

50 Years
Reliable. Every time. Everywhere.

Industrial Pneumatics.



Pneumatic Products for industrial applications

Product catalogue



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Special constructions

VETTER - Always one idea ahead!

- › different materials
- › many sizes and shapes possible
- › precise regulation without stepping
- › 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 5100010800 | V 1 1314009300 | 1.0 1.1 | 7.5 3.0 | 14x13 5.5x5.1 | 2.7 0.1 | 0.5 1.1 |
| IKV 3 5100010900 | V 3 1314009500 | 3.3 3.6 | 12.0 4.7 | 25.5x20 10x7.9 | 15.8 0.6 | 1.0 2.2 |
| IKV 5 5100011000 | V 5 1314018200 | 5.7 6.3 | 14.5 5.7 | 28x28 11x11 | 28.4 1.0 | 1.4 3.1 |
| IKV 6 5100011100 | V 6 1314009600 | 6.4 7.0 | 16.5 6.5 | 29.5x29.5 11.6x11.6 | 39.6 1.4 | 1.9 4.2 |
| IKV 10 5100011200 | V 10 1314002200 | 9.6 10.6 | 20.3 8.0 | 37x37 15x15 | 82.8 2.9 | 3.3 7.3 |
| IKV 12 5100010600 | V 12 1314002400 | 12.0 13.2 | 20.0 7.9 | 32x52 13x20 | 96.3 3.4 | 3.9 8.6 |
| IKV 18 5100011300 | V 18 1314002500 | 17.7 19.5 | 27.0 10.6 | 47x52 19x20 | 195.3 6.9 | 5.7 12.6 |
| | V 20 1314011800 | 19.4 21.4 | 28.0 11.0 | 48x58 19x23 | 224.1 7.9 | 6.2 13.7 |
| IKV 24 5100011500 | V 24 1314002600 | 24.0 26.5 | 30.6 12.0 | 52x62 20x24 | 296.1 10.4 | 7.2 15.9 |
| IKV 24 L 5100011600 | V 24 L 1314002700 | 24.0 26.5 | 20.1 7.9 | 31x102 12x40 | 211.5 7.5 | 6.8 15.0 |
| IKV 31 5100011700 | V 31 1314002800 | 31.4 34.6 | 37.0 14.6 | 65x69 26x27 | 517.5 18.0 | 10.1 22.3 |
| | V 35 L 1314018300 | 35.8 39.5 | 31.0 12.2 | 43x115 17x45 | 349.4 12.3 | 10.0 22.1 |
| IKV 40 5100011900 | V 40 1314002900 | 39.6 43.7 | 40.2 15.8 | 78x69 31x27 | 675.0 23.6 | 12.2 26.9 |
| IKV 54 5100012100 | V 54 1314003000 | 54.4 60.0 | 47.8 18.8 | 86x86 34x34 | 1,117.8 39.5 | 17.3 38.1 |
| IKV 68 5100012200 | V 68 1314003100 | 67.7 74.6 | 52.0 20.5 | 95x95 37x37 | 1,457.1 51.4 | 20.7 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 54 (V 54) – IKV 68 (V 68) 2.8 cm (1.1 inch).

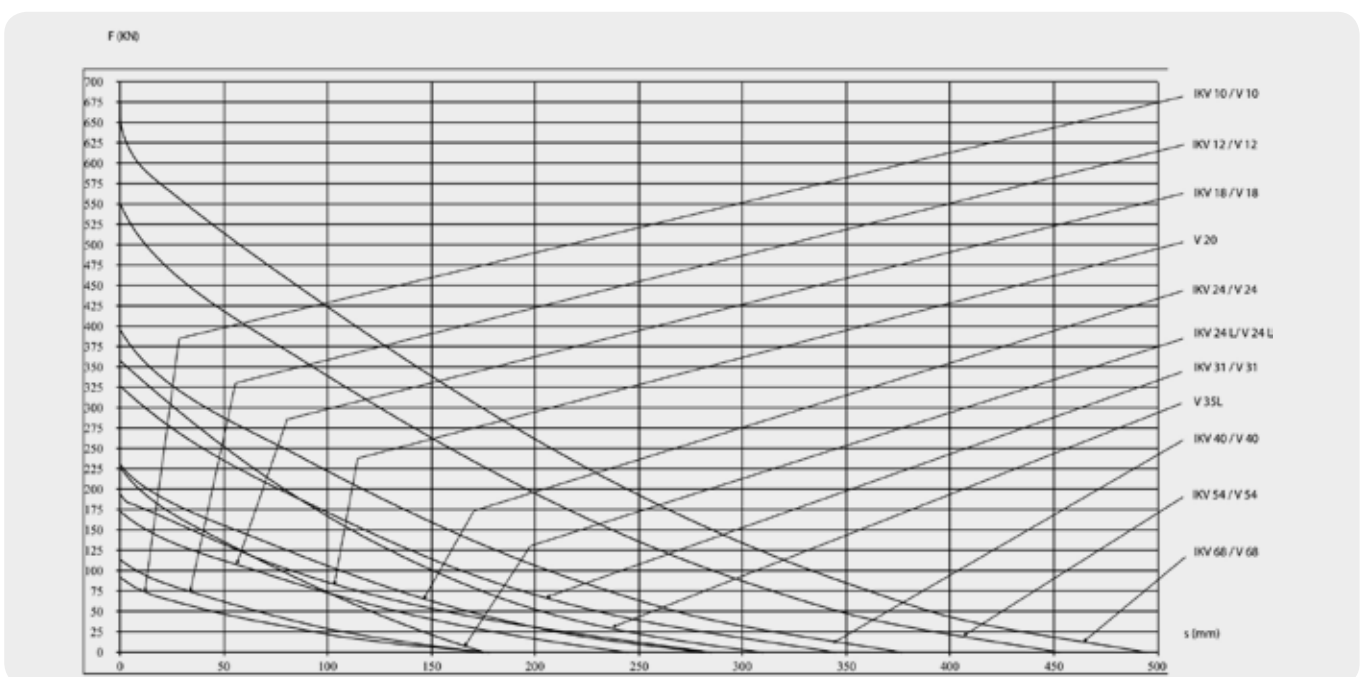
In order to use the maximum lifting power, the total effective area, i.e. total area minus the edge zone, must be completely positioned underneath the load to be lifted and the bag must be inflated to the maximum permissible operating pressure.

