

**Industrial Pneumatics.**



# **Inspection, sealing & rehabilitation technology**

Product catalogue



**Version: 03.2013**

# Important advice

Owing to an increase in demand, all pipe and test sealing bags will be fitted with brass couplings as a standard from 01.01.2012 onwards.

If you still wish to have the safety couplings (blue at 1.5 bar, black at 2.5 bar), we kindly ask you to state this explicitly when placing an order.

## Coupling system

### Overview about the available systems

#### Brass couplings

**1.5 bar (21.75 psi) and  
2.5 bar (36.25 psi):**  
Brass coupling and nipple



#### Safety system

**1.5 bar (21.75 psi):**  
Blue coupling/nipple



**2.5 bar (36.25 psi):**  
Black coupling/nipple



If you have questions, do not hesitate to contact us!

### **Vetter GmbH**

A Unit of IDEX Corporation  
Blatzheimer Str. 10 - 12  
D-53909 Zülpich  
Germany

Tel.: +49 (0) 22 52 / 30 08-60  
Fax: +49 (0) 22 52 / 30 08-71  
Mail: [vetter.info@idexcorp.com](mailto:vetter.info@idexcorp.com)

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# Industrial Pneumatics.

Variable, flexible, sealing.

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



## Experience

About 30 years of experience at the sewage market make Vetter a partner you can rely on. We apply our experience and expertise to the constant refinement of our products. Your benefit: Sophisticated industrial pneumatics help you to get everything under control. So, you can fully concentrate on your work.



## Technology leader

Highly specialised pneumatics is our core business. Benefit from our complete range of industrial pneumatic products – developed by our engineers in Germany. At Vetter, we are committed to a wide variety of pressure levels, materials and designs.



## Expert advice worldwide

Vetter listens to you. Together with you, we will choose equipment exactly tailored to your application scenarios. Our worldwide dealer network is always at your service: before, during and after your purchase. For instance, Vetter also provides a testing service to test your products onsite. That keeps you prepared at all times and guarantees the specified safety.



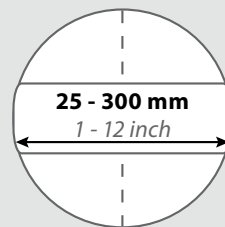
## Highest quality – made in Germany

Put your trust in first-class sewage technology handmade by Vetter. Flawless materials and meticulous handwork are the foundation for the safest industrial pneumatics on the market. So nothing can go wrong when it really counts. Our product range is produced entirely in Germany and every product is individually checked before delivery with the 1.3 times test pressure, as you can confirm by checking our test seal.



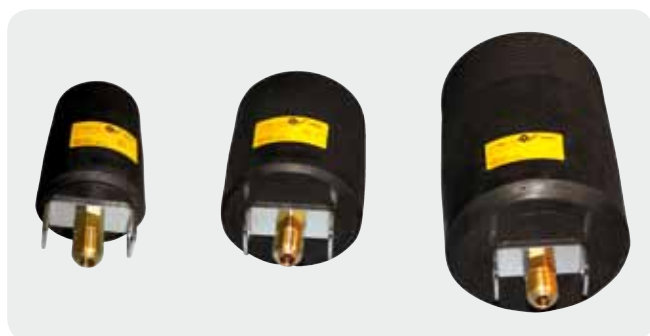
## Mini Pipe Sealing Bags 2.5 bar (36.25 psi)

The small flexible.



- › extremely short design
- › easy handling
- › extremely expandable
- › up to 1 bar (14.5 psi) counter-pressure

Mini pipe sealing bags are especially suited for sealing domestic pipe systems due to their short design. In addition to this they can be used when flexibility and curve mobility is required, e.g. in the heating and sanitary sector as well as with testing oil and petrol strainers according to DIN 1999 T 100.



### Technical data

| Mini Pipe Sealing Bags<br>2.5 bar/36.25 psi | Pipe diameter<br>mm / inch | Diameter<br>mm / inch | Cylinder length<br>mm / inch | Total length<br>mm / inch | Air requirement<br>litres / cu. ft. | Weight, approx.<br>kg / lbs |
|---------------------------------------------|----------------------------|-----------------------|------------------------------|---------------------------|-------------------------------------|-----------------------------|
| <b>RDK 2.5/4</b><br>1440000101              | 25 - 40<br>1 - 1.6         | 21<br>0.9             | 115<br>4.5                   | 175<br>7                  | 0.7<br>0.02                         | 0.15<br>0.33                |
| <b>RDK 4/7</b><br>1440000201                | 40 - 70<br>1.6 - 2.8       | 37<br>1.5             | 155<br>6.1                   | 215<br>8.5                | 2.5<br>0.09                         | 0.2<br>0.44                 |
| <b>RDK 8/15</b><br>1440018800               | 80 - 150<br>3.1 - 6        | 72<br>2.8             | 120<br>4.7                   | 170<br>7                  | 11<br>0.39                          | 0.4<br>0.88                 |
| <b>RDK 10/15</b><br>1440010500              | 100 - 150<br>4 - 6         | 89<br>3.5             | 130<br>5.1                   | 175<br>7                  | 9<br>0.32                           | 0.56<br>1.23                |
| <b>RDK 12.5/20</b><br>1440010700            | 125 - 200<br>5 - 8         | 115<br>4.5            | 125<br>5                     | 175<br>7                  | 16<br>0.56                          | 0.76<br>1.68                |
| <b>RDK 15/20</b><br>1440018900              | 150 - 200<br>6 - 8         | 90<br>3.5             | 150<br>5.9                   | 195<br>7.6                | 13<br>0.46                          | 0.6<br>1.32                 |
| <b>RDK 15/30</b><br>1440010600              | 150 - 300<br>6 - 12        | 145<br>5.7            | 200<br>8                     | 245<br>9.7                | 72<br>2.54                          | 1.42<br>3.13                |

**Standard test counter-pressure  
of 10 m WC (14.5 psi).**

## Mini Test Sealing Bags 2.5 bar (36.25 psi)

The small ones with duct.

- › extremely short design
- › extremely expandable
- › up to 1 bar (14.5 psi) counter-pressure
- › optimised handling by valve connection



Mini test sealing bags 2.5 bar can be used for testing, sealing and bypassing with repairs and maintenance work, e.g. sealing tests, channel inspection, maintenance, repair and cleaning.



### Technical data

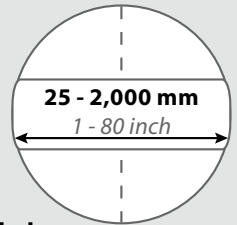
| Mini Test Sealing Bags<br>2.5 bar/36.25 psi | Opening          | Pipe diameter<br><i>mm / inch</i> | Diameter<br><i>mm / inch</i> | Cylinder length<br><i>mm / inch</i> | Total length<br><i>mm / inch</i> | Air requirement<br><i>litres / cu. ft.</i> | Weight, approx.<br><i>kg / lbs</i> |
|---------------------------------------------|------------------|-----------------------------------|------------------------------|-------------------------------------|----------------------------------|--------------------------------------------|------------------------------------|
| <b>PDK 4/7</b><br>1441000701                | 6 mm<br>0.2 inch | 40 - 70<br>1.6 - 2.8              | 37<br>1.5                    | 155<br>6.1                          | 250<br>9.8                       | 3.5<br>0.12                                | 0.4<br>0.9                         |
| <b>PDK 10/15</b><br>1441035400              | 1/2"             | 100 - 150<br>4 - 6                | 90<br>3.5                    | 150<br>5.9                          | 300*<br>11.8*                    | 2<br>0.07                                  | 1<br>2.2                           |
| <b>PDK 12.5/20</b><br>1441035200            | 1/2"             | 125 - 200<br>5 - 8                | 115<br>4.5                   | 150<br>5.9                          | 300*<br>11.8*                    | 4.4<br>0.16                                | 1.2<br>2.6                         |
| <b>PDK 20/30</b><br>1441035300              | 1"               | 200 - 300<br>8 - 12               | 185<br>7.2                   | 250<br>9.8                          | 410*<br>16*                      | 18<br>0.64                                 | 4.5<br>9.9                         |

\* including valve connection

**Standard test counter-pressure  
of 10 m WC (14.5 psi).**

## Pipe Sealing Bags

The classics.



- › wide product range
- › only 3 sizes from 100 - 1,000 mm
- › very flexible due to the material
- › easy handling, because lightweight and short

Vetter Pipe Sealing bags are the optimum solution when quick and reliable sealing of drainage is required. A big advantage of the sealing bags are their freely selectable contact pressure (on the pipe wall): from 0.5 bar/7.25 psi to 36.25 psi.

The areas of operation are, among others:

- › sealing off sewer pipelines during repair or maintenance work
- › avoiding sewage backflow at the source location during pipe bursts, flooding, sewer inspection, sewer cleaning, repair and maintenance work

Due to the numerous application possibilities, sealing bags are used in different branches of industry, such as road construction and civil engineering companies, sewer constructors, water authorities and industry.

Vetter Pipe Sealing bags can be used for the sealing test according to DIN EN 1610.





## Technical data

| Pipe Sealing Bags                |                               | Pipe diameter<br>mm / inch | Diameter<br>mm / inch | Cylinder<br>length<br>mm / inch | Total<br>length<br>mm / inch | Air requirement,<br>approx.<br>litres / cu. ft. | Weight,<br>approx.<br>kg / lbs |
|----------------------------------|-------------------------------|----------------------------|-----------------------|---------------------------------|------------------------------|-------------------------------------------------|--------------------------------|
| <b>RDK 2.5/4</b><br>1440000101   | <b>2.5 bar</b><br>(36.25 psi) | 25 - 40<br>1 - 1.6         | 21<br>0.9             | 115<br>4.5                      | 175<br>7                     | 0.7<br>0.02                                     | 0.15<br>0.33                   |
| <b>RDK 4/7</b><br>1440000201     | <b>2.5 bar</b><br>(36.25 psi) | 40 - 70<br>1.6 - 2.8       | 37<br>1.5             | 155<br>6.1                      | 215<br>8.5                   | 2.5<br>0.09                                     | 0.2<br>0.44                    |
| <b>RDK 7/15</b><br>1440000301    | <b>2.5 bar</b><br>(36.25 psi) | 70 - 150<br>2.8 - 6        | 68<br>2.7             | 300<br>12                       | 345<br>13.6                  | 13.3<br>0.47                                    | 0.5<br>1.1                     |
| <b>RDK 10/20</b><br>1440011700   | <b>2.5 bar</b><br>(36.25 psi) | 100 - 200<br>4 - 8         | 90<br>3.5             | 510<br>20                       | 555<br>21.9                  | 40.3<br>1.4                                     | 1.2<br>2.7                     |
| <b>RDK 15/30</b><br>1440000601   | <b>2.5 bar</b><br>(36.25 psi) | 150 - 300<br>6 - 12        | 145<br>5.7            | 460<br>18.1                     | 505<br>20                    | 87.5<br>3.1                                     | 1.9<br>4.2                     |
| <b>RDK 20/40</b><br>1440020100   | <b>2.5 bar</b><br>(36.25 psi) | 200 - 400<br>8 - 16        | 195<br>7.7            | 650<br>25.6                     | 700<br>27.3                  | 224<br>7.9                                      | 2.8<br>6.2                     |
| <b>RDK 20/50</b><br>1440016700   | <b>2.5 bar</b><br>(36.25 psi) | 200 - 500<br>8 - 20        | 195<br>7.7            | 750<br>29.3                     | 795<br>31                    | 329.0<br>11.6                                   | 5<br>11                        |
| <b>RDK 30/60</b><br>1440000801   | <b>2.5 bar</b><br>(36.25 psi) | 300 - 600<br>12 - 24       | 295<br>11.6           | 735<br>28.9                     | 780<br>30.7                  | 507.5<br>17.9                                   | 7<br>15.4                      |
| <b>RDK 50/80</b><br>1440020000   | <b>2.5 bar</b><br>(36.25 psi) | 500 - 800<br>20 - 32       | 450<br>17.7           | 1,110<br>43.7                   | 1,155<br>45.6                | 2,135<br>75.4                                   | 17<br>37.5                     |
| <b>RDK 60/100</b><br>1440011900  | <b>2.5 bar</b><br>(36.25 psi) | 600 - 1,000<br>24 - 40     | 580<br>22.8           | 1,320<br>52                     | 1,365<br>53.7                | 3,465<br>122.3                                  | 25<br>55                       |
| <b>RDK 50/100</b><br>1480000801  | <b>1.5 bar</b><br>(21.75 psi) | 500 - 1,000<br>20 - 40     | 450<br>17.7           | 1,110<br>43.7                   | 1,155<br>45.6                | 1,525<br>53.8                                   | 17<br>37.5                     |
| <b>RDK 60/120</b><br>1480001901  | <b>1.5 bar</b><br>(21.75 psi) | 600 - 1,200<br>24 - 48     | 580<br>22.8           | 1,320<br>52                     | 1,365<br>53.7                | 2,475<br>87.4                                   | 25<br>55                       |
| <b>RDK 80/140</b><br>1480006000  | <b>1.5 bar</b><br>(21.75 psi) | 800 - 1,400<br>32 - 56     | 785<br>30.9           | 1,810<br>71.3                   | 1,855<br>73                  | 3,125<br>110.3                                  | 41<br>90.4                     |
| <b>RDK 140/170</b><br>1400000300 | <b>0.5 bar</b><br>(7.25 psi)  | 1,400 - 1,700<br>56 - 67   | 1,350<br>53.2         | 1,900<br>74.8                   | 2,150<br>84.7                | 8,700<br>307.1                                  | 55<br>121.3                    |
| <b>RDK 170/200</b><br>1400000100 | <b>0.5 bar</b><br>(7.25 psi)  | 1,700 - 2,000<br>67 - 80   | 1,620<br>63.8         | 1,900<br>74.8                   | 2,300<br>90.6                | 9,000<br>317.7                                  | 59<br>130.1                    |

**RDK 2.5 bar - Test counter-pressure 10 m WC (14.5 psi)**

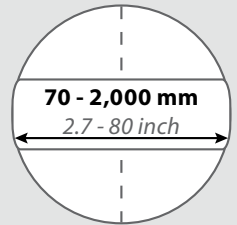
**RDK 1.5 bar - Test counter-pressure 5 m WC (7.25 psi)**

**RDK 0.5 bar - Test counter-pressure 2 m WC (2.9 psi)**

**Note: As an oil-resistant alternative the Pipe Sealing Bags are also available as a CR-version. You will find the Pipe Sealing Bags CR on page 16.**

## Test Sealing Bags

The inspectors.



