

# Pneumatic products for industrial applications

Product catalogue



## Content

### Special constructions

Custom-made products Page 3

### Industrial bags 8 bar (116 psi)

Industrial bags 8 bar (116 psi): V and IKV series Page 4

### Accessories

Inflation of the bags Page 8

### IDEX Units

Lukas – moving your projects Page 11

### Vetter resistance lists

Temperature resistance, material and resistance lists Page 16



# Special constructions

## Special tools for every application

- › different materials
- › many sizes and shapes possible
- › precise and steplessly variable
- › numerous applications

We implement your tool idea: Especially in the industrial sector, special tools tailored to individual needs are often required. This is where our special and custom-made products come in: Together with our customers, we develop and manufacture pneumatic constructions for every application. Flexibility and versatility are the top priorities: Whether material, operating pressure, size, shape, filling connection or resistance – our customers can choose from many different options, have a say themselves and create their desired tool together with our experts.



Pipe gripper with internal expansion



Pipe gripper with external expansion



Gel packer with constriction



Testing device Pipe jacking

# Industrial bags 8 bar (116 psi): V and IKV series

## The silent powerhouse

- › in a flash
- › type designation = lifting power
- › can be controlled with

Even the heaviest loads lifted quickly: The Vetter industrial bags 8 bar (116 psi) are real performance wonders and lift, push, press, prise and split even the heaviest loads with ease - and even in inclined position. They operate silently, smoothly and steplessly.

Due to their multi-layer construction (aramid armouring), which covers each side of the bag broadly, they are extremely robust and at the same time particularly light weight. Their surface profile ensures improved grip even on slippery surfaces such as grass or sand. 8 bar industrial bags can be filled with both air and water. The necessary accessories can be put together individually.

### Optionally, we also offer the 8 bar (116 psi) industrial bags:

- with smooth surface
- with other inflation connections (e.g. central)
- in special sizes or shapes
- with other operating pressures

**Just get in touch with us and together we will find the right model for your purpose.**

## The right bags for every application



The industrial bags of the **V-Series** are particularly suitable for **temporary applications**, such as:

- › Assembly and maintenance work on machines and other equipment
- › Moving and adjusting heavy loads

The industrial bags of the **IKV series** have been specially developed for applications with **high lifting frequencies**, such as:

- › Closing device in presses or other machine
- › Regular pressing or lifting of loads
- › Mould ejection in production lines

## Technical Data\*

The sizes V 1 (IKV 1) – V 40 (IKV 40) have an insertion height of 2.5 cm (0.98 inch), V 54 (IKV 54) – V 68 (IKV 68) of 2.8 cm (1.1 inch).

