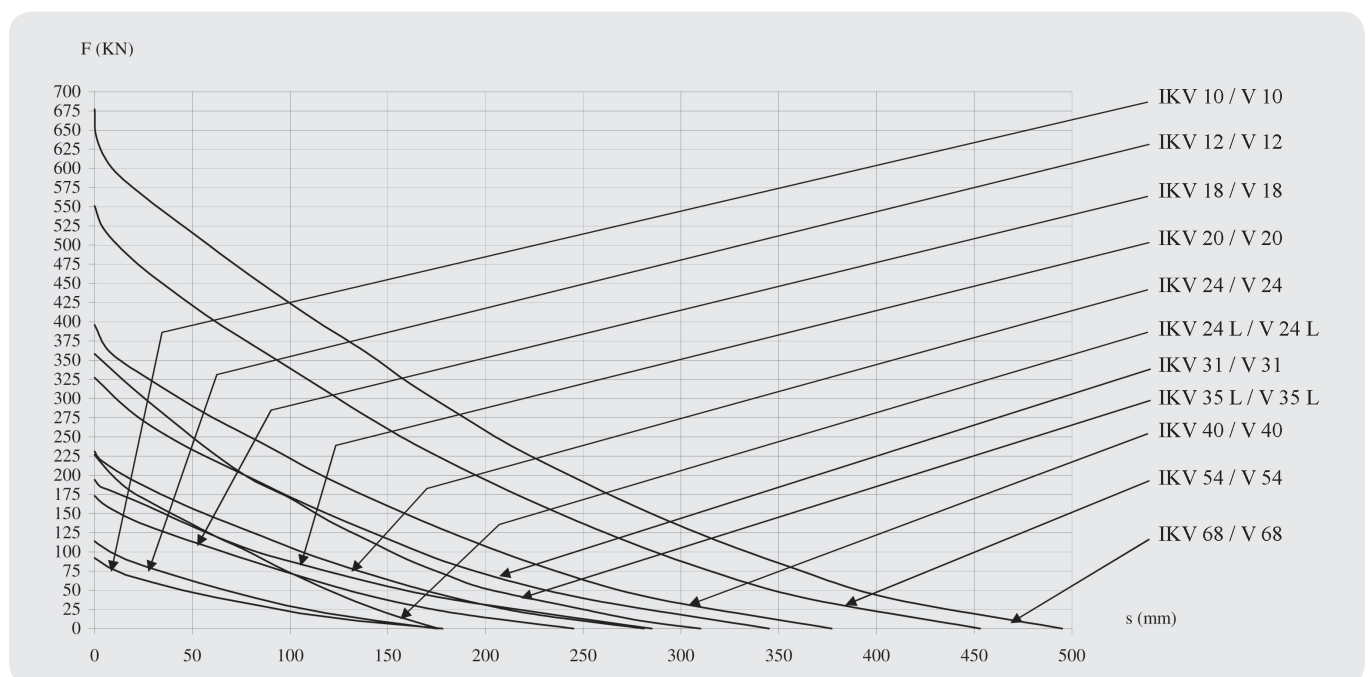
In order to use the maximum lifting power, the total effective area, i.e. total area minus the edge zone, must be completely positioned underneath the load to be lifted and the bag must be inflated to the maximum permissible operating pressure.

Selection of the industrial lifting bag depends on the weight of the load to be lifted as well as the lifting path

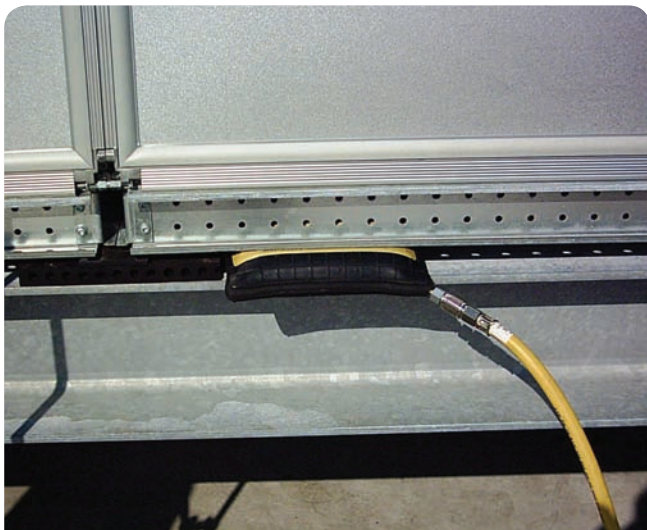
This means that the industrial lifting bag develops the greatest lifting power at the beginning of the lift path and the greatest possible lifting height in the unloaded state. This results in the fact that the lift path reduces with increasing weight. The load-path diagram shown here illustrates this.