- › flexible and sturdy design
- › only 3 sizes from 100 - 1,000 mm
- › for tests according to DIN EN 1610
- › lighter than test bags with inside core

Vetter Test Sealing Bags fulfil three functions in one: seal, test with water or air and reroute / divert.

The flexible (internal hoses – no internal tube) and sturdy construction enable easy matching of the test bag to the different pipe materials. Small amounts of unevenness can also be compensated.

The areas of operation are, among others:

- › Rerouting drainage when leaking occurs
- › Banking up and dosed diversion of liquids
- › Sealing tests according to DIN EN 1610 with air or water
- › Control of the pipeline sections

The test bags are fitted with (an) inflation coupling(s) and tension lugs. The outside threaded connections of the inlets enable a free selection of accessories. The size of the connection depends on the type of bag.



Front view Test Sealing Bags



Compressed air testing



Water pressure testing

## Technical data

| Test Sealing Bags                                                       |                               | Pipe diameter<br>mm / inch | Diameter<br>mm / inch | Cylinder<br>length<br>mm / inch | Total<br>length<br>mm / inch | Air requirement,<br>approx.<br>litres / cu. ft. | Weight,<br>approx.<br>kg / lbs |
|-------------------------------------------------------------------------|-------------------------------|----------------------------|-----------------------|---------------------------------|------------------------------|-------------------------------------------------|--------------------------------|
| <b>PDK 7/15 FLEX</b><br>1441001201 1 x 1/2" OT                          | <b>2.5 bar</b><br>(36.25 psi) | 70 - 150<br>2.8 - 6        | 68<br>2.7             | 350<br>13.7                     | 395<br>15.4                  | 14<br>0.5                                       | 1.7<br>3.8                     |
| <b>PDK 10/20 FLEX</b><br>1441018501 1 x 1" OT                           | <b>2.5 bar</b><br>(36.25 psi) | 100 - 200<br>4 - 8         | 90<br>3.5             | 510<br>20                       | 555<br>21.9                  | 40.3<br>1.4                                     | 2.8<br>6.2                     |
| <b>PDK 15/30 FLEX</b><br>1441022700 2 x 1/2" OT<br>1441022800 1 x 2" OT | <b>2.5 bar</b><br>(36.25 psi) | 150 - 300<br>6 - 12        | 145<br>5.7            | 460<br>18.1                     | 505<br>20                    | 87.5<br>3.1                                     | 5.8<br>12.8                    |
| <b>PDK 20/40 FLEX</b><br>1441040300 2 x 1" OT<br>1441018600 1 x 2" OT   | <b>2.5 bar</b><br>(36.25 psi) | 200 - 400<br>8 - 16        | 195<br>7.7            | 640<br>25                       | 685<br>26.7                  | 225<br>7.9                                      | 8<br>17.6                      |
| <b>PDK 20/50 FLEX</b><br>1441031100 2 x 1" OT<br>1441031200 1 x 2" OT   | <b>2.5 bar</b><br>(36.25 psi) | 200 - 500<br>8 - 20        | 195<br>7.7            | 750<br>29.3                     | 795<br>31                    | 333<br>11.8                                     | 7 - 9<br>15.4 - 19.8           |
| <b>PDK 30/60 FLEX</b><br>1441023100 2 x 1" OT<br>1441018701 1 x 2" OT   | <b>2.5 bar</b><br>(36.25 psi) | 300 - 600<br>12 - 24       | 295<br>11.6           | 735<br>28.9                     | 815<br>32.1                  | 471<br>16.6                                     | 11 - 12<br>24.3 - 26.5         |
| <b>PDK 50/80 FLEX</b><br>1441003900 1 x 2" OT<br>1441003800 2 x 2" OT   | <b>2.5 bar</b><br>(36.25 psi) | 500 - 800<br>20 - 32       | 450<br>17.7           | 1,110<br>43.7                   | 1,155<br>45.6                | 2,065 - 2,135<br>72.9 - 75.4                    | 27 - 36<br>59.5 - 79.4         |
| <b>PDK 60/100 FLEX</b><br>1441023200 1 x 2" OT<br>1441023300 2 x 2" OT  | <b>2.5 bar</b><br>(36.25 psi) | 600 - 1,000<br>24 - 40     | 580<br>22.8           | 1,320<br>52                     | 1,365<br>53.7                | 2,648 - 2700<br>94 - 95                         | 33.5 - 42<br>73.9 - 92.6       |
| <b>PDK 50/100 FLEX</b><br>1481003501 1 x 2" OT<br>1481023800 2 x 2" OT  | <b>1.5 bar</b><br>(21.75 psi) | 500 - 1,000<br>20 - 40     | 450<br>17.7           | 1,110<br>43.7                   | 1,155<br>45.6                | 1,475 - 1,525<br>52.1 - 53.8                    | 27 - 36<br>59.5 - 79.4         |
| <b>PDK 60/120 FLEX</b><br>1481009501 1 x 2" OT<br>1481009301 2 x 2" OT  | <b>1.5 bar</b><br>(21.75 psi) | 600 - 1,200<br>24 - 48     | 580<br>22.8           | 1,320<br>52                     | 1,365<br>53.7                | 2,425 - 2,450<br>85.6 - 86.5                    | 33.5 - 42<br>73.9 - 92.6       |
| <b>PDK 80/140 FLEX</b><br>1481024000 1 x 2" OT<br>1481023900 2 x 2" OT  | <b>1.5 bar</b><br>(21.75 psi) | 800 - 1,400<br>32 - 56     | 785<br>30.9           | 1,810<br>71.3                   | 1,855<br>73                  | 3,075 - 3,100<br>108.5 - 109.4                  | 55 - 69<br>121.3 - 152.2       |
| <b>PDK 140/170 FLEX</b><br>1401000400 1 x 2" OT<br>1401000300 2 x 2" OT | <b>0.5 bar</b><br>(7.25 psi)  | 1,400 - 1,700<br>56 - 67   | 1,350<br>53.2         | 1,900<br>74.8                   | 2,150<br>84.7                | 8,670 - 8,685<br>306.1 - 306.6                  | 62.5 - 70<br>137.8 - 154.4     |
| <b>PDK 170/200 FLEX</b><br>1401000700 1 x 2" OT<br>1401000600 2 x 2" OT | <b>0.5 bar</b><br>(7.25 psi)  | 1,700 - 2,000<br>67 - 80   | 1,620<br>63.8         | 1,900<br>74.8                   | 2,300<br>90.6                | 8,775 - 8,888<br>309.8 - 313.8                  | 64.5 - 70<br>142.2 - 154.4     |

**PDK 2.5 bar - Test counter-pressure 10 m WC (14.5 psi)**

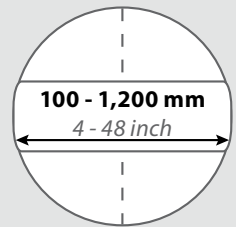
**PDK 1.5 bar - Test counter-pressure 5 m WC (7.25 psi)**

**PDK 0.5 bar - Test counter-pressure 2 m WC (2.9 psi)**

**With 1 RDK and 1 PDK with 2 openings the compressed air testing as well as the water pressure testing can be carried out. No second PDK is necessary!**

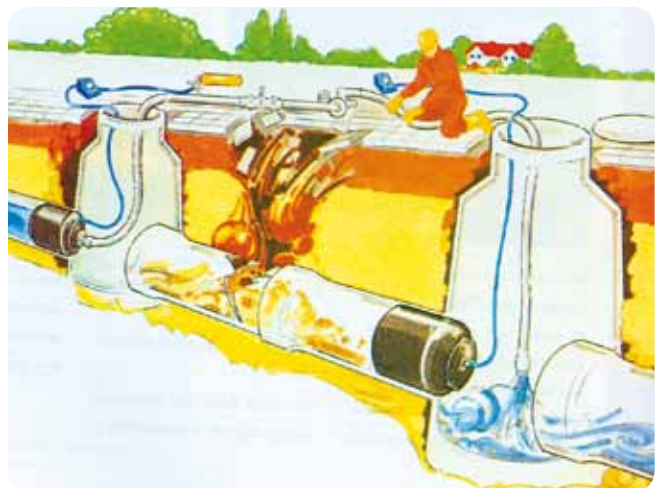
## Bypass Bags 1.5 bar (21.75 psi)

With big opening for easy diversion.



- › optimum handling
- › with 3 sizes from 100 - 1,200 mm
- › very lightweight due to PE-core
- › exchangeable sleeve

If there is a requirement to reroute the sewage from defective piping by bypassing the defective location and letting the sewage flow back into the pipeline behind this location, then bypass bags are the suitable solution due to their largest possible through-flow opening. Only three bypass bags are required for pipe diameters from 100 mm to 1,200 mm (4 inch to 48 inch). The outside thread enables the connection coupling to be freely selectable.



### Technical data

| Bypass Bags<br>1.5 bar/21.75 psi                     | Pipe diameter<br>mm / inch | Diameter<br>mm / inch | Cylinder<br>length<br>mm / inch | Total<br>length<br>mm / inch | Air<br>requirement<br>litres / cu. ft. | Weight,<br>approx.<br>kg / lbs |
|------------------------------------------------------|----------------------------|-----------------------|---------------------------------|------------------------------|----------------------------------------|--------------------------------|
| <b>PDK 10/20 PE-core</b><br>1481004400 1 x 2 1/2" OT | 100 - 200<br>4 - 8         | 97<br>3.9             | 485<br>19.1                     | 545<br>21.7                  | 27<br>0.95                             | 2.2<br>4.9                     |
| <b>PDK 20/50 PE-core</b><br>1481005000 1 x 4" OT     | 200 - 500<br>8 - 20        | 195<br>7.7            | 550<br>21.7                     | 610<br>24                    | 143<br>5                               | 7<br>15.4                      |
| <b>PDK 50/80 PE-core*</b><br>1481006900 1 x 4" OT    | 500 - 800<br>20 - 32       | 450<br>17.7           | 565<br>22.2                     | 580<br>22.8                  | 310<br>10.9                            | 32<br>70.6                     |
| <b>PDK 50/120 PE-core*</b><br>1481008000 1 x 4" OT   | 500 - 1,200<br>20 - 48     | 450<br>17.7           | 920<br>36.2                     | 935<br>36.8                  | 1,420<br>50.1                          | 42.5<br>93.7                   |

\* Can be supplied with 6" or 8" duct if required.

**Standard test counter-pressure  
of 5 m WC (7.25 psi).**

## PDK 10/20 and PDK 20/50

With the sizes PDK 10/20 and PDK 20/50 the bypass adapters are fitted on the PE core with screws.



**Bypass adapter** for PDK 10/20 (Art. no. 1481002900)  
for PDK 20/50 (Art. no. 1481001600)



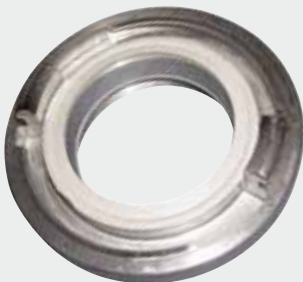
## PDK 50/80 and PDK 50/120

With bypass bags PDK 50/80 and PDK 50/120, the ducts (also with outside threads) are directly in the PE core.

If required, a through-flow opening of up to 8" can be supplied for both sizes.