Industrial bags 8 bar (116 psi)		Lifting power	Lifting height**, max.	Size	Air requirement	Weight, approx.
		to / US tons	cm / inch	cm / inch	Liter / cu.ft.	kg / lbs
<b>V 1</b> 1314009300	<b>IKV 1</b> 5100010800	1.0 1.1	7.5 3.0	14x13 5.5x5.1	2.7 0.1	0.5 1.1
<b>V 3</b> 1314009500	<b>IKV 3</b> 5100010900	3.3 3.6	12.0 4.7	25.5x20 10x7.9	15.8 0.6	1.0 2.2
<b>V 5</b> 1314018200	<b>IKV 5</b> 5100011000	5.7 6.3	14.5 5.7	28x28 11x11	28.4 1.0	1.4 3.1
<b>V 6</b> 1314009600	<b>IKV 6</b> 5100011100	6.4 7.0	16.5 6.5	29.5x29.5 11.6x11.6	39.6 1.4	1.9 4.2
<b>V 10</b> 1314002200	<b>IKV 10</b> 5100011200	9.6 10.6	20.3 8.0	37x37 15x15	82.8 2.9	3.3 7.3
<b>V 12</b> 1314002400	<b>IKV 12</b> 5100010600	12.0 13.2	20.0 7.9	32x52 13x20	96.3 3.4	3.9 8.6
<b>V 18</b> 1314002500	<b>IKV 18</b> 5100011300	17.7 19.5	27.0 10.6	47x52 19x20	195.3 6.9	5.7 12.6
<b>V 20</b> 1314011800		19.4 21.4	28.0 11.0	48x58 19x23	224.1 7.9	6.2 13.7
<b>V 24</b> 1314002600	<b>IKV 24</b> 5100011500	24.0 26.5	30.6 12.0	52x62 20x24	296.1 10.4	7.2 15.9
<b>V 24 L</b> 1314002700	<b>IKV 24 L</b> 5100011600	24.0 26.5	20.1 7.9	31 x 102 12 x 40	211.5 7.5	6.8 15.0
<b>V 31</b> 1314002800	<b>IKV 31</b> 5100011700	31.4 34.6	37.0 14.6	65x69 26x27	517.5 18.0	10.1 22.3
<b>V 35 L</b> 1314018300		35.8 39.5	31.0 12.2	43 x 115 17 x 45	349.4 12.3	10.0 22.1
<b>V 40</b> 1314002900	<b>IKV 40</b> 5100011900	39.6 43.7	40.2 15.8	78x69 31x27	675.0 23.6	12.2 26.9
<b>V 54</b> 1314003000	<b>IKV 54</b> 5100012100	54.4 60.0	47.8 18.8	86x86 34x34	1,117.8 39.5	17.3 38.1
<b>V 68</b> 1314003100	<b>IKV 68</b> 5100012200	67.7 74.6	52.0 20.5	95x95 37x37	1,457.1 51.4	20.7 45.6

\* Subject to technical changes. / \*\* Please note our load path diagram!

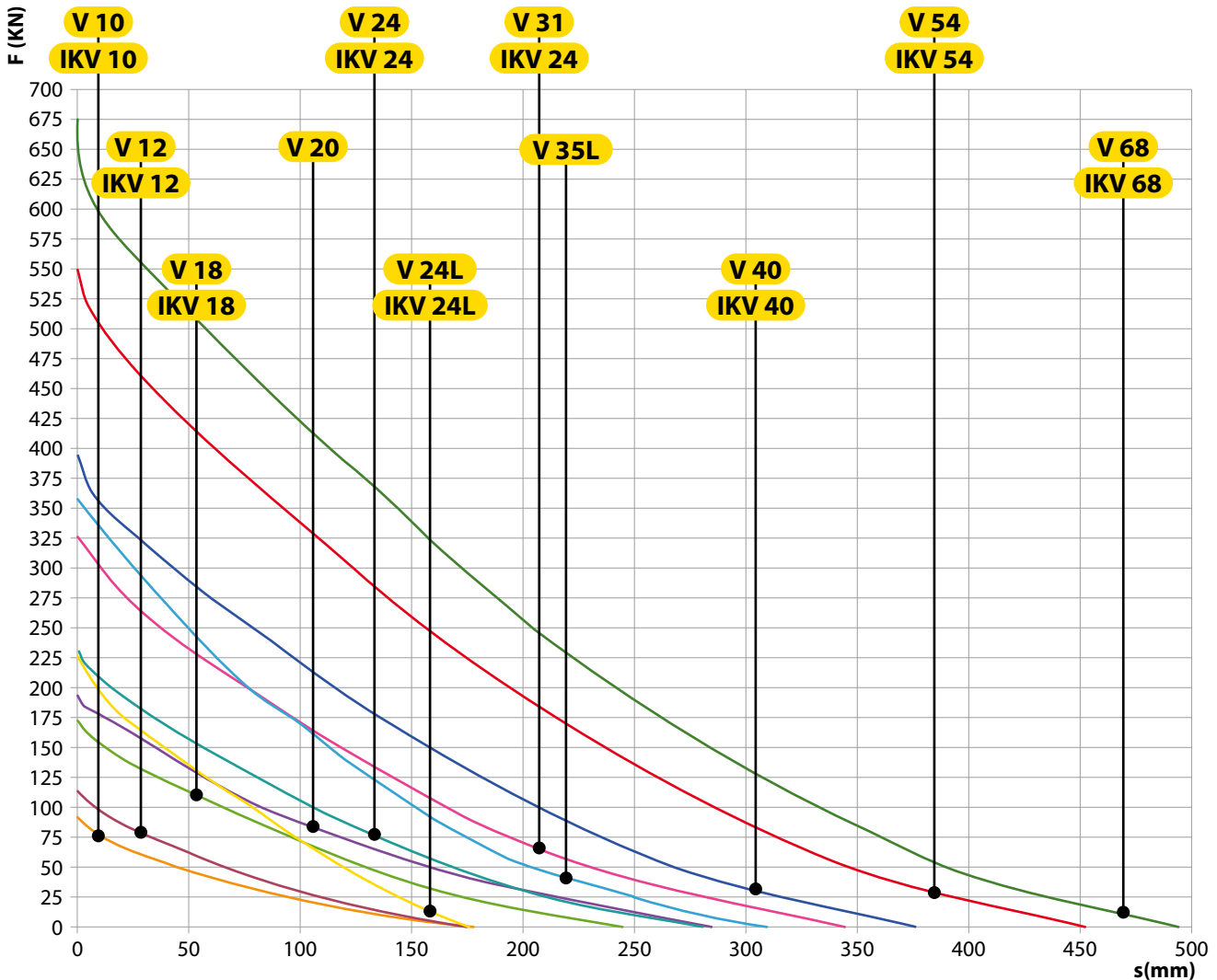
**Industrial bags (8 bar):** Operating pressure: 8 bar (116 psi) | Test pressure: 14 bar (203 psi) | Burst pressure at least: 32 bar (464 psi)  
**L:** Elongated industrial bag