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

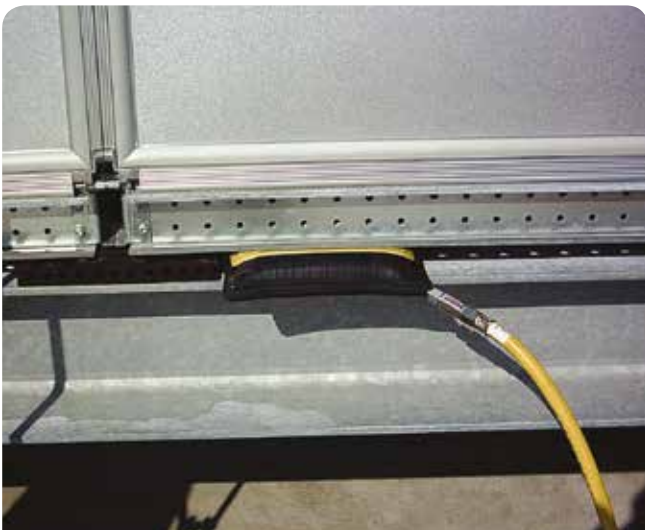
This means that the industrial lifting bag develops the greatest lifting power at the beginning of the lift path and the greatest possible lifting height in the unloaded state. This results in the fact that the lift path reduces with increasing weight. The load-path diagram shown here illustrates this.

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 of 2.5 cm (0.98 inch)



Substructure support of bridge elements



Lifting of trucks



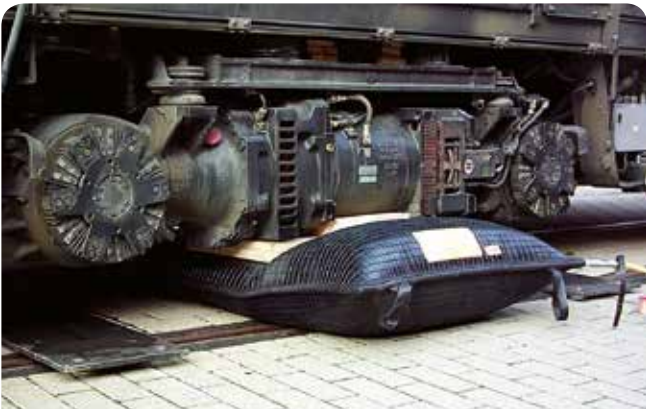
Cleave of a trunk



Creating intermediate space



Assembly of wind energy installations




Train lifting







Assembling aid for adjustment of the elements


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 |
| | ● 0800001301 | 0800007601 |

| Controller 8 bar (116 psi) | Dual | Single |
|---|------------|------------|
| Deadman control, plastic housing, lighting | | |
|  | 0800019900 | -- |
| Deadman controller, aluminium style, connectable | | |
|  | 0800015800 | -- |
| Fitting control | | |
|  | 0800002401 | 0800002001 |

| 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

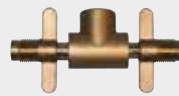
Dual connector, for simultaneous attachment of 2 compressed air cylinders, thread 5/8"

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 14 bar (203 psi)



1600031900
1600032000 (USA)

Inflation with alternative air source*

Air-supply hose, green



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 the green air-supply hose.

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 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
- not-resistant
- o conditionally 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 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 8 bar (116 psi) | -40 °C | -20 °C | +90 °C | +115 °C |
| 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
- not-resistant
- o conditionally resistant
- n. d. no details



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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.



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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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