## Appropriate fixed- and blind coupling:



**Fixed coupling** 2 1/2" IT (Art. no. 1700010500)  
4" IT (Art. no. 1700009900)

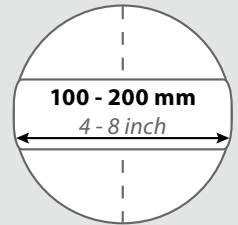


**Blind coupling with chain** 2 1/2" (Art. no. 1700022400)  
4" (Art. no. 1700012600)



## Test system for domestic pipe network

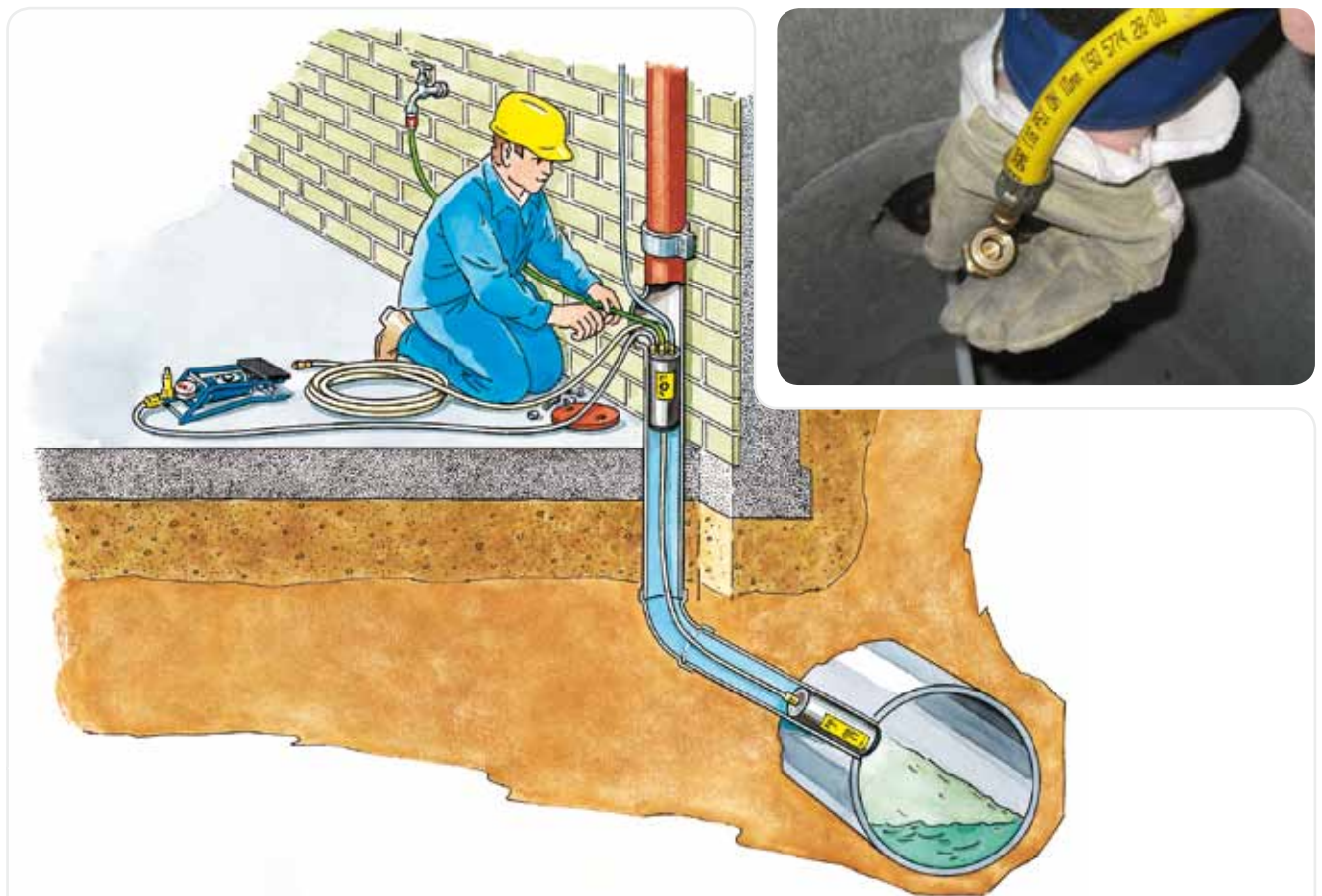
For sealing tests according to DIN EN 1610.



- › ideal bending characteristics
- › rounded „tips“
- › spherical head for easy bag-return
- › for water pressure & compressed air testing

Blocking as well as the test procedure are carried out exclusively from the inspection shaft. Using an inflation hose and a feed hose, the sealing bag is pushed in until it reaches the mouth of the main sewage channel. The test sealing bag is positioned so that it is just in front of the inspection shaft.

The special short design of the pipe sealing bag as well as the rounded „tip“ increase the bending characteristics. In addition to this, the other end of the sealing bag is fitted with a spherical head which enables an effortless return of the bag via a sleeve offset.



Water pressure testing according to DIN EN 1610 with the Vetter Test system for domestic pipe network

## Set Test system for domestic pipe network 2.5 bar

For sealing tests according to DIN EN 1610

1441005903



**Test sealing bag, Type PDK 10/20 HA FLEX**  
incl. inflation and feed hose, 15 m

**Pipe sealing bag, Type RDK 15/20 HA**  
incl. Quick-snap couplings 1/4" IT and spherical head

**Pipe sealing bag, Type RDK 8/15 HA**  
incl. Quick-snap couplings 1/4" IT and spherical head

**Y-distributor** for simultaneous attachment of test and measurement hose as well as the measurement hose for a digital measurement device

**Bayonet blind coupling**  
for connection to the inflation and safety hose

**Shut-off unit bayonet coupling**  
for the water pressure testing

**Transport case**

## Technical data

| Test system for domestic pipe network 2.5 bar/36.25 psi | Pipe diameter<br>mm / inch | Diameter<br>mm / inch | Cylinder length<br>mm / inch | Total length<br>mm / inch | Air requirement, approx.<br>litres / cu. ft. | Weight, approx.<br>kg / lbs |
|---------------------------------------------------------|----------------------------|-----------------------|------------------------------|---------------------------|----------------------------------------------|-----------------------------|
| <b>RDK 8/15</b><br>1440001200                           | 80 - 150<br>3.1 - 6        | 72<br>2.8             | 120<br>4.7                   | 165<br>6.5                | 11<br>0.39                                   | 0.3<br>0.7                  |
| <b>RDK 15/20</b><br>1440001300                          | 150 - 200<br>6 - 8         | 90<br>3.5             | 150<br>5.9                   | 190<br>7.4                | 13<br>0.46                                   | 0.5<br>1.1                  |
| <b>PDK 10/20 FLEX</b><br>1441007703                     | 100 - 200<br>4 - 8         | 90<br>3.5             | 300<br>11.8                  | 460*<br>18*               | 18<br>0.54                                   | 3.1<br>6.8                  |

\* including valve connection

**Standard test counter-pressure of 10 m WC (14.5 psi).**

## Optional accessories

For compressed air testing



**Inflation and safety hose**  
0.3 bar/4.35 psi, 10 m (32 ft.)

1700009001

**Measurement hose**  
0.3 bar/4.35 psi, 10 m (32 ft.)

1700010301

For water pressure testing



**Testing and measurement hose**  
9 mm/0.35 inch, 6 m (16 ft.)

0250002700

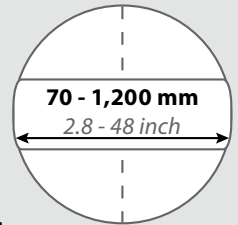
**Ventilation float hose**

1441039300

# Pipe Sealing Bags CR

The oil-resistant alternative to the classics.

- › good handling (length/weight)
- › very flexible applicable
- › with integrated hose as an option
- › good resistance to oil and chemicals



The Pipe Sealing Bags of chloroprene rubber (CR) are characterised by an increased resistance to chemicals (e.g. against mineral oils, heating oil etc.) compared to conventional Pipe Sealing Bags of natural rubber (NR).

These Pipe Sealing Bags CR are available with an integrated inflation hose as an option.

Further sizes can be delivered on request.



## Technical data

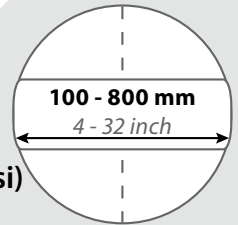
| Pipe Sealing Bags CR            | Pipe diameter<br>mm / inch    | Diameter<br>mm / inch  | Cylinder length<br>mm / inch | Total length<br>mm / inch | Air requirement<br>litres / cu. ft. | Weight, approx.<br>kg / lbs |
|---------------------------------|-------------------------------|------------------------|------------------------------|---------------------------|-------------------------------------|-----------------------------|
| <b>RDK 7/15</b><br>1440008100   | <b>2.5 bar</b><br>(36.25 psi) | 70 - 150<br>2.8 - 6    | 68<br>2.7                    | 300<br>11.8               | 345<br>13.4                         | 14<br>0.5                   |
| <b>RDK 15/30</b><br>1440008000  | <b>2.5 bar</b><br>(36.25 psi) | 150 - 300<br>6 - 12    | 145<br>5.7                   | 465<br>18.1               | 510<br>20                           | 80<br>2.8                   |
| <b>RDK 30/60</b><br>1440007900  | <b>2.5 bar</b><br>(36.25 psi) | 300 - 600<br>12 - 24   | 295<br>11.6                  | 735<br>28.9               | 780<br>30.4                         | 508<br>18                   |
| <b>RDK 60/120</b><br>1480004800 | <b>1.5 bar</b><br>(21.75 psi) | 600 - 1,200<br>24 - 48 | 580<br>22.8                  | 1,320<br>52               | 1,365<br>53.7                       | 2,475<br>87.4               |

RDK 2.5 bar - Test counter-pressure 10 m WC (14.5 psi)  
RDK 1.5 bar - Test counter-pressure 5 m WC (7.25 psi)



## High Pressure Pipe Sealing Bags 6 bar (87 psi)

Withstand even high pipe internal pressures.



- › multi-layer and stable bag design
- › high operating pressure of 6 bar (87 psi)
- › up to 3 bar (43.5 psi) counter-pressure
- › extreme expansion despite high pressure

The 6.0 bar (87 psi) High Pressure Sealing Bags round off the product range for the pipe sealing bags and the test sealing bags belonging to the 1.5 bar and 2.5 bar (21.75 and 36.25 psi) series which have been successful for many years. These bags, which can withstand a maximum counter-pressure of 30 m (96 ft.) water column and used everywhere where there is a high pipe internal pressure (e.g. in the area of sanitation or for the inspection of pipelines). The multi-layer bag design with textile ply enables the application of a high operating over-pressure of 6.0 bar (87 psi) on the one hand and on the other hand helps to avoid longitudinal expansion due to its structure.



### Technical data

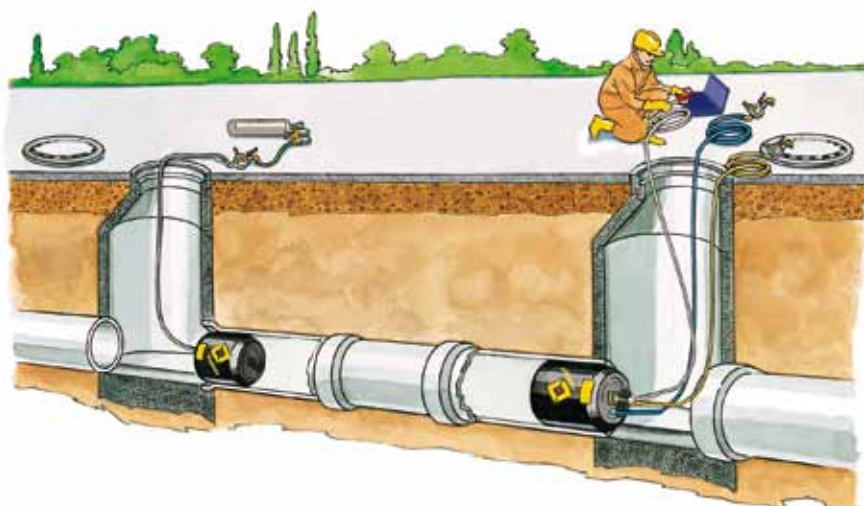
| High Pressure<br>Pipe Sealing Bags<br>6 bar (87 psi) | Pipe diameter<br><i>mm / inch</i> | Diameter<br><i>mm / inch</i> | Cylinder<br>length<br><i>mm / inch</i> | Total<br>length<br><i>mm / inch</i> | Air<br>requirement<br><i>litres / cu. ft.</i> | Weight,<br>approx.<br><i>kg / lbs</i> |
|------------------------------------------------------|-----------------------------------|------------------------------|----------------------------------------|-------------------------------------|-----------------------------------------------|---------------------------------------|
| <b>RDK 100-200</b><br>1430001300                     | 100 - 200<br>4 - 8                | 90<br>3.5                    | 510<br>20                              | 555<br>21.9                         | 105<br>3.7                                    | 1.5<br>3.3                            |
| <b>RDK 200-300</b><br>1430001500                     | 200 - 300<br>8 - 12               | 195<br>7.7                   | 650<br>25.6                            | 695<br>27.4                         | 338<br>11.9                                   | 3.1<br>6.8                            |
| <b>RDK 300-400</b><br>1430001400                     | 300 - 400<br>12 - 16              | 295<br>11.6                  | 735<br>29                              | 780<br>30.7                         | 527<br>18.6                                   | 7<br>15.4                             |
| <b>RDK 500-600</b><br>1430000600                     | 500 - 600<br>20 - 24              | 450<br>17.7                  | 1,110<br>43.7                          | 1,155<br>45.5                       | 1,550<br>54.7                                 | 20<br>44.1                            |
| <b>RDK 800</b><br>1430000800                         | 800<br>32                         | 785<br>30.9                  | 1,810<br>71.3                          | 1,855<br>73                         | 6,160<br>217.5                                | 44<br>97                              |

