

# Operating Instructions

## VETTER Test Equipment for Lifting Bags



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## 1. Important preliminary remarks

The test equipment for lifting bags is used for the correct and professional execution of repetitive tests on:

- ✓ Vetter lifting bags 0.5 bar
- ✓ Vetter lifting bags 1 bar
- ✓ Vetter mini lifting bags 8 bar
- ✓ Vetter S.Tec lifting bags 10 bar
- ✓ VEPRO pressure bags 0.5 bar
- ✓ VEPRO pressure bags 1 bar
- ✓ VEPRO mini lifting bags 8 bar

The 5 yearly pressure test according to GUV G 9102 for lifting bags 0.5 bar and 1 bar is stipulated to be carried out by the manufacturer.









The implementation of the visual test and function test according to GUV G 9102 must only be carried out by a specialist according to GUV G 9102. This assignment must normally be made in writing.

The inspector is responsible for carrying out his test assignment and to abide by the regulations valid on the day of the test.

### 1.1 Inventory check

Pos.-Nr.	Article No.	Description	Test equipment 1700005302	Test equipment with test pump 1700006803
1	1700005400	Blind coupling 0.5 bar (claw)	X	X
2	0350006500	Blind coupling 1 bar	X	X
3	0350006501	Blind coupling 1 bar, (quick action)	X	X
4	0350006300	Test manometer 0.5/1 bar	X	X
5	0800008000	Test manometer 8 bar	X	X
6	1000006600	Test manometer 10 bar	X	X
7	1700014300	Connector nipple/bayonet		X
8	1700006501	Adapter, hasp, 3/4"		X
9	1700010200	Test and measurement hose adapter	X	X
10	1600013401	Air supply hose, 10 m,	X	X
11	1700005501	Hand pump for water test with integrated 10 l tank		X
12	1700005701	Inflation hose, 5 m, red, brass		X
13	1700006101	Test and ventilation head with manometer and 2 ball valves	X	X
14	1000006300	S.Tec test adapter	X	X
15	1520002500	Bag, red, for transportation		X
16	1700035500	Transport case	X	

# Vetter Test Equipment for Lifting Bags

Pos.-Nr.	Article No.	Description	
1	1700005400	Blind coupling 0.5 bar	
2	0350006500	Blind coupling 1 bar	
3	0350006501	Blind coupling 1 bar	
4	0350006300	Test manometer 0.5/1 bar	
5	0800008000	Test manometer 8 bar	
6	1000006600	Test manometer 10 bar	
7	1700014300	Connector nipple/bayonet	
8	1700006501	Adapter, hasp, 3/4"	

9	1700010200	Test and measurement hose adapter	
10	1600013401	Air supply hose, 10 m	
11	1700005501	Hand pump for water test with integrated 10 l tank	
12	1700005701	Inflation hose, 5 m, red, brass	
13	1700006101	Test and ventilation head with manometer and 2 ball valves	
14	1000006300	S.Tec test adapter	
15	1520002500	Bag, red, for transportation	
16	1700035500	Transport case	

## 1.2 Correct handling and usage

The test equipment for lifting bags must only be used for the visual test and function test as well as the pressure test according to the operating instructions. Any other ulterior application must be excluded.

## 1.3 Safety instructions

Due to the fact that when testing pressure containers failure of the wall supports must be taken into account, then a certain distance to persons, objects and buildings must be maintained.

A pressure test must only be carried out after a visual test and function test has been carried out without any defects being found. Basically, pressure testing should be carried out in outside open spaces. The pre-specified personal protection equipment/clothing is to be worn according to UVV.

## 2. Preparations for the test

Check the test equipment to see if the individual parts are complete and in perfect condition.

If necessary clean the lifting bags/mini lifting bags/S.Tec lifting bags with warm soapy water and dry at room temperature.

Check the bag kits to see if the individual parts are complete and in perfect condition.

## 3. Testing the lifting bags 0.5 bar and 1 bar

### 3.1 Test intervals

- ✓ **After each operation/period of use**  
Visual test by the user
- ✓ **Yearly test**  
Visual test and function test by a specialist according to the preliminary stipulations in GUV-G 9102
- ✓ **Every 5 years, after repair or if there is any doubt about safety**  
Pressure test according to GUV-G 9102 Section 4.1.1.2 (only to be made by the manufacturer)

### 3.2 Function test of the inflation device

#### 3.2.1 Required test equipment

- ✓ Blind coupling 0.5 bar
- ✓ Blind coupling 1 bar
- ✓ Test manometer 0.5/1 bar

### 3.2.2 Preparations for testing

Connect the air source, e.g. pressure regulator 200/300 bar, to the input coupling of the controller. Adjust the output pressure on the regulator to approximately 2-3 bar.

Connect inflation hose to the output of the controller and close the open end with a blind coupling 1/0.5 bar and couple the test manometer 0.5/1 bar.

### 3.2.3 Operation

Open the shutoff valve on the pressure regulator. Carefully open the piston valve or ball valve. Monitor and compare the pressure increase on the manometer of the controller and the test manometer. Increase the pressure until the safety valve activates (permissible tolerance according to GUV-G 9102, +/- 10 %). Close the piston valve or ball valve and check to see if the safety valve perfectly closes.