## The right bags for maximum lifting power

In order for our industrial bags to develop their maximum lifting power, the entire surface of the bag – i.e. total surface area minus the edge areas – must lie fully under the load to be lifted and the bag must be filled with the max. permissible operating pressure.

Which industrial bag you use depends on the weight of the load to be lifted and the stroke distance. Please note: An industrial bag develops the greatest power at the beginning of the stroke distance. It reaches its maximum lifting height when unloaded. The result is that the stroke distance shortens as the load increases. In the load path diagram below, we have illustrated this process again for different industrial bag models.

### Load path diagram V 10 – V 68 / IKV 10 – IKV 68



**We will be happy to provide you with load path diagrams of the individual bags on request.**

## Examples for applications of the industrial bags of the V and IKV series



### Steel industry

- Small insertion dimension from 2.5 cm (0.98 inch)



### Production

- Aligning the elements during assembly



### Bridge

- Substructure of bridge elements



### Rail traffic

- Lifting of rail vehicles



### Mining

- Creating spaces



### Wind

- Wind turbine assembly



### Gravel plants

- Lifting trucks, machines, etc.



### Agriculture and forestry

- Lifting agricultural and forestry machinery for maintenance work
- Splitting a tree trunk

# Accessories – Inflation of the bags

## 8 bar (116 psi)

### Inflation hose, 8 bar (116 psi)

5 m (16.4 ft.):  
080000901 ● (Yellow)

10 m (32 ft.):  
0800007401 ● (Yellow)

5 m (16.4 ft.): 0800001301 ● (Red)

10 m (32 ft.): 0800007601 ● (Red)



### Shut-off unit, 8 bar (116 psi)

> 0,3 m (1 ft.)

0800007301 ● (Yellow)

0800007201 ● (Red)



### Air CU Lighting

- > Deadman controller, 8 bar (116 psi)
- > circuit plastic housing with lighting



Dual controller:  
0800019900

### Shut-off unit, 8 bar (116 psi)

0800005800



### Aluminium controller

- > Deadman controller, 8 bar (116 psi)
- > circuit connectable



Dual controller:  
0800015800

### Fitting controller\*

- > controller, 8 bar (116 psi)

Single: 0800002001

Dual: 0800002401



\*According to EN 13731, these items are not approved for use by fire services within the EU.