**Standard test counter-pressure  
of 30 m WC (43.5 psi).**

## Compressed air testing - Round profile

### Sets 2.5 bar (36.25 psi)

| For pipes 70 - 1,000 mm (2.7 - 40 inch)                 |            |                               | 70<br>-<br>150 | 100<br>-<br>200 | 150<br>-<br>300 | 200<br>-<br>400 | 200<br>-<br>500 | 300<br>-<br>600 | 500<br>-<br>800 | 600<br>-<br>1,000 |
|---------------------------------------------------------|------------|-------------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| <b>RDK 7/15</b>                                         | 1440000301 | <b>2.5 bar</b><br>(36.25 psi) | 1              |                 |                 |                 |                 |                 |                 |                   |
| <b>PDK 7/15 FLEX</b><br>with duct 1 x 1/2" OT           | 1441001201 | <b>2.5 bar</b><br>(36.25 psi) | 1              |                 |                 |                 |                 |                 |                 |                   |
| <b>RDK 10/20</b>                                        | 1440011700 | <b>2.5 bar</b><br>(36.25 psi) |                | 1               |                 |                 |                 |                 |                 |                   |
| <b>PDK 10/20</b> with duct 1 x 1" OT                    | 1441018501 | <b>2.5 bar</b><br>(36.25 psi) |                | 1               |                 |                 |                 |                 |                 |                   |
| <b>RDK 15/30</b>                                        | 1440000601 | <b>2.5 bar</b><br>(36.25 psi) |                |                 | 1               |                 |                 |                 |                 |                   |
| <b>PDK 15/30</b> with duct 1 x 2" OT                    | 1441022800 | <b>2.5 bar</b><br>(36.25 psi) |                |                 | 1               |                 |                 |                 |                 |                   |
| <b>RDK 20/40</b>                                        | 1440020100 | <b>2.5 bar</b><br>(36.25 psi) |                |                 |                 | 1               |                 |                 |                 |                   |
| <b>PDK 20/40</b> with duct 1 x 2" OT                    | 1441018600 | <b>2.5 bar</b><br>(36.25 psi) |                |                 |                 | 1               |                 |                 |                 |                   |
| <b>RDK 20/50</b>                                        | 1440016700 | <b>2.5 bar</b><br>(36.25 psi) |                |                 |                 |                 | 1               |                 |                 |                   |
| <b>PDK 20/50</b> with duct 1 x 2" OT                    | 1441031200 | <b>2.5 bar</b><br>(36.25 psi) |                |                 |                 |                 | 1               |                 |                 |                   |
| <b>RDK 30/60</b>                                        | 1440000801 | <b>2.5 bar</b><br>(36.25 psi) |                |                 |                 |                 |                 | 1               |                 |                   |
| <b>PDK 30/60</b> with duct 1 x 2" OT                    | 1441018701 | <b>2.5 bar</b><br>(36.25 psi) |                |                 |                 |                 |                 | 1               |                 |                   |
| <b>RDK 50/80</b>                                        | 1440020000 | <b>2.5 bar</b><br>(36.25 psi) |                |                 |                 |                 |                 |                 | 1               |                   |
| <b>PDK 50/80</b> with duct 1 x 2" OT                    | 1441003900 | <b>2.5 bar</b><br>(36.25 psi) |                |                 |                 |                 |                 |                 | 1               |                   |
| <b>RDK 60/100</b>                                       | 1440011900 | <b>2.5 bar</b><br>(36.25 psi) |                |                 |                 |                 |                 |                 |                 | 1                 |
| <b>PDK 60/100</b> with duct 1 x 2" OT                   | 1441023200 | <b>2.5 bar</b><br>(36.25 psi) |                |                 |                 |                 |                 |                 |                 | 1                 |
| <b>Compressed air adapter</b>                           |            |                               |                |                 |                 |                 |                 |                 |                 |                   |
| <b>Comp. air adapter 1/2" IT</b>                        | 1481023600 |                               | 1              |                 |                 |                 |                 |                 |                 |                   |
| <b>Comp. air adapter 1" IT</b>                          | 1481023500 |                               |                | 1               |                 |                 |                 |                 |                 |                   |
| <b>Comp. air adapter 2" IT</b>                          | 1481023400 |                               |                |                 | 1               | 1               | 1               | 1               | 1               | 1                 |
| <b>Accessories for inflation</b>                        |            |                               |                |                 |                 |                 |                 |                 |                 |                   |
| <b>Inflation hose, 10 m (32 ft.), yellow</b>            | 1600029900 | <b>2.5 bar</b><br>(36.25 psi) | 2              | 2               | 2               | 2               | 2               | 2               | 2               | 2                 |
| <b>Single fitting controller</b>                        | 0250005700 | <b>2.5 bar</b><br>(36.25 psi) | 1              | 1               | 1               | 1               | 1               | 1               | 1               | 1                 |
| <b>Additional accessories as an option</b>              |            |                               |                |                 |                 |                 |                 |                 |                 |                   |
| <b>Inflation and safety hose 10 m (32 ft.), yellow</b>  | 1700009001 | <b>0.3 bar</b><br>(4.35 psi)  | 1              | 1               | 1               | 1               | 1               | 1               | 1               | 1                 |
| <b>Measurement hose 10 m (32 ft.) (self-monitoring)</b> | 1700010301 | <b>0.3 bar</b><br>(4.35 psi)  | 1              | 1               | 1               | 1               | 1               | 1               | 1               | 1                 |



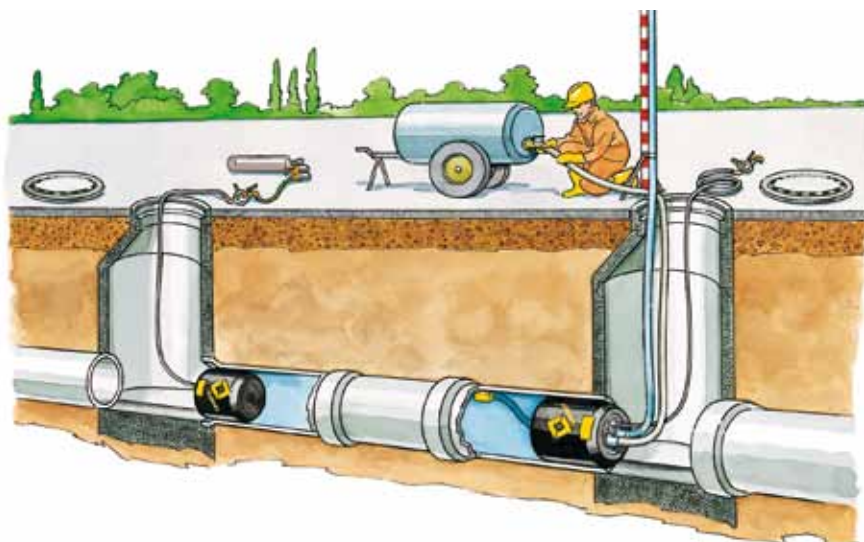
### Sets 1.5 bar (21.75 psi) + Sets 0.5 bar (7.25 psi)

| For pipes 500 - 2,000 mm (20 - 80 inch)             |            |                        | 500<br>-<br>1,000 | 600<br>-<br>1,200 | 800<br>-<br>1,400 | 1,400<br>-<br>1,700 | 1,700<br>-<br>2,000 |
|-----------------------------------------------------|------------|------------------------|-------------------|-------------------|-------------------|---------------------|---------------------|
| RDK 50/100                                          | 1480000801 | 1.5 bar<br>(21.75 psi) | 1                 |                   |                   |                     |                     |
| PDK 50/100 with duct 1 x 2" OT                      | 1481003501 | 1.5 bar<br>(21.75 psi) | 1                 |                   |                   |                     |                     |
| RDK 60/120                                          | 1480001901 | 1.5 bar<br>(21.75 psi) |                   | 1                 |                   |                     |                     |
| PDK 60/120 with duct 1 x 2" OT                      | 1481009501 | 1.5 bar<br>(21.75 psi) |                   | 1                 |                   |                     |                     |
| RDK 80/140                                          | 1480006000 | 1.5 bar<br>(21.75 psi) |                   |                   | 1                 |                     |                     |
| PDK 80/140 with duct 1 x 2" OT                      | 1481024000 | 1.5 bar<br>(21.75 psi) |                   |                   | 1                 |                     |                     |
| RDK 140/170                                         | 1400000300 | 0.5 bar<br>(7.25 psi)  |                   |                   |                   | 1                   |                     |
| PDK 140/170 with duct 1 x 2" OT                     | 1401000400 | 0.5 bar<br>(7.25 psi)  |                   |                   |                   | 1                   |                     |
| RDK 170/200                                         | 1400000100 | 0.5 bar<br>(7.25 psi)  |                   |                   |                   |                     | 1                   |
| PDK 170/200 with duct 1 x 2" OT                     | 1401000700 | 0.5 bar<br>(7.25 psi)  |                   |                   |                   |                     | 1                   |
| <b>Compressed air adapter</b>                       |            |                        |                   |                   |                   |                     |                     |
| Comp. air adapter 2" IT                             | 1481023400 |                        | 1                 | 1                 | 1                 | 1                   | 1                   |
| <b>Accessories for inflation</b>                    |            |                        |                   |                   |                   |                     |                     |
| Inflation hose,<br>10 m (32 ft.), yellow            | 1600029900 | 1.5 bar<br>(21.75 psi) | 2                 | 2                 | 2                 |                     |                     |
| Single fitting controller                           | 0150005400 | 1.5 bar<br>(21.75 psi) | 1                 | 1                 | 1                 |                     |                     |
| Inflation hose,<br>10 m (32 ft.), yellow            | 0050001801 | 0.5 bar<br>(7.25 psi)  |                   |                   |                   | 4                   | 4                   |
| Dual fitting controller                             | 0050000801 | 0.5 bar<br>(7.25 psi)  |                   |                   |                   | 2                   | 2                   |
| <b>Additional accessories as an option</b>          |            |                        |                   |                   |                   |                     |                     |
| Inflation and safety hose<br>10 m (32 ft.), yellow  | 1700009001 | 0.3 bar<br>(4.35 psi)  | 1                 | 1                 | 1                 | 1                   | 1                   |
| Measurement hose<br>10 m (32 ft.) (self-monitoring) | 1700010301 | 0.3 bar<br>(4.35 psi)  | 1                 | 1                 | 1                 | 1                   | 1                   |

## Water pressure testing - Round profile

### Sets 2.5 bar (36.25 psi)

| For pipes 70 - 1,000 mm (2.7 - 40 inch)  |            |                        | 70<br>-<br>150 | 100<br>-<br>200 | 150<br>-<br>300 | 200<br>-<br>400 | 200<br>-<br>500 | 300<br>-<br>600 | 500<br>-<br>800 | 600<br>-<br>1,000 |
|------------------------------------------|------------|------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| PDK 7/15 with duct 1 x 1/2" OT           | 1441001201 | 2.5 bar<br>(36.25 psi) | 2              |                 |                 |                 |                 |                 |                 |                   |
| PDK 10/20 with duct 1 x 1" OT            | 1441018501 | 2.5 bar<br>(36.25 psi) |                | 2               |                 |                 |                 |                 |                 |                   |
| RDK 15/30                                | 1440000601 | 2.5 bar<br>(36.25 psi) |                |                 | 1               |                 |                 |                 |                 |                   |
| PDK 15/30 with duct 2 x 1/2" OT          | 1441022700 | 2.5 bar<br>(36.25 psi) |                |                 | 1               |                 |                 |                 |                 |                   |
| RDK 20/40                                | 1440020100 | 2.5 bar<br>(36.25 psi) |                |                 |                 | 1               |                 |                 |                 |                   |
| PDK 20/40 with duct 2 x 1" OT            | 1441040300 | 2.5 bar<br>(36.25 psi) |                |                 |                 | 1               |                 |                 |                 |                   |
| RDK 20/50                                | 1440016700 | 2.5 bar<br>(36.25 psi) |                |                 |                 |                 | 1               |                 |                 |                   |
| PDK 20/50 with duct 2 x 1" OT            | 1441031100 | 2.5 bar<br>(36.25 psi) |                |                 |                 |                 | 1               |                 |                 |                   |
| RDK 30/60                                | 1440000801 | 2.5 bar<br>(36.25 psi) |                |                 |                 |                 |                 | 1               |                 |                   |
| PDK 30/60 with duct 2 x 1" OT            | 1441023100 | 2.5 bar<br>(36.25 psi) |                |                 |                 |                 |                 | 1               |                 |                   |
| RDK 50/80                                | 1440020000 | 2.5 bar<br>(36.25 psi) |                |                 |                 |                 |                 |                 | 1               |                   |
| PDK 50/80 with duct 2 x 2" OT            | 1441003800 | 2.5 bar<br>(36.25 psi) |                |                 |                 |                 |                 |                 | 1               |                   |
| RDK 60/100                               | 1440011900 | 2.5 bar<br>(36.25 psi) |                |                 |                 |                 |                 |                 |                 | 1                 |
| PDK 60/100 with duct 2 x 2" OT           | 1441023300 | 2.5 bar<br>(36.25 psi) |                |                 |                 |                 |                 |                 |                 | 1                 |
| Accessories for inflation                |            |                        |                |                 |                 |                 |                 |                 |                 |                   |
| Inflation hose,<br>10 m (32 ft.), yellow | 1600029900 | 2.5 bar<br>(36.25 psi) | 2              | 2               | 2               | 2               | 2               | 2               | 2               | 2                 |
| Single fitting controller                | 0250005700 | 2.5 bar<br>(36.25 psi) | 1              | 1               | 1               | 1               | 1               | 1               | 1               | 1                 |
| Additional accessories as an option      |            |                        |                |                 |                 |                 |                 |                 |                 |                   |
| D-Fixed coupling 1/2" IT                 | 1700007600 |                        | 2              |                 | 2               |                 |                 |                 |                 |                   |
| D-Fixed coupling 1" IT                   | 1700016000 |                        |                | 2               |                 | 2               | 2               | 2               |                 |                   |
| C-Fixed coupling 2" IT                   | 1700007700 |                        |                |                 |                 |                 |                 |                 | 2               | 2                 |
| D-Blind coupling with chain              | 1700016200 |                        | 2              | 2               | 2               | 2               | 2               | 2               |                 |                   |
| C-Blind coupling with chain              | 1700016600 |                        |                |                 |                 |                 |                 |                 | 2               | 2                 |
| Ventilation float hose 1/2"              | 0250004400 |                        | 1              |                 | 1               |                 |                 |                 |                 |                   |
| Ventilation float hose 1"                | 1700038400 |                        |                | 1               |                 | 1               | 1               | 1               |                 |                   |
| Ventilation float hose 2"                | 1700011900 |                        |                |                 |                 |                 |                 |                 | 1               | 1                 |
| Testing & measurement hose               | 1700008400 | Size D                 | 1              | 1               | 1               | 1               | 1               | 1               |                 |                   |
| Testing & measurement hose               | 1700013700 | Size C                 |                |                 |                 |                 |                 |                 | 1               | 1                 |
| Blocking valve                           | 1700013200 | Size D                 | 1              | 1               | 1               | 1               | 1               | 1               |                 |                   |
| Blocking valve                           | 1700007900 | Size C                 |                |                 |                 |                 |                 |                 | 1               | 1                 |