Load-path diagrams of the individual bags can be obtained on request.

Load path diagram IKV 10 - IKV 68 / V 10 - V 68



Examples for applications of the industrial bags of the V series



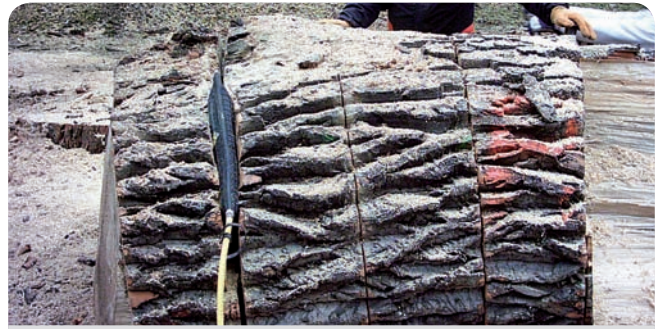
Small insertion height from 2.5 cm (0.98 inch)



Substructure support of bridge elements



Lifting of trucks



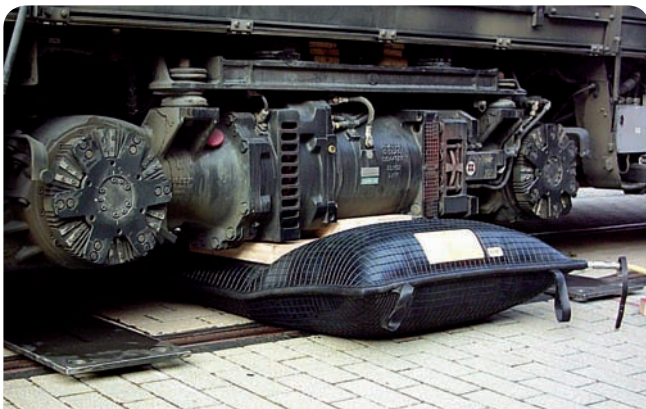
Cleave of a trunk



Creating intermediate space



Assembly of wind energy installations



Train lifting



Assembling aid for adjustment of the elements

Industrial Bags 6bar/87psi - IK series

Tools which are tailored to your requirements.

- › high lifting power + quality standard
- › Connection of up to 3 bags possible
- › Extremely wear-proof and slip-proof
- › Centre valve connection (either 1/4" or 1/2")

Industry requires tools which are tailored to requirements.

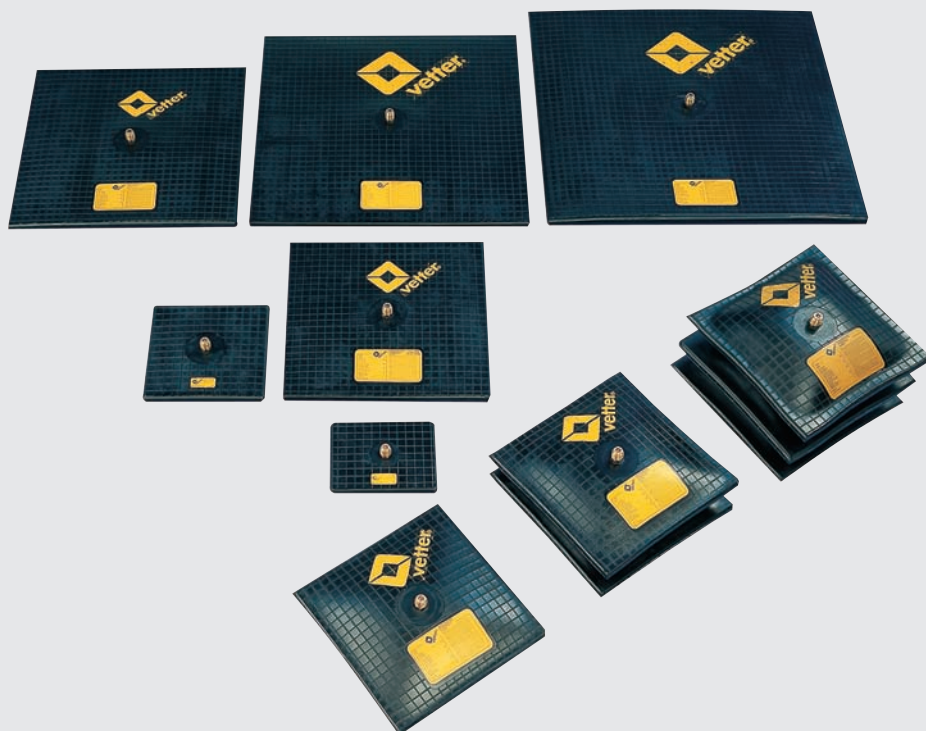
The industrial bags 6 bar (87 psi) are used in industrial production, e.g.:

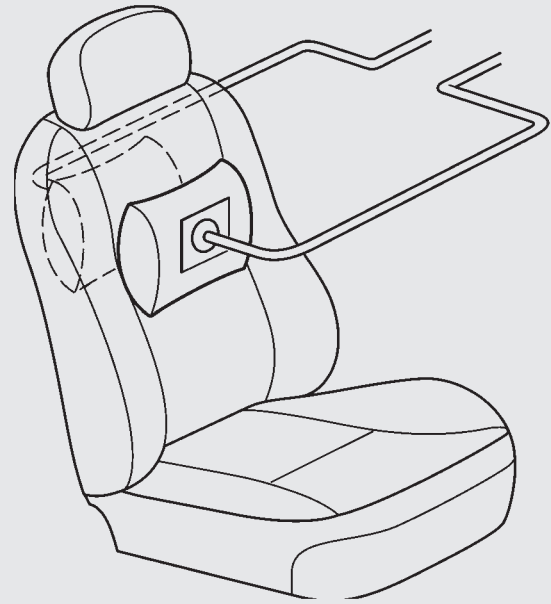
- › automotive
- › machine engineering
- › building construction
- › shipbuilding.

With respect to these factors they are characterized by their lifting power, high quality standard and their excellent adaptation capability.

As a standard, the industrial bags are supplied with a surface profile – increasing grip – and a centred air connection.

As an alternative the industrial bags can also be fitted with a side connection, have a smooth surface and be supplied in other sizes and shapes (e.g. rhombic).





Technical data







Industrial Bags 6 bar (87 psi)	Lifting power to / US tons	Lifting height, max. cm / inch	Size cm / inch	Air requirement litres / cu.ft.	Weight, approx. kg / lbs
IK 3	2.9	12.0	25 x 25	11.2	1.5
5100000200	3.2	4.7	9.9 x 9.9	0.4	3.3
IK 4	4.3	16.0	30 x 30	32.9	2.5
5100001200	4.7	6.3	11.8 x 11.8	1.2	5.5
IK 8	8.2	22.5	40 x 40	75.6	3.9
5100001400	9.0	8.9	15.8 x 15.8	2.7	8.6
IK 13	13.3	27.0	50 x 50	154.7	6.5
5100001600	14.7	10.6	19.7 x 19.7	5.5	14.3
IK 19	19.5	28.0	60 x 60	294.0	8.9
5100001800	21.5	11.0	23.6 x 23.6	10.4	19.6
IK 27	26.9	30.0	70 x 70	497.0	13.0
5100002000	29.7	11.8	27.6 x 27.6	17.6	28.7
IK 35	35.6	32.0	80 x 80	735.0	17.0
5100002200	39.3	12.6	31.5 x 31.5	26.0	37.5







* with smooth surface 2.2 cm/0.87 inch
All data applies to the fixed built-in condition!


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


Accessories - Inflation of the bags


8 bar (116 psi)




Inflation hose 8 bar (116 psi)		5 m (16.4 ft.)	10 m (32 ft.)
		0800000901	0800007401
		0800000601	0800007801
		0800000801	0800007501
		0800001301	0800007601
		0800000701	0800007901


Shut-off unit 8 bar (116 psi)		5 m (16.4 ft.)	10 m (32 ft.)
		0800008201	0800008301
		0800008801	0800008901
		0800009001	0800009101
		0800008401	0800008501
		0800008601	0800008701

Controller 8 bar (116 psi)	Dual	Single
Deadman control, plastic housing		
	0800001600	--

Deadman control, aluminium	
	<div>08000002010800000401</div>

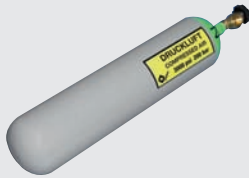
Fitting control	
	<div>08000024010800002001</div>

Shut-off unit 8 bar (116 psi), 0.3 m (1 ft.)	
	 0800007201
	 0800007301

Shut-off unit 8 bar (116 psi)	
	0800005800

Inflation with cylinder

Compressed air cylinder



1 l / 200 bar (0.04 cu.ft. / 2,900 psi), steel, 5/8" IT, 200 l (7.1 cu.ft.)