## 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**

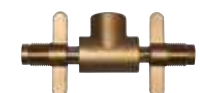


### Dual connector

- › for simultaneous connection 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)
- › max. 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**



### Truck tyre valve

▶ **1600008000**



### Truck tyre valve connector

▶ **1600012900**



### Truck tyre inflation system adapter

▶ **1600007800**



\*\*For any other air source than the compressed air cylinder you need the green supply hose.

## Accessories – Inflation of the bags

### Compressor

#### Adapter fitting for construction compressor

▶ 1600012000



#### Adapter fitting for portable compressor

▶ 1600008200



### Truck brake line

#### Truck compressed air connector

▶ Dual circuit system

▶ 1600007500



#### Sealing-off cap

▶ 1600012600



### Adapter set for all compressed air sources

The complete set with all adapters and valves listed below is available under the following item number:

▶ 1600012501



The set includes:

- ▶ 2x air supply hose, 10 m (32 ft.), green with shut-off valve
- ▶ Truck tyre inflation system adapter
- ▶ Truck tyre valve
- ▶ Truck tyre valve connector
- ▶ Truck compressed air connector
- ▶ Sealing-off cap
- ▶ Adapter fitting for construction compressor
- ▶ Adapter fitting for stationary compressed air network
- ▶ Bag 18x45 cm (7 x 17.7 inch)

### Non-movable compressed air network

#### Adapter fitting for stationary compressed air network

▶ 1600008200



#### Pre-pressure regulator

▶ max. inlet pressure, 16 bar (232 psi)\*\*

▶ 1600014500



\*\*Note: If the outlet pressure of the compressed air network exceeds the permissible filling pressure of the control element, the adapter fitting must be replaced with the upstream pressure reducer.

**LUKAS**



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POWERFUL PERFORMANCE**

**OUR PRODUCTS  
PERSUASIVE WITH EVERY APPLICATION**

# LUKAS – MOVING YOUR PROJECTS.

**LUKAS** has been developing and manufacturing exceptional high-pressure hydraulics for industrial use in various sectors since 1948. No matter what loads need to be moved, we have the right product for your application scenario, because we are pioneers in the development of light metal cylinders and are particularly proud of the quality of our tools.

The material for our powerful helpers is aluminium and therefore not only particularly light, but also extremely corrosion-resistant. LUKAS cylinders move reliably, have a long service life and material fatigue is very low.

**But most important to us is your safety.** That's why you can connect special hoses to all cylinders in our 500 bar range, whose quick-stop system prevents the load from dropping uncontrollably during your projects. The unique quick-connect coupling, to which you connect the hoses with just one hand movement, also saves you crucial time.

Each of our LUKAS products is assembled with passion and precision for your exceptional projects.

**Then as now – reliable, flexible and durable.**

Are you interested? Then contact LUKAS Hydraulik GmbH directly at [lukas.info@idexcorp.com](mailto:lukas.info@idexcorp.com).



You can find more information about our industrial product portfolio at: [www.lukas.com/industrial](http://www.lukas.com/industrial)

# LUKAS

moving your projects



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# Vetter resistance lists

## Reliability at a glance

Knowing what matters: Pneumatic products must withstand extreme thermal conditions and chemical influences when in use. So that you can always rely on our products, we have listed our detailed resistance specifications below. This gives you a quick overview of the temperature resistance, material used and resistance of our products to chemical substances.

The data are based on laboratory tests and empirical values and are influenced by variable factors such as temperature, intensity or exposure time.

The following symbols indicate the degree of resistance:

- + resistant
- not resistant
- o conditionally resistance
- n. a. not specified

### Please note:

A material under strain reacts more quickly to chemicals than when at rest. This means that the greater the elongation, the lower the chemical resistance. In addition, the resistance of our products also depends on the thickness of the material, due to diffusion.