## Sets 1.5 bar (21.75 psi) + Sets 0.5 bar (7.25 psi)

| For pipes 500 - 2,000 mm (20 - 80 inch) |            |                        | 500<br>-<br>1,000 | 600<br>-<br>1,200 | 800<br>-<br>1,400 | 1,400<br>-<br>1,700 | 1,700<br>-<br>2,000 |
|-----------------------------------------|------------|------------------------|-------------------|-------------------|-------------------|---------------------|---------------------|
| RDK 50/100                              | 1480000801 | 1.5 bar<br>(21.75 psi) | 1                 |                   |                   |                     |                     |
| PDK 50/100 with duct 2 x 2" OT          | 1481023800 | 1.5 bar<br>(21.75 psi) | 1                 |                   |                   |                     |                     |
| RDK 60/120                              | 1480001901 | 1.5 bar<br>(21.75 psi) |                   | 1                 |                   |                     |                     |
| PDK 60/120 with duct 2 x 2" OT          | 1481009301 | 1.5 bar<br>(21.75 psi) |                   | 1                 |                   |                     |                     |
| RDK 80/140                              | 1480006000 | 1.5 bar<br>(21.75 psi) |                   |                   | 1                 |                     |                     |
| PDK 80/140 with duct 2 x 2" OT          | 1481023900 | 1.5 bar<br>(21.75 psi) |                   |                   | 1                 |                     |                     |
| RDK 140/170                             | 1400000300 | 0.5 bar<br>(7.25 psi)  |                   |                   |                   | 1                   |                     |
| PDK 140/170 with duct 2 x 2" OT         | 1401000300 | 0.5 bar<br>(7.25 psi)  |                   |                   |                   | 1                   |                     |
| RDK 170/200                             | 1400000100 | 0.5 bar<br>(7.25 psi)  |                   |                   |                   |                     | 1                   |
| PDK 170/200 with duct 2 x 2" OT         | 1401000600 | 0.5 bar<br>(7.25 psi)  |                   |                   |                   |                     | 1                   |

### Accessories for inflation

|                                          |            |                        |   |   |   |   |   |
|------------------------------------------|------------|------------------------|---|---|---|---|---|
| Inflation hose,<br>10 m (32 ft.), yellow | 1600029900 | 1.5 bar<br>(21.75 psi) | 2 | 2 | 2 |   |   |
| Single fitting controller                | 0150005400 | 1.5 bar<br>(21.75 psi) | 1 | 1 | 1 |   |   |
| Inflation hose,<br>10 m (32 ft.), yellow | 0050001801 | 0.5 bar<br>(7.25 psi)  |   |   |   | 4 | 4 |
| Dual fitting controller                  | 0050000801 | 0.5 bar<br>(7.25 psi)  |   |   |   | 2 | 2 |

### Additional accessories as an option

|                             |            |        |   |   |   |   |   |
|-----------------------------|------------|--------|---|---|---|---|---|
| C-Fixed coupling 2" IT      | 1700007700 |        | 2 | 2 | 2 | 2 | 2 |
| C-Blind coupling with chain | 1700016600 |        | 2 | 2 | 2 | 2 | 2 |
| Ventilation float hose 2"   | 1700011900 |        | 1 | 1 | 1 | 1 | 1 |
| Testing & measurement hose  | 1700013700 | Size C | 1 | 1 | 1 | 1 | 1 |
| Blocking valve              | 1700007900 | Size C | 1 | 1 | 1 | 1 | 1 |

## Egg Profile Sealing Bags

The specialists for egg profiles.

- › foldable bag
- › very lightweight and practical
- › up to 0.5 bar (7.25 psi) counter-pressure
- › extremely flexible

The sealing bags for egg profiled pipelines offer the opportunity to also seal sewer pipelines which are egg-shaped as well as the more frequent round shape. Reliable sealing of this Type of pipeline is not possible with round bags due to the fact that at the lower end (sole) has a smaller radius and therefore does not seal one hundred percent (see upper picture on the right).

The egg-profile sealing bag is made of a sturdy rubber material which is seamless and has high expansion characteristics.



Egg Profile Sealing Bags 1 bar (14.5 psi)



Egg profile pipe with round profile sealing bag - adaption problems, no sealing.



Egg profile pipe with egg profile sealing bag - optimum adaption and sealing.



A feature of the **1.5 bar (21.75 psi) egg-profiled sealing bag** is its compact design and therefore has a decisive advantage over the 1.0 bar (14.5 psi) version. This lies in the fact that due to the material expansion of the bag coating, two pipe cross sections can be covered with one egg profiled sealing bag.

The smooth surface ensures constant quality in the field of sewer reconstruction. These sealing bags are also made as test bags and bypass bags with internal hose (refer to Page 25).



**Further sizes and length  
can be produced  
on request.**

Egg Profile Sealing Bags 1.5 bar (21.75 psi) (Art. no. 1420000101)

## Technical data

| Egg Profile Sealing Bags                 |                               | Pipe cross section<br>mm / inch    | Cylinder length<br>mm / inch | Total length<br>mm / inch | Air requirement, approx.<br>litres / cu. ft. | Weight, approx.<br>kg / lbs |
|------------------------------------------|-------------------------------|------------------------------------|------------------------------|---------------------------|----------------------------------------------|-----------------------------|
| <b>EDK 35/52.5 - 50/75</b><br>1420000101 | <b>1.5 bar</b><br>(21.75 psi) | 350/525 - 500/750<br>14/21 - 20/30 | 600<br>23.4                  | 645<br>25.4               | 250<br>8.8                                   | 8<br>17.6                   |
| <b>EDK 60/90</b><br>1420000300           | <b>1 bar</b><br>(14.5 psi)    | 600/900<br>23.4/35                 | 1,200<br>47.2                | 1,400<br>55.1             | 840<br>29.7                                  | 17<br>37.5                  |
| <b>EDK 70/105</b><br>1420000400          | <b>1 bar</b><br>(14.5 psi)    | 700/1.050<br>28/41                 | 1,200<br>47.2                | 1,450<br>57.1             | 1,400<br>49.4                                | 20<br>44.1                  |
| <b>EDK 90/135</b><br>1420000500          | <b>1 bar</b><br>(14.5 psi)    | 900/1.350<br>35/53                 | 1,800<br>70.2                | 2,200<br>86.6             | 2,640<br>93.2                                | 26<br>57.3                  |

**Standard test counter-pressure  
of 5 m WC (7.25 psi).**



## Egg Profile Test and Bypass Bags

For the reliable testing of egg profiles.

- › foldable bag
- › very lightweight and practical
- › up to 0.5 bar (7.25 psi) counter-pressure
- › extremely flexible

The egg profiles are not only used as sealing bags but also as test bags and bypass bags. In addition to the inflation connection, the bags are equipped with either one or two C-connectors (2").

Additionally, the sealing function is, among other things, suitable for:

- › damming or banking
- › producing a pump well
- › for sealing inspection of newly laid pipelines or reconstructed sewer pipelines according to EN 1610
- › for rerouting sewerage when there are leaky pipelines

Owing to their flexibility, the egg profile bag can be positioned through the shaft in the sewerage pipeline.



Egg Profile Bypass Bags 1 bar (14.5 psi)



Easy positioning into the pipeline shaft

As opposed to the 1.0 bar (14.5 psi) version, **the 1.5 bar (21.75 psi) egg profiled test sealing bag** covers two pipe dimensions. The compact design and user-friendly application are just two of its features. Test sealing bags can also be used as bypass bags.

Another advantage is the work saving characteristic due to the fact that assembly in the shaft is not necessary as opposed to other customary blocking devices.

The smooth surface ensures constant quality in the field of sewer reconstruction.



**You will find the compatible testing equipment at page 27.**

Egg profiled test sealing bags 1.5 bar (21.75 psi) (Art. no. 1421000101)

## Technical data

| Egg Profile Test and Bypass Bags                                  |                               | Pipe cross section<br>mm / inch    | Cylinder length<br>mm / inch | Total length<br>mm / inch | Air requirement<br>litres / cu. ft. | Weight, approx.<br>kg / lbs |
|-------------------------------------------------------------------|-------------------------------|------------------------------------|------------------------------|---------------------------|-------------------------------------|-----------------------------|
| <b>EPK 35/52.5 - 50/75</b><br>1421000101 1 x 1" OT                | <b>1.5 bar</b><br>(21.75 psi) | 350/525 - 500/750<br>14/21 - 20/30 | 600<br>23.4                  | 645<br>25.4               | 225<br>7.9                          | 12<br>26.5                  |
| <b>EPK 60/90</b><br>1421001300 1 x 2" OT<br>1421001200 2 x 2" OT  | <b>1 bar</b><br>(14.5 psi)    | 600/900<br>23.4/35                 | 1,200<br>47.2                | 1,400<br>55.1             | 820<br>29                           | 26 - 35<br>57.3 - 77.2      |
| <b>EPK 70/105</b><br>1421001700 1 x 2" OT<br>1421001600 2 x 2" OT | <b>1 bar</b><br>(14.5 psi)    | 700/1.050<br>28/41                 | 1,200<br>47.2                | 1,450<br>57.1             | 1,380<br>48.7                       | 29 - 38<br>63.9 - 83.8      |
| <b>EPK 90/135</b><br>1421002000 1 x 2" OT<br>1421001900 2 x 2" OT | <b>1 bar</b><br>(14.5 psi)    | 900/1.350<br>35/53                 | 1,800<br>70.2                | 2,200<br>86.6             | 2,620<br>92.5                       | 36 - 46<br>79.4 - 101.4     |

**Standard test counter-pressure  
of 5 m WC (7.25 psi).**

## Compressed air & water pressure testing - Egg profile

### Sets 1.5 bar (21.75 psi) + Sets 1 bar (14.5 psi)

| For pipes 350-900 mm (14-35 inch)                   |            |                        | Compressed air testing |       |        |        | Water pressure testing |       |        |        |
|-----------------------------------------------------|------------|------------------------|------------------------|-------|--------|--------|------------------------|-------|--------|--------|
|                                                     |            |                        | 35/52.5<br>50/70       | 60/90 | 70/105 | 90/135 | 35/52.5<br>50/70       | 60/90 | 70/105 | 90/135 |
| EDK 35/52.5 - 50/75                                 | 1420000101 | 1.5 bar<br>(21.75 psi) | 1                      |       |        |        |                        |       |        |        |
| EPK 35/52.5 - 50/75<br>with duct 1 x 1" OT          | 1421000101 | 1.5 bar<br>(21.75 psi) | 1                      |       |        |        | 2                      |       |        |        |
| EDK 60/90                                           | 1420000300 |                        |                        | 1     |        |        |                        | 1     |        |        |
| EPK 60/90 with 1 x 2" OT                            | 1421001300 | 1 bar<br>(14.5 psi)    |                        | 1     |        |        |                        |       |        |        |
| EPK 60/90 with 2 x 2" OT                            | 1421001200 |                        |                        |       |        |        |                        | 1     |        |        |
| EDK 70/105                                          | 1420000400 |                        |                        |       | 1      |        |                        |       | 1      |        |
| EPK 70/105 with 1 x 2" OT                           | 1421001700 | 1 bar<br>(14.5 psi)    |                        |       | 1      |        |                        |       |        |        |
| EPK 70/105 with 2 x 2" OT                           | 1421001600 |                        |                        |       |        |        |                        |       | 1      |        |
| EDK 90/135                                          | 1420000500 |                        |                        |       |        | 1      |                        |       |        | 1      |
| EPK 90/135 with 1 x 2" OT                           | 1421002000 | 1 bar<br>(14.5 psi)    |                        |       |        | 1      |                        |       |        |        |
| EPK 90/135 with 2 x 2" OT                           | 1421001900 |                        |                        |       |        |        |                        |       |        | 1      |
| Compressed air adapter                              |            |                        |                        |       |        |        |                        |       |        |        |
| Compressed air adapter 1" IT                        | 1481023500 |                        | 1                      |       |        |        |                        |       |        |        |
| Compressed air adapter 2" IT                        | 1481023400 |                        |                        | 1     | 1      | 1      |                        |       |        |        |
| Accessories for inflation                           |            |                        |                        |       |        |        |                        |       |        |        |
| Inflation hose,<br>10 m (32 ft.), yellow            | 1600029900 | 1.5 bar<br>(21.75 psi) | 2                      |       |        |        | 2                      |       |        |        |
| Single fitting controller                           | 0150005400 | 1.5 bar<br>(21.75 psi) | 1                      |       |        |        | 1                      |       |        |        |
| Inflation hose,<br>10 m (32 ft.), yellow            | 0100000701 | 1 bar<br>(14.5 psi)    |                        | 2     | 2      | 2      |                        | 2     | 2      | 2      |
| Single fitting controller                           | 0100001501 | 1 bar<br>(14.5 psi)    |                        | 2     | 2      | 2      |                        | 2     | 2      | 2      |
| Additional accessories as an option                 |            |                        |                        |       |        |        |                        |       |        |        |
| Inflation and safety hose<br>10 m (32 ft.), yellow  | 1700009001 | 0.3 bar<br>(4.35 psi)  | 1                      | 1     | 1      | 1      |                        |       |        |        |
| Measurement hose<br>10 m (32 ft.) (self-monitoring) | 1700010301 | 0.3 bar<br>(4.35 psi)  | 1                      | 1     | 1      | 1      |                        |       |        |        |
| D-Fixed coupling 1" IT                              | 1700016000 |                        |                        |       |        |        | 2                      |       |        |        |
| C-Fixed coupling 2" IT                              | 1700007700 |                        |                        |       |        |        |                        | 2     | 2      | 2      |
| D-Blind coupling with chain                         | 1700016200 |                        |                        |       |        |        | 2                      |       |        |        |
| C-Blind coupling with chain                         | 1700016600 |                        |                        |       |        |        |                        | 2     | 2      | 2      |
| Ventilation float hose 1"                           | 1700038400 |                        |                        |       |        |        | 1                      |       |        |        |
| Ventilation float hose 2"                           | 1700011900 |                        |                        |       |        |        |                        | 1     | 1      | 1      |
| Testing & measurement hose                          | 1700008400 | Size D                 |                        |       |        |        | 1                      |       |        |        |
| Testing & measurement hose                          | 1700013700 | Size C                 |                        |       |        |        |                        | 1     | 1      | 1      |
| Blocking valve                                      | 1700013200 | Size D                 |                        |       |        |        | 1                      |       |        |        |
| Blocking valve                                      | 1700007900 | Size C                 |                        |       |        |        |                        | 1     | 1      | 1      |