### 3.2.4 Pressure test for lifting bags 0.5 bar/1 bar

The required pressure test is, in connection with the manufacturer's test, carried out by the manufacturer or his mobile inspection service. Therefore a pressure test made by a specialist of the user is not made.

#### 4.1.1.2 Five yearly test

Pneumatic lifters (without compressed air bottle) are to be inspected if there is any doubt about safety or reliability but at least every 5 years by the manufacturer.

Excerpt from GUV-G 9102

## 4. Testing the mini lifting bags 8 bar

### 4.1 Test intervals

- ✓ **After each operation/period of use**  
Visual test by the user
- ✓ **Yearly test**  
Visual test and function test by a specialist according to the preliminary stipulations in GUV-G 9102
- ✓ **Every 5 years, after repair or if there is any doubt about safety**  
Pressure test only to be made by a specialist according to the preliminary stipulations in GUV-G 9102 with the addition training according to GUV-G 9102, section 4.2.1.2.



## 4.2.1.2 Five yearly test

Pneumatic lifters (without compressed air bottle) are to be inspected if there is any doubt about safety or reliability but at least every 5 years according to Section 4.2.3 by a specialist (see preliminary remarks) having additional training or by an authorized trainer or the manufacturer himself

Excerpt from GUV-G 9102

## 4.2 Function test of the inflation device

### 4.2.1 Required test equipment

- ✓ Test manometer 8 bar

### 4.2.2 Preparations for testing

Connect the air source, e.g. pressure regulator 200/300 bar, to the input coupling of the controller. Adjust the output pressure on the regulator to approximately 10 bar.

Connect inflation hose to the output of the controller and connect the manometer 8 bar to the open end.

### 4.2.3 Operation

Open the shutoff valve on the pressure regulator. Carefully open the piston valve or ball valve. Monitor and compare the pressure increase on the manometer of the controller and the test manometer. Increase the pressure until the safety valve activates (permissible tolerance according to GUV-G 9102, +/- 10 %). Close the piston valve or ball valve and check to see if the safety valve perfectly closes.

### 4.2.4 Pressure test of the mini lifting bags 8 bar

#### Safety instructions

The pressure test must only be carried out after a function test has been made without establishing any defects. Due to the fact that with this test the bag could burst, a distance to persons, buildings and objects must be maintained. Basically, the test should be carried out in outside open spaces.





## 5. Pressure testing of mini lifting bags 8 bar

### 5.1 with the aid of existing pressure water sources (min. 11 bar)

#### 5.1.1 Material

- ✓ Test and measurement hose adapter
- ✓ Test and ventilation head
- ✓ Air supply hose, 10 m, green

#### 5.1.2 Preparations for the test

The test and measurement hose adapter is coupled with the Storz-D-coupling to a corresponding water connection.

**The outlet pressure of the water supply must be at least 11 bar.**

The air supply hose, 10 m, green, is connected to the test and measurement hose adapter on one side and to the test and ventilation head on the other side.

After the test and ventilation head has been connected to the safety coupling on the mini lifting bag, both ball valves should be closed.

#### 5.1.3 Carrying out the test

Open the shutoff valve on the pressure water source. Open the water supply valve (A). The mini lifting bag to be tested is now completely filled with water. If the manometer clearly indicates an increase in pressure then the mini lifting bag must be ventilated.

For ventilation, the water supply valve (A) is closed and the mini lifting bag must be positioned so that the valve connection is pointing upwards.

If the ventilation valve „B“ is now opened then the air remaining inside the bag escapes. By alternately operating the ball valves „A“ and „B“ it can be ensured that there is no more air in the bag.

Only when it is certain that the bag is completely ventilated can the pressure be carefully and evenly increased to the pre-specified test pressure.

#### Mini lifting bags 8.0 bar = 10.4 bar test pressure/water

The bag which is now under pressure should remain for a

**minimum of 3 minutes but a maximum of 5 minutes**

under pressure.





During this period the specialist can carry out a test for leaks, deformations or other types of damage. In order to empty the bag after the test has been completed, the bag is drained. To do this completely open the ventilation valve (B). Uncouple the test and ventilation head.

Position the bag for complete emptying so that the nipple is pointing downwards. The weight of the bag must not be resting on the connection nipple.

**Blow the fittings with compressed air after use.**

## 5.2 with the aid of a hand pump

If there is no water source is available with a minimum pressure of 11 bar then the hand pump must be used in order to reach the test pressure.

### 5.2.1 Material

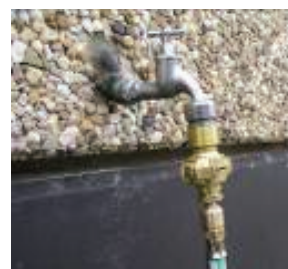
- ✓ Test und measurement hose adapter
- ✓ Test and ventilation head
- ✓ Air supply hose, 10 m, green
- ✓ Adapter nipple/bayonet
- ✓ Adapter, hasp, 3/4"
- ✓ Inflation hose, 5 m, red, brass
- ✓ Hand pump for water test with integrated 10 l tank

### 5.2.2 Preparations for testing

The corresponding adapter is used between the water valve and the air supply hose (10 m, green) depending on the water connection.



Test and measurement adapter with air supply hose



Adapte nipple/bayonet with air supply hose