**Therefore, this resistance list serves only as a guide.** We will be happy to provide you with material samples for your own determination of chemical resistance.

## Temperature resistance

Products	cold resistant	cold flexible	heat resistant long-term	heat resistant short-term
Industrial bags 8 bar (116 psi)	- 40 °C	- 20 °C	+ 90 °C	+ 115 °C
Rubber hoses	- 40 °C	- 30 °C	+ 90 °C	--
<b>Control elements:</b> Plastic, aluminium and fitting construction	- 20 °C	--	+ 50 °C	--

## Materials list

Products	Material	Carrier Material
industrial bags 8 bar (116 psi)	CR	Aramide
Filling hoses and air supply hoses (outside)	EPDM	Polyester



## Resistance list\*

Substance name	CR	NR	EPDM
Acetone	o	+	-
Acetylene	+	+	-
Alum aqueous	+	+	-
Aluminium chloride	+	+	+
Aniline	-	n. a.	n. a.
ASTM oil 1	o	-	-
Petrol	o	-	n. a.
Benzene	-	-	-
Boric acid	+	+	+
Bromine (wet)	-	-	-
Butyric acid	-	-	n. a.
Chlorine gas (wet)	-	-	n. a.
Chlorine, wet	o	-	o
Diesel fuel	o	-	-
Ferric chloride	+	+	+
Crude oil	o	-	-
Acetic acid	o	+	o
Fatty acids	+	o	-
Formaldehyde	+	+	+
Glucose	+	+	+
Heating oil	+	-	-
Potassium chloride	+	+	+
Calcium chloride	+	+	+
Calcium nitrate	+	+	+
Carbon dioxide	+	+	+
Carbon monoxide	+	+	+
Copper sulphate	+	+	+
Adhesive	+	+	+
Methyl chloride	-	-	o
Seawater	+	+	n. a.
Mineral oils	+	-	-
Sodium carbonate	+	+	-
Ozone	+	-	+
Paraffin	+	-	-
Perchloric acid	o	n. a.	+
Phenol (aqueous)	-	-	+
Phosphoric acid (concentrated)	-	-	-
Mercury	+	+	+
Nitric acid (fuming)	-	-	-
Sulphur dioxide (dry)	-	o	n. a.
Sulphuric acid (50 %)	+	-	-
Nitrogen	+	+	+
Carbon tetrachloride	-	-	-
Animal fats	+	-	+
Toluene	-	-	-

\* Subject to change without notice. | + resistant | o conditionally resistant | - not resistant | n. d. no data



## Part of the international IDEX Corporation

Vetter is part of the international IDEX Corporation. This corporation invests in successful medium-sized companies in highly specialised markets. All members of the group are characterised by their technical orientation and high innovative strength.

As our customer, you benefit twice over: On the one hand, from our international application knowledge and, on the other hand, from the intensive know-how transfer within the group of companies. Because this know-how flows directly into the development of Vetter's sophisticated and high-performance products.



[idexcorp.com](http://idexcorp.com)





## The full-range supplier for industrial pneumatics

Vetter represents sound technological expertise as well as intensive cooperation with fire brigades and industrial companies all over the world. On this basis, we develop high-quality and field-proven pneumatic products that are indispensable in many rescue areas and application scenarios.

- ▶ **Rescue Products**
  - ▶ **Hazardous material program**
  - ▶ **Pneumatic tents and decon showers**
  - ▶ **Oil and water aspirators**
  - ▶ **Airshore**
  - ▶ **Aircraft Recovery**
  - ▶ **Truck recovery**
  - ▶ **Industrial pneumatic**
  - ▶ **Inspection, sealing & rehabilitation technology**
- All products, detailed information and catalogues for download can be found on the Internet at: **[vetter.de](http://vetter.de)**

## **Place your trust in industrial pneumatics!**

We will be able to help you.

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