# Accessories - Compressed air & water pressure testing

## Compressed air testing

**Compressed air adapter,**  
with two brass quick-snap couplings and hose



| 1/2" IT    |
|------------|
| 1481023600 |
| 1" IT      |
| 1481023500 |
| 2" IT      |
| 1481023400 |

**Inflation and safety hose 0.3 bar (4.35 psi),**  
10 m (32 ft.), yellow for inflation of the line



1700009001

**Measurement hose 0.3 bar (4.35 psi), 10 m (32 ft.)**  
for self-monitoring for the sealing tests



1700010301

## Water pressure testing

**Fixed coupling**



| D-Fixed coupling 1/2" IT |
|--------------------------|
| 1700007600               |
| D-Fixed coupling 1" IT   |
| 1700016000               |
| C-Fixed coupling 2" IT   |
| 1700007700               |

**Ventilation float hose**



| 1/2" IT    |
|------------|
| 0250004400 |
| 1" IT      |
| 1700038400 |
| 2" IT      |
| 1700011900 |

**Blind coupling**



| D-Blind coupling with chain |
|-----------------------------|
| 1700016200                  |
| C-Blind coupling with chain |
| 1700016600                  |

**Testing and measurement hose 6 m (19 ft.)**



| Storz D    |
|------------|
| 1700008400 |
| Storz C    |
| 1700013700 |

**Blocking valve Size D**



1700013200

**Blocking valve Size C**



1700007900

## Accessories - Inflation of the bags

### 0.5 bar (7.25 psi)

| Inflation hose<br>0.5 bar (7.25 psi)                                              | 5 m (16.4 ft.) | 10 m (32 ft.) | Dual fitting controller 0.5 bar (7.25 psi)                                         |            |
|-----------------------------------------------------------------------------------|----------------|---------------|------------------------------------------------------------------------------------|------------|
|  | 0050000701     | 0050001801    |  | 0050000801 |

### 1 bar (14.5 psi)

| Inflation hose<br>1 bar (14.5 psi)                                                | 5 m (16.4 ft.) | 10 m (32 ft.) | Single fitting controller 1 bar (14.5 psi)                                         |            |
|-----------------------------------------------------------------------------------|----------------|---------------|------------------------------------------------------------------------------------|------------|
|  | 0100000501     | 0100000701    |  | 0100001501 |

### 1.5 bar (21.75 psi)

| Inflation hose                                                                      | 5 m (16.4 ft.) | 10 m (32 ft.) | Single fitting controller 1.5 bar (21.75 psi)                                        |            |
|-------------------------------------------------------------------------------------|----------------|---------------|--------------------------------------------------------------------------------------|------------|
|  | 1600030000     | 1600029900    |  | 0150005401 |

### Inflation and safety hose 1.5 bar (21.75 psi), 10 m (32 ft.), yellow

|                                                                                     |            |
|-------------------------------------------------------------------------------------|------------|
|  | 0150005500 |
|-------------------------------------------------------------------------------------|------------|

**All pipe and test sealing bags will be fitted with brass couplings\* as a standard from 01.01.2012 onwards.**

### 2.5 bar (36.25 psi)

| Inflation hose                                                                      | 5 m (16.4 ft.) | 10 m (32 ft.) | Single fitting controller 2.5 bar (36.25 psi)                                        |            |
|-------------------------------------------------------------------------------------|----------------|---------------|--------------------------------------------------------------------------------------|------------|
|  | 1600030000     | 1600029900    |  | 0250005701 |

### Inflation and safety hose 2.5 bar (36.25 psi), 10 m (32 ft.), yellow

|                                                                                     |            |
|-------------------------------------------------------------------------------------|------------|
|  | 0250005800 |
|-------------------------------------------------------------------------------------|------------|

### Foot air pump 2.5 bar (36.25 psi) with safety valve

|                                                                                      |            |
|--------------------------------------------------------------------------------------|------------|
|  | 0250005300 |
|--------------------------------------------------------------------------------------|------------|

\* If you still wish to have the safety couplings (blue at 1.5 bar, black at 2.5 bar), we kindly ask you to state this explicitly when placing an order.

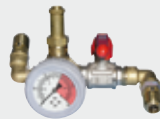
## 6 bar (87 psi)

### Inflation hose 6 bar (87 psi), 10 m (32 ft.), green



1000000401

### Single fitting controller 6 bar (87 psi)



0600000401

## Accessories for inflation

### Air supply hose, green



10 m (32 ft.)

1600013401

10 m (32 ft.), with blocking valve

1600013601

### Hand and foot air pump

you need no further adapters or hoses



**Hand air pump,**  
520 ccm / Hub (25.6 cu.in.)

1600008700

**Foot air pump,**  
420 ccm / Hub (31.7 cu.in.)

16000009400

### Adapter

for portable compressor/local compressed air network



1600008200

### Adapter

for construction site compressor



1600012000

## Vetter Flexible packers

For fast partial rehabilitation work.

› deliverable in different constructions and sizes:

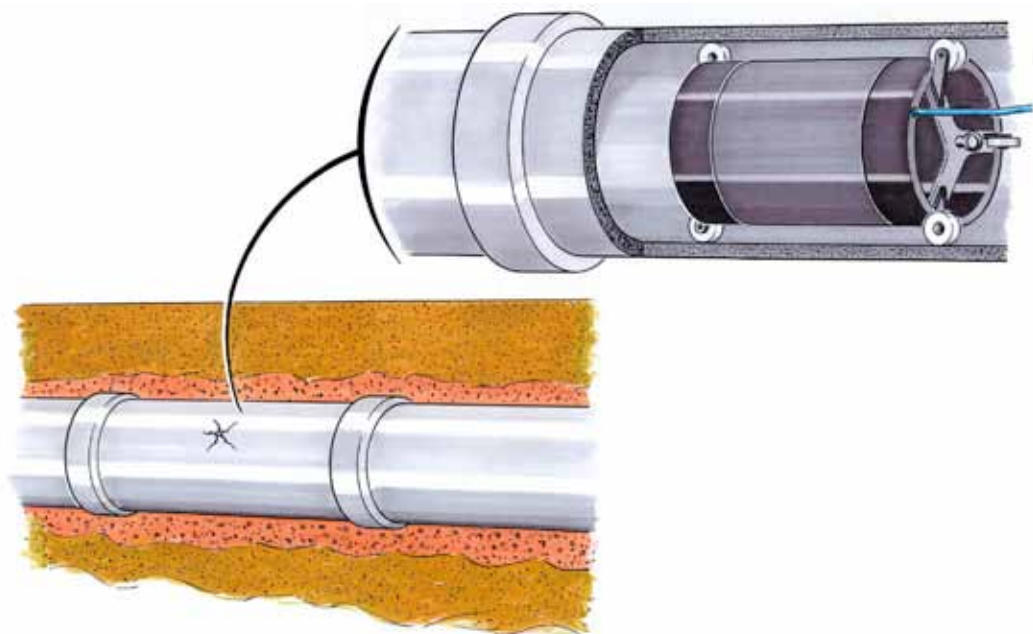
› Short packers

› Lateral packers

› Flexible packers

The partial repair of a defective pipeline (e.g. damages caused by roots, leaky connections, corrosion damages etc.) is carried out using a mat made of synthetic resin and fibre glass. The packer is equipped with this mat and is then attached to the damaged position on the pipeline. Here pressure is applied and in doing so presses the mat onto the pipe wall. This pressure causes the resin to enter the cracks as well as other damaged positions in the pipeline where it solidifies.

Pressure is then finally released from the packer which is then removed out of the repaired pipeline.



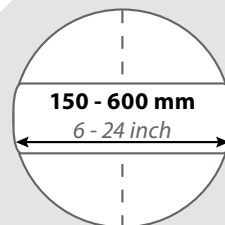
Partial reconstruction work with Vetter flexible packers.



# Short packers 2.5 bar (36.25 psi)

The fast and clever solution.

- › adjustable carriage with spring action
- › low weight due to PE tube
- › skid-shaped carriage allows sliding even over offsets



Vetter short packers are designed for reconstructing drains of up to 600 mm (24 inch) diameter. They comprise a replaceable rubber sleeve and a PE core with a duct which ensures the water flows off during the reconstruction. The open safety coupling with a lock pin prevents unwanted decoupling.

The carriage can be flexibly adjusted depending on the pipe diameter and has a slight spring action. On top of that, the runner shape facilitates smooth sliding, even over offsets. The wheels are mounted at a 120° angle, which ensures reliable stability and prevents tipping over during the repair work.

The Vetter short packers are available in 5 sizes for pipe diameters of 150 mm - 600 mm (6 - 24 inch).



Reliable stability due to 3 wheels in an angle of 120°

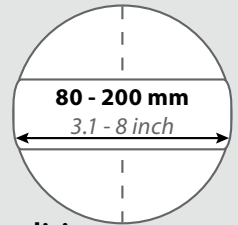


## Technical data

| Short packers<br>2.5 bar/36.25 psi | Application<br>range<br>(from-to)<br>mm / inch | Packer<br>length<br>mm / inch | Application<br>length in<br>largest diam.<br>mm / inch | Application<br>length in<br>smallest diam.<br>mm / inch | Packer<br>diameter,<br>approx.<br>mm / inch | Packer<br>length,<br>with carriage<br>mm / inch | Sleeve<br>length,<br>approx.<br>mm / inch | Weight,<br>approx.<br>kg / lbs |
|------------------------------------|------------------------------------------------|-------------------------------|--------------------------------------------------------|---------------------------------------------------------|---------------------------------------------|-------------------------------------------------|-------------------------------------------|--------------------------------|
| <b>Type 150-200</b><br>1491000100  | 150 - 200<br>6 - 8                             | 820<br>32                     | 650<br>25.6                                            | 695<br>27.1                                             | 105<br>4.1                                  | 950<br>37.1                                     | 800<br>31.2                               | 5<br>11                        |
| <b>Type 250-300</b><br>1491044400  | 250 - 300<br>10 - 12                           | 820<br>32                     | 640<br>25                                              | 690<br>26.9                                             | 190<br>7.4                                  | 1,080<br>42.1                                   | 800<br>31.2                               | 11.8<br>26                     |
| <b>Type 300-350</b><br>1491044700  | 300 - 350<br>12 - 14                           | 820<br>32                     | 630<br>24.6                                            | 670<br>26.1                                             | 230<br>9                                    | 1,080<br>42.1                                   | 800<br>31.2                               | 17.8<br>39.2                   |
| <b>Type 400-450</b><br>1491013100  | 400 - 450<br>16 - 18                           | 820<br>32                     | 660<br>25.7                                            | 680<br>26.5                                             | 310<br>12.1                                 | 1,080<br>42.1                                   | 800<br>31.2                               | 24.7<br>54.5                   |
| <b>Type 500-600</b><br>1491013700  | 500 - 600<br>20 - 24                           | 920<br>36                     | 680<br>26.5                                            | 690<br>26.9                                             | 385<br>15                                   | 1,180<br>46                                     | 900<br>35.1                               | 41<br>90.4                     |

## Lateral packers 2.5 bar (36.25 psi)

The intelligent solution that saves money.



- › high flexibility
- › Replaceable spherical heads
- › Construction allows very good bending characteristics & increased slipping qualities

Vetter lateral packers are the ideal solution for pipes with small diameters, especially pipelines in the building lateral area. The flexible construction ensures good slipping qualities, bending characteristics and handling. That facilitates quick application, reducing your working hours. The open safety coupling with a lock pin prevents unwanted decoupling. The spherical heads are mounted on the packers and are not vulcanised in. That makes them replaceable and reusable. That in turn provides you with benefits in handling, saves resources and on top of that saves you money.

The lateral packers are available in 3 sizes from 80 - 200 mm (3.1 - 8 inch) and lengths up to 4 m (13.2 ft.).



Replaceable spherical heads

Good bending characteristics due to flexible construction to be able to work more effective.

## Technical data

| Lateral packers<br>2.5 bar/36.25 psi | Design | Application<br>range<br>(from-to)<br>mm / inch | Packer<br>length,<br>approx.<br>mm / inch | Application<br>length in<br>largest diam.<br>mm / inch | Application<br>length in<br>smallest diam.<br>mm / inch | Packer<br>diameter<br>mm / inch | Packer length<br>with spherical<br>head<br>mm / inch | Weight,<br>approx.*<br>kg / lbs |
|--------------------------------------|--------|------------------------------------------------|-------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|---------------------------------|------------------------------------------------------|---------------------------------|
| <b>Type 80-110</b><br>1491019600     | wound  | 80 - 110<br>3.1 - 4.3                          | 1,000<br>39                               | 800<br>31.2                                            | 820<br>32                                               | 51<br>2                         | 1,175<br>45.8                                        | 1.1<br>2.4                      |
| <b>Type 80-110</b><br>1491019800     | wound  | 80 - 110<br>3.1 - 4.3                          | 2,000<br>78                               | 1,800<br>70.2                                          | 1,820<br>71                                             | 51<br>2                         | 2,175<br>84.8                                        | 2<br>4.4                        |
| <b>Type 80-110</b><br>1491020000     | wound  | 80 - 110<br>3.1 - 4.3                          | 2,500<br>97.5                             | 2,300<br>89.7                                          | 2,320<br>90.5                                           | 51<br>2                         | 2,675<br>104.3                                       | 2.8<br>6.2                      |
| <b>Type 100-150</b><br>1491031500    | smooth | 100 - 150<br>4 - 6                             | 1,000<br>39                               | 840<br>32.8                                            | 920<br>35.9                                             | 66<br>2.6                       | 1,170<br>45.6                                        | 1.1<br>2.4                      |
| <b>Type 100-150</b><br>1491018200    | smooth | 100 - 150<br>4 - 6                             | 2,000<br>78                               | 1,840<br>71.8                                          | 1,920<br>74.9                                           | 66<br>2.6                       | 2,170<br>84.6                                        | 2.2<br>4.9                      |
| <b>Type 100-150</b><br>1491018300    | smooth | 100 - 150<br>4 - 6                             | 3,000<br>118                              | 2,840<br>110.8                                         | 2,920<br>113.9                                          | 66<br>2.6                       | 3,170<br>123.6                                       | 3.3<br>7.3                      |
| <b>Type 100-150</b><br>1491018000    | smooth | 100 - 150<br>4 - 6                             | 4,000<br>156                              | 3,840<br>149.8                                         | 3,920<br>152.9                                          | 66<br>2.6                       | 4,170<br>162.6                                       | 4.4<br>9.7                      |
| <b>Type 150-200</b><br>1491019100    | smooth | 150 - 200<br>6 - 8                             | 1,000<br>39                               | 940<br>36.7                                            | 920<br>35.9                                             | 92<br>3.6                       | 1,225<br>47.8                                        | 1.6<br>3.5                      |
| <b>Type 150-200</b><br>1491018700    | smooth | 150 - 200<br>6 - 8                             | 2,000<br>78                               | 1,840<br>71.8                                          | 1,920<br>74.9                                           | 92<br>3.6                       | 2,225<br>86.8                                        | 3.0<br>6.6                      |
| <b>Type 150-200</b><br>1441013600    | smooth | 150 - 200<br>6 - 8                             | 3,000<br>118                              | 2,840<br>110.8                                         | 2,920<br>113.9                                          | 92<br>3.6                       | 3,225<br>125.8                                       | 4.5<br>9.9                      |
| <b>Type 150-200</b><br>1441013700    | smooth | 150 - 200<br>6 - 8                             | 4,000<br>156                              | 3,840<br>149.8                                         | 3,920<br>152.9                                          | 92<br>3.6                       | 4,225<br>164.8                                       | 6.6<br>14.6                     |

\* without spherical heads



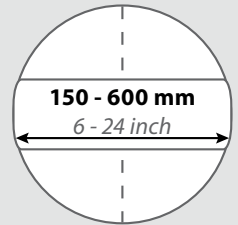
### Set spherical heads

DN 80-110 (Art. no. 1491011001)  
DN 100-150 (Art. no. 1491047400)  
DN 150-200 (Art. no. 1491011101)

## Flexible packers

The adaptable solution.