1600010100

6 l / 300 bar (0.21 cu.ft. / 4,350 psi), steel, 5/8" IT, 1,800 l (63.5 cu.ft.)

1600010800

9 l / 300 bar (0.32 cu.ft. / 4,350 psi), composite, 5/8" IT, 2,700 l (95.3 cu.ft.)

1600019900

10 l / 200 bar (0.35 cu.ft. / 2,900 psi), steel, 5/8" IT, 2,000 l (70.6 cu.ft.)

1600010500

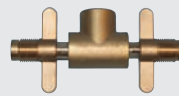
Dual connector, for simultaneous attachment of 2 compressed air cylinders, thread 5/8"

200 bar (2,900 psi)



1600008400

300 bar (4,350 psi)



1600009100

Pressure regulator 200 / 300 bar (2,900 / 4,350 psi), with maximum outlet pressure 12 bar (174 psi)



1600029300
1600026200 (USA)

Inflation with alternative air source*

Air-supply hose, green



10 m (32 ft.)

1600013401

10 m (32 ft.), with shut-off valve

1600013601

Adapter for truck tyre inflation system



1600007800

Commercially available hand and foot pump

Truck tyre valve



1600008000

Truck tyre valve connector



1600012900

* For every air source other than the compressed air cylinder, you need one of the two green air-supply hoses.

Accessories - Inflation of the bags

Truck brake line

Truck compressed air connector, 2 way



1600007500

Sealing-off cap



1600012600

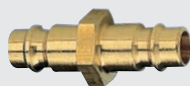
Compressor

Adapter for construction-site compressor



1600012000

Adapter for portable compressor



1600008200

Stationary compressed air network

Adapter for stationary compressed air network



1600008200

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



1600014500

Adapter set for all compressed air sources

1600012501



Air-supply hose, 10 m (32 ft.), green

1600013401

Air-supply hose, 10 m (32 ft.), green with shut-off valve

1600013601

Adapter for truck tyre inflation system

1600007800

Truck tyre valve

1600008000

Truck tyre valve connector

1600012900

Truck compressed air connector

1600007500

Sealing-off cap

1600012600

Adapter for construction-site compressor

1600012000

Adapter for stationary compressed air network

1600008200

Bag 18 x 40 cm (7 x 16 inch)

1520002500

** 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

Transparency for your safety.

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

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
Industrial lifting bags 6 bar (87 psi)	NR	Nylon cord
Industrial lifting bags 8 bar (116 psi)	CR	Aramide
Inflation hoses and air supply hoses (outside)	EPDM	Polyester

Temperature resistance limits

Products	Cold resistance	Cold flexible	Heat resistance, long term	Heat resistance, short term
Industrial lifting bags 6 bar (87 psi)	– 40 °C	– 20 °C	+ 90 °C	+ 115 °C
Industrial lifting bags 8 bar (116 psi)				
Rubber hoses	– 40 °C	– 30 °C	+ 90 °C	--
Rubber hoses: plastic, aluminium- and fitting	– 20 °C	--	+ 50 °C	--

Resistance charts

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

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



A part of the IDEX Corporation.

Vetter GmbH is part of the international IDEX Corporation. This corporation invests in successful medium-sized companies in highly specialised markets. All members of the group have two things in common: strong technical orientation and innovative strength.

As our customer, you will benefit twice: on the one hand from our international practical knowledge and on the other hand from the intensive transfer of skills and know-how within the corporate group. This know-how contributes directly to the development of sophisticated and high-performing products.



www.idexcorp.com



The all-round manufacturer for specialized industrial pneumatics

Owing to the intensive work for customers throughout the world, Vetter was able to create an extensive product range which has become indispensable in many fields. Vetter stands for specialized technical knowledge. Based on this we develop optimally tailored pneumatic solution for different application areas.

- **Rescue products**
- **Medical Tents**
- **Aircraft Lifting Bags**
- **Pipe and Test Sealing Bags**

All products as well as detailed information and the catalogue for downloading can be found on our internet website under

www.vetter.de

Place your trust in industrial pneumatics!

We are the company who can help you, find a solution to your problem!

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