- › high flexibility
- › adjustable carriage with resilience
- › skid-shaped carriage allows sliding even over offsets



Vetter flexible packers are the flexible solution for drain reconstruction. They are made of a rubber sleeve that is vulcanised onto metal heads. The interior tube lets the water flow off during the repair work. The open safety coupling with a lock pin prevents unwanted decoupling. The flexible construction means it is easy to conduct the packer through a manhole and install it in the damaged line.

The carriage has a slight spring action and can be flexibly adjusted to match the pipe diameter. On top of that, the runner-shaped carriage facilitates smooth sliding, even over offsets. The wheels are set at a 120° angle, which ensures easy packer penetration.

The Vetter flexible packers are available in 4 sizes for pipe diameters from 150 - 600 mm (6 - 24 inch) and lengths up to 4 m (13.1 ft.).



Best flexibility and guaranteed stability.

## Technical data

| Flexible packers                  |                               | Application range<br>(from-to)<br>mm / inch | Packer length,<br>approx.<br>mm / inch | Application length in<br>largest diam.<br>mm / inch | Application length in<br>smallest diam.<br>mm / inch | Packer diameter,<br>approx.<br>mm / inch | Packer length,<br>with carriage,<br>approx.<br>mm / inch | Weight,<br>approx.<br>kg / lbs |
|-----------------------------------|-------------------------------|---------------------------------------------|----------------------------------------|-----------------------------------------------------|------------------------------------------------------|------------------------------------------|----------------------------------------------------------|--------------------------------|
| <b>Type 150-250</b><br>1491045900 | <b>2.5 bar</b><br>(36.25 psi) | 150 - 250<br>6 - 10                         | 1,000<br>39                            | 680<br>26.5                                         | 780<br>30.4                                          | 105<br>4.1                               | 1,130<br>44.1                                            | 6.4<br>14.1                    |
| <b>Type 150-250</b><br>1491046000 | <b>2.5 bar</b><br>(36.25 psi) | 150 - 250<br>6 - 10                         | 2,000<br>78                            | 1,680<br>65.5                                       | 1,780<br>69.4                                        | 105<br>4.1                               | 2,130<br>83.1                                            | 10<br>22.1                     |
| <b>Type 150-250</b><br>1491046100 | <b>2.5 bar</b><br>(36.25 psi) | 150 - 250<br>6 - 10                         | 3,000<br>118                           | 2,680<br>104.5                                      | 2,780<br>108.4                                       | 105<br>4.1                               | 3,130<br>122.1                                           | 14<br>20.9                     |
| <b>Type 150-250</b><br>1491046200 | <b>2.5 bar</b><br>(36.25 psi) | 150 - 250<br>6 - 10                         | 4,000<br>156                           | 3,680<br>143.5                                      | 3,780<br>147.4                                       | 105<br>4.1                               | 4,130<br>161.1                                           | 18<br>39.7                     |
| <b>Type 200-300</b><br>1491044800 | <b>1.5 bar</b><br>(21.75 psi) | 200 - 300<br>8 - 12                         | 1,000<br>39                            | 590<br>23                                           | 690<br>26.9                                          | 170<br>6.6                               | 1,260<br>49.1                                            | 10<br>22.1                     |
| <b>Type 200-300</b><br>1491046300 | <b>1.5 bar</b><br>(21.75 psi) | 200 - 300<br>8 - 12                         | 2,000<br>78                            | 1,590<br>62                                         | 1,690<br>65.9                                        | 170<br>6.6                               | 2,260<br>88.1                                            | 15<br>33.1                     |
| <b>Type 200-300</b><br>1491046400 | <b>1.5 bar</b><br>(21.75 psi) | 200 - 300<br>8 - 12                         | 3,000<br>118                           | 2,590<br>101                                        | 2,690<br>104.9                                       | 170<br>6.6                               | 3,260<br>127.1                                           | 20<br>44.1                     |
| <b>Type 200-300</b><br>1491046500 | <b>1.5 bar</b><br>(21.75 psi) | 200 - 300<br>8 - 12                         | 4,000<br>156                           | 3,590<br>140                                        | 3,690<br>143.9                                       | 170<br>6.6                               | 4,260<br>166.1                                           | 25<br>55.1                     |
| <b>Type 300-400</b><br>1491044900 | <b>1.5 bar</b><br>(21.75 psi) | 300 - 400<br>12 - 16                        | 1,000<br>39                            | 560<br>21.8                                         | 660<br>25.7                                          | 230<br>9                                 | 1,260<br>49.1                                            | 13.2<br>29.1                   |
| <b>Type 300-400</b><br>1491046600 | <b>1.5 bar</b><br>(21.75 psi) | 300 - 400<br>12 - 16                        | 2,000<br>78                            | 1,560<br>60.8                                       | 1,660<br>64.7                                        | 230<br>9                                 | 2,260<br>88.1                                            | 19.4<br>42.8                   |
| <b>Type 300-400</b><br>1491046700 | <b>1.5 bar</b><br>(21.75 psi) | 300 - 400<br>12 - 16                        | 3,000<br>118                           | 2,560<br>99.8                                       | 2,660<br>103.7                                       | 230<br>9                                 | 3,260<br>127.1                                           | 26<br>57.3                     |
| <b>Type 300-400</b><br>1491046800 | <b>1.5 bar</b><br>(21.75 psi) | 300 - 400<br>12 - 16                        | 4,000<br>156                           | 3,560<br>138.8                                      | 3,660<br>142.7                                       | 230<br>9                                 | 4,260<br>166.1                                           | 32<br>70.6                     |
| <b>Type 400-600</b><br>1491045700 | <b>1.5 bar</b><br>(21.75 psi) | 400 - 600<br>16 - 24                        | 1,500<br>58.5                          | 900<br>35.1                                         | 950<br>37.1                                          | 350<br>13.7                              | 1,770<br>69                                              | 26.1<br>57.6                   |

Standard through-flow openings of 2".



Through-flow openings of the flexible packers.

## Counter-pressure tables

Measured in dry metal pipe.

### All counter-pressure specifications in bar (psi).

#### Mini Pipe Sealing Bags 2.5 bar (36.25psi)

| Diameter<br>mm / inch | RDK 2.5/4<br>1440000101 | RDK 4/7<br>1440000201 | RDK 8/15<br>1440018800 | RDK 10/15<br>1440010500 | RDK 12.5/20<br>1440010700 | RDK 15/20<br>1440018900 | RDK 15/30<br>1440010600 |
|-----------------------|-------------------------|-----------------------|------------------------|-------------------------|---------------------------|-------------------------|-------------------------|
| 25 / 1                | 1.6 / 23.98             |                       |                        |                         |                           |                         |                         |
| 40 / 1.6              | 1.4 / 20.3              | 1.65 / 23.9           |                        |                         |                           |                         |                         |
| 50 / 2                |                         | 1.5 / 21.75           |                        |                         |                           |                         |                         |
| 70 / 2.8              |                         | 1.25 / 18.1           |                        |                         |                           |                         |                         |
| 80 / 3.1              |                         |                       | 1.35 / 19.6            |                         |                           |                         |                         |
| 90 / 3.5              |                         |                       | 1.25 / 18.1            |                         |                           |                         |                         |
| 100 / 4               |                         |                       | 1.25 / 18.1            | 1.4 / 20.3              |                           |                         |                         |
| 125 / 5               |                         |                       | 1.25 / 18.1            | 1.35 / 19.6             |                           | 1.4 / 20.3              |                         |
| 150 / 6               |                         |                       | 1.05 / 15.2            | 1.3 / 18.9              | 1.15 / 16.7               | 1.3 / 18.9              | 1.35 / 19.6             |
| 200 / 8               |                         |                       |                        |                         | 1.1 / 15.9                | 1.25 / 18.1             | 1.3 / 18.9              |
| 250 / 10              |                         |                       |                        |                         |                           |                         | 1.25 / 18.1             |
| 300 / 12              |                         |                       |                        |                         |                           |                         | 1.25 / 18.1             |

#### Pipe Sealing Bags

| Diameter<br>mm / inch | RDK 7/15<br>1440000301<br>1440008100 (CR) | RDK 10/20<br>1440011700 | RDK 15/30<br>1440000601<br>1440008000 (CR) | RDK 20/40<br>1440020100 | RDK 20/50<br>1440016700 | RDK 30/60<br>1440000801<br>1440007900 (CR) | RDK 50/80<br>1440020000 | RDK 60/100<br>1440011900 |
|-----------------------|-------------------------------------------|-------------------------|--------------------------------------------|-------------------------|-------------------------|--------------------------------------------|-------------------------|--------------------------|
| 2.5 bar (36.25psi)    |                                           |                         |                                            |                         |                         |                                            |                         |                          |
| 70 / 2.8              | 1.6 / 23.2                                |                         |                                            |                         |                         |                                            |                         |                          |
| 80 / 3.1              | 1.8 / 26.1                                |                         |                                            |                         |                         |                                            |                         |                          |
| 90 / 3.5              | 1.8 / 26.1                                |                         |                                            |                         |                         |                                            |                         |                          |
| 100 / 4               | 1.8 / 26.1                                | 1.5 / 21.75             |                                            |                         |                         |                                            |                         |                          |
| 125 / 5               | 1.55 / 22.5                               | 1.75 / 25.4             |                                            |                         |                         |                                            |                         |                          |
| 150 / 6               | 1.4 / 20.3                                | 1.6 / 23.2              | 1.7 / 24.7                                 |                         |                         |                                            |                         |                          |
| 200 / 8               |                                           | 1.4 / 20.3              | 1.65 / 23.9                                | 1.5 / 21.75             | 2.1 / 30.5              |                                            |                         |                          |
| 250 / 10              |                                           |                         | 1.6 / 23.2                                 | 1.3 / 18.9              | 1.8 / 26.1              |                                            |                         |                          |
| 300 / 12              |                                           |                         | 1.35 / 19.6                                | 1.4 / 20.3              | 1.7 / 24.7              | 1.65 / 23.9                                |                         |                          |
| 400 / 16              |                                           |                         |                                            | 1.3 / 18.9              | 1.5 / 21.75             | 1.7 / 24.7                                 |                         |                          |
| 500 / 20              |                                           |                         |                                            |                         | 1.4 / 20.3              | 1.45 / 21.0                                | 1.45 / 21.0             |                          |
| 600 / 24              |                                           |                         |                                            |                         |                         | 1.3 / 18.9                                 | 1.55 / 22.5             | 1.8 / 26.1               |
| 800 / 32              |                                           |                         |                                            |                         |                         |                                            | 1.35 / 19.6             | 1.6 / 23.2               |
| 1000 / 40             |                                           |                         |                                            |                         |                         |                                            |                         | 1.3 / 18.9               |
| 1200 / 48             |                                           |                         |                                            |                         |                         |                                            |                         |                          |
| 1400 / 56             |                                           |                         |                                            |                         |                         |                                            |                         |                          |
| 1700 / 67             |                                           |                         |                                            |                         |                         |                                            |                         |                          |
| 2000 / 80             |                                           |                         |                                            |                         |                         |                                            |                         |                          |

### Mini Test Sealing Bags 2.5 bar (36.25psi)

| Diameter<br>mm / inch | PDK 4/7<br>1441000701 | PDK 10/15<br>1441035400 | PDK 12.5/20<br>1441035200 | PDK 20/30<br>1441035300 |
|-----------------------|-----------------------|-------------------------|---------------------------|-------------------------|
| 25 / 1                |                       |                         |                           |                         |
| 40 / 1.6              | 1.8 / 26.1            |                         |                           |                         |
| 50 / 2                | 1.6 / 23.2            |                         |                           |                         |
| 70 / 2.8              | 1.3 / 18.9            |                         |                           |                         |
| 80 / 3.1              |                       |                         |                           |                         |
| 90 / 3.5              |                       |                         |                           |                         |
| 100 / 4               |                       | 1.5 / 21.75             |                           |                         |
| 125 / 5               |                       | 1.25 / 18.1             | 1.25 / 18.1               |                         |
| 150 / 6               |                       | 1.2 / 17.4              | 1.2 / 17.4                |                         |
| 200 / 8               |                       |                         | 1.1 / 15.9                | 1.25 / 18.1             |
| 250 / 10              |                       |                         |                           | 1.2 / 17.4              |
| 300 / 12              |                       |                         |                           | 1.15 / 16.7             |

### Pipe Sealing Bags

| Diameter<br>mm / inch | RDK 50/100<br>1480000801 | RDK 60/120<br>1480001901<br>1480004800 (CR) | RDK 80/140<br>1480006000 | RDK 140/170<br>1400000300 | RDK 170/200<br>1400000100 |
|-----------------------|--------------------------|---------------------------------------------|--------------------------|---------------------------|---------------------------|
|                       | 1.5 bar (21.75 psi)      |                                             |                          | 0.5 bar (7.25 psi)        |                           |
| 70 / 2.8              |                          |                                             |                          |                           |                           |
| 80 / 3.1              |                          |                                             |                          |                           |                           |
| 90 / 3.5              |                          |                                             |                          |                           |                           |
| 100 / 4               |                          |                                             |                          |                           |                           |
| 125 / 5               |                          |                                             |                          |                           |                           |
| 150 / 6               |                          |                                             |                          |                           |                           |
| 200 / 8               |                          |                                             |                          |                           |                           |
| 250 / 10              |                          |                                             |                          |                           |                           |
| 300 / 12              |                          |                                             |                          |                           |                           |
| 400 / 16              |                          |                                             |                          |                           |                           |
| 500 / 20              | 1.25 / 18.1              |                                             |                          |                           |                           |
| 600 / 24              | 1.25 / 18.1              | 1.1 / 15.9                                  |                          |                           |                           |
| 800 / 32              | 1.1 / 15.9               | 0.95 / 13.8                                 | 0.5 / 7.25               |                           |                           |
| 1000 / 40             | 0.57 / 10.9              | 0.85 / 12.3                                 | 0.5 / 7.25               |                           |                           |
| 1200 / 48             |                          | 0.75 / 10.9                                 | 0.5 / 7.25               |                           |                           |
| 1400 / 56             |                          |                                             | 0.5 / 7.25               | 0.2 / 2.9                 |                           |
| 1700 / 67             |                          |                                             |                          | 0.2 / 2.9                 | 0.2 / 2.9                 |
| 2000 / 80             |                          |                                             |                          | 0.2 / 2.9                 | 0.2 / 2.9                 |



## Counter-pressure tables

Measured in dry metal pipe.

All counter-pressure specifications in bar (psi).

### Test Sealing Bags

| Diameter<br>mm / inch | PDK 7/15<br>FLEX<br>1441001201 | PDK 10/20<br>FLEX<br>1441018501 | PDK 15/30<br>FLEX<br>1441022700<br>1441022800 | PDK 20/40<br>FLEX<br>1441040300<br>1441018600 | PDK 20/50<br>FLEX<br>1441031100<br>1441031200 | PDK 30/60<br>FLEX<br>1441023100<br>1441018701 | PDK 50/80<br>FLEX<br>1441003900<br>1441003800 | PDK 60/100<br>FLEX<br>1441023200<br>1441023300 |
|-----------------------|--------------------------------|---------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|------------------------------------------------|
| 2.5 bar (36.25psi)    |                                |                                 |                                               |                                               |                                               |                                               |                                               |                                                |
| 70 / 2.8              | 1.55 / 22.5                    |                                 |                                               |                                               |                                               |                                               |                                               |                                                |
| 80 / 3.1              | 1.75 / 25.4                    |                                 |                                               |                                               |                                               |                                               |                                               |                                                |
| 90 / 3.5              | 1.7 / 24.7                     |                                 |                                               |                                               |                                               |                                               |                                               |                                                |
| 100 / 4               | 1.65 / 23.9                    | 1.6 / 23.2                      |                                               |                                               |                                               |                                               |                                               |                                                |
| 125 / 5               | 1.5 / 21.75                    | 1.5 / 21.75                     |                                               |                                               |                                               |                                               |                                               |                                                |
| 150 / 6               | 1.4 / 20.3                     | 1.4 / 20.3                      | 1.65 / 23.9                                   |                                               |                                               |                                               |                                               |                                                |
| 200 / 8               |                                | 1.45 / 21.0                     | 1.6 / 23.2                                    | 1.45 / 21.0                                   | 2 / 29.0                                      |                                               |                                               |                                                |
| 250 / 10              |                                |                                 | 1.5 / 21.75                                   | 1.3 / 18.9                                    | 1.7 / 24.7                                    |                                               |                                               |                                                |
| 300 / 12              |                                |                                 | 1.3 / 18.9                                    | 1.35 / 19.6                                   | 1.65 / 23.9                                   | 1.6 / 23.2                                    |                                               |                                                |
| 400 / 16              |                                |                                 |                                               | 1.3 / 18.9                                    | 1.5 / 21.75                                   | 1.65 / 23.9                                   |                                               |                                                |
| 500 / 20              |                                |                                 |                                               |                                               | 1.35 / 19.6                                   | 1.4 / 20.3                                    | 1.4 / 20.3                                    |                                                |
| 600 / 24              |                                |                                 |                                               |                                               |                                               | 1.3 / 18.9                                    | 1.5 / 21.75                                   | 1.75 / 25.4                                    |
| 800 / 32              |                                |                                 |                                               |                                               |                                               |                                               | 1.35 / 19.6                                   | 1.5 / 21.75                                    |
| 1000 / 40             |                                |                                 |                                               |                                               |                                               |                                               |                                               | 1.3 / 18.9                                     |
| 1200 / 48             |                                |                                 |                                               |                                               |                                               |                                               |                                               |                                                |
| 1400 / 56             |                                |                                 |                                               |                                               |                                               |                                               |                                               |                                                |
| 1700 / 67             |                                |                                 |                                               |                                               |                                               |                                               |                                               |                                                |
| 2000 / 80             |                                |                                 |                                               |                                               |                                               |                                               |                                               |                                                |

### High Pressure Pipe Sealing Bags 6 bar (87 psi)

| Diameter<br>mm / inch | RDK 100-200<br>1430001300 | RDK 200-300<br>1430001500 | RDK 300-400<br>1430001400 | RDK 500-600<br>1430001600 | RDK 800<br>1430000800 |
|-----------------------|---------------------------|---------------------------|---------------------------|---------------------------|-----------------------|
| 100 / 4               | 3.7 / 53.65               |                           |                           |                           |                       |
| 125 / 5               | 3.6 / 52.2                |                           |                           |                           |                       |
| 150 / 6               | 4.6 / 66.7                |                           |                           |                           |                       |
| 200 / 8               | 3.3 / 47.9                | 4.75 / 68.9               |                           |                           |                       |
| 250 / 10              |                           | 4 / 58.0                  |                           |                           |                       |
| 300 / 12              |                           | 3.4 / 49.3                | 3.8 / 55.1                |                           |                       |
| 400 / 16              |                           |                           | 3.6 / 52.2                |                           |                       |
| 500 / 20              |                           |                           |                           | 4 / 58.0                  |                       |
| 600 / 24              |                           |                           |                           | 3.4 / 49.3                |                       |
| 800 / 32              |                           |                           |                           |                           | 3 / 43.5              |

## Test Sealing Bags

| Diameter<br><i>mm / inch</i> | PDK 50/100<br>FLEX<br>1481003501<br>1481023800 | PDK 60/120<br>FLEX<br>1481009501<br>1481009301 | PDK 80/140<br>FLEX<br>1481024000<br>1481023900 | PDK 140/170<br>FLEX<br>1401000400<br>1401000300 | PDK 170/200<br>FLEX<br>1401000700<br>1401000600 |
|------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
|                              | 1.5 bar (21.75 psi)                            |                                                |                                                | 0.5 bar (7.25 psi)                              |                                                 |
| 70 / 2.8                     |                                                |                                                |                                                |                                                 |                                                 |
| 80 / 3.1                     |                                                |                                                |                                                |                                                 |                                                 |
| 90 / 3.5                     |                                                |                                                |                                                |                                                 |                                                 |
| 100 / 4                      |                                                |                                                |                                                |                                                 |                                                 |
| 125 / 5                      |                                                |                                                |                                                |                                                 |                                                 |
| 150 / 6                      |                                                |                                                |                                                |                                                 |                                                 |
| 200 / 8                      |                                                |                                                |                                                |                                                 |                                                 |
| 250 / 10                     |                                                |                                                |                                                |                                                 |                                                 |
| 300 / 12                     |                                                |                                                |                                                |                                                 |                                                 |
| 400 / 16                     |                                                |                                                |                                                |                                                 |                                                 |
| 500 / 20                     | 1.2 / 17.4                                     |                                                |                                                |                                                 |                                                 |
| 600 / 24                     | 1.2 / 17.4                                     | 1.05 / 15.2                                    |                                                |                                                 |                                                 |
| 800 / 32                     | 1 / 14.5                                       | 0.9 / 13.1                                     | 0.5 / 7.25                                     |                                                 |                                                 |
| 1000 / 40                    | 0.55 / 8.0                                     | 0.8 / 11.6                                     | 0.5 / 7.25                                     |                                                 |                                                 |
| 1200 / 48                    |                                                | 0.75 / 10.9                                    | 0.5 / 7.25                                     |                                                 |                                                 |
| 1400 / 56                    |                                                |                                                | 0.5 / 7.25                                     | 0.2 / 2.9                                       |                                                 |
| 1700 / 67                    |                                                |                                                |                                                | 0.2 / 2.9                                       | 0.2 / 2.9                                       |
| 2000 / 80                    |                                                |                                                |                                                | 0.2 / 2.9                                       | 0.2 / 2.9                                       |

# 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
- k. A. 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.**

## Temperature resistance limits

| Products                                                    | Cold resistance | Cold flexible | Heat resistance, long term | Heat resistance, short term |
|-------------------------------------------------------------|-----------------|---------------|----------------------------|-----------------------------|
| Mini Pipe Sealing Bags                                      |                 |               |                            |                             |
| Mini Test Sealing Bags                                      |                 |               |                            |                             |
| Pipe Sealing Bags 1.5 bar (21.75 psi)                       |                 |               |                            |                             |
| Pipe Sealing Bags 2.5 bar (36.25 psi)                       |                 |               |                            |                             |
| Test Sealing Bags 1.5 bar (21.75 psi)                       |                 |               |                            |                             |
| Test Sealing Bags 2.5 bar (36.25 psi)                       |                 |               |                            |                             |
| Bypass Bags 1.5 bar (21.75 psi)                             |                 |               |                            |                             |
| Pipe Sealing Bags CR                                        | - 40 °C         | - 20 °C       | + 90 °C                    | + 115 °C                    |
| High Pressure Pipe Sealing Bags                             |                 |               |                            |                             |
| Egg profile Sealing Bags 1.5 bar (21.75 psi)                |                 |               |                            |                             |
| Egg profile Testing Bags 1.5 bar (21.75 psi)                |                 |               |                            |                             |
| Short packers                                               |                 |               |                            |                             |
| Lateral packers                                             |                 |               |                            |                             |
| Flexible packers                                            |                 |               |                            |                             |
| Pipe Sealing Bags 0.5 bar (7.25 psi)                        |                 |               |                            |                             |
| Test Sealing Bags 0.5 bar (7.25 psi)                        |                 |               |                            |                             |
| Egg profile Sealing Bags 1 bar (14.5 psi)                   | - 40 °C         | - 20 °C       | + 70 °C                    | + 85 °C                     |
| Egg profile Testing Bags 1 bar (14.5 psi)                   |                 |               |                            |                             |
| Egg profile Bypass Bags 1 bar (14.5 psi)                    |                 |               |                            |                             |
| Rubber hoses                                                | - 40 °C         | - 30 °C       | + 90 °C                    | --                          |
| <b>Controller:</b><br>plastic,<br>aluminium-<br>and fitting | - 20 °C         | --            | + 50 °C                    | --                          |

## Material list

| Products                                       | Material | Support material  |
|------------------------------------------------|----------|-------------------|
| Mini Pipe Sealing Bags                         |          |                   |
| High Pressure Pipe Sealing Bags                |          |                   |
| Egg profile Sealing Bags 1.5 bar (21.75 psi)   | NR       | Nylon cord        |
| Egg profile Sealing Bags 1.5 bar (21.75 psi)   |          |                   |
| Short packers                                  |          |                   |
| Lateral packers                                |          |                   |
| Flexible packers                               |          |                   |
| Mini Test Sealing Bags                         | NR       | NR                |
| Pipe Sealing Bags 1.5 bar (21.75 psi)          |          |                   |
| Pipe Sealing Bags 2.5 bar (36.25 psi)          |          |                   |
| Test Sealing Bags 1.5 bar (21.75 psi)          | NR       | Nylon cord/Aramid |
| Test Sealing Bags 2.5 bar (36.25 psi)          |          |                   |
| Bypass Bags 1.5 bar (21.75 psi)                |          |                   |
| Pipe Sealing Bags 0.5 bar (7.25 psi)           |          |                   |
| Test Sealing Bags 0.5 bar (7.25 psi)           |          |                   |
| Egg profile Sealing Bags 1 bar (14.5 psi)      | CR/NR    | Nylon cord/Aramid |
| Egg profile Testing Bags 1 bar (14.5 psi)      |          |                   |
| Egg profile Bypass Bags 1 bar (14.5 psi)       |          |                   |
| Pipe Sealing Bags CR                           | CR       | Nylon cord        |
| Inflation hoses and air supply hoses (outside) | EPDM     | Polyester         |

## Resistance charts

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

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



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### **Vetter GmbH**

A Unit of IDEX Corporation

Blatzheimer Str. 10 – 12  
53909 Zülrich  
Germany

Sales Germany

Tel.: +49 (0)2252 / 3008-50  
Fax: +49 (0)2252 / 3008-70  
Mail: [vetter.info@idexcorp.com](mailto:vetter.info@idexcorp.com)

International sales

Tel.: +49 (0)2252 / 3008-60  
Fax: +49 (0)2252 / 3008-71  
Mail: [vetter.info@idexcorp.com](mailto:vetter.info@idexcorp.com)

**[www.vetter.de](http://www.vetter.de)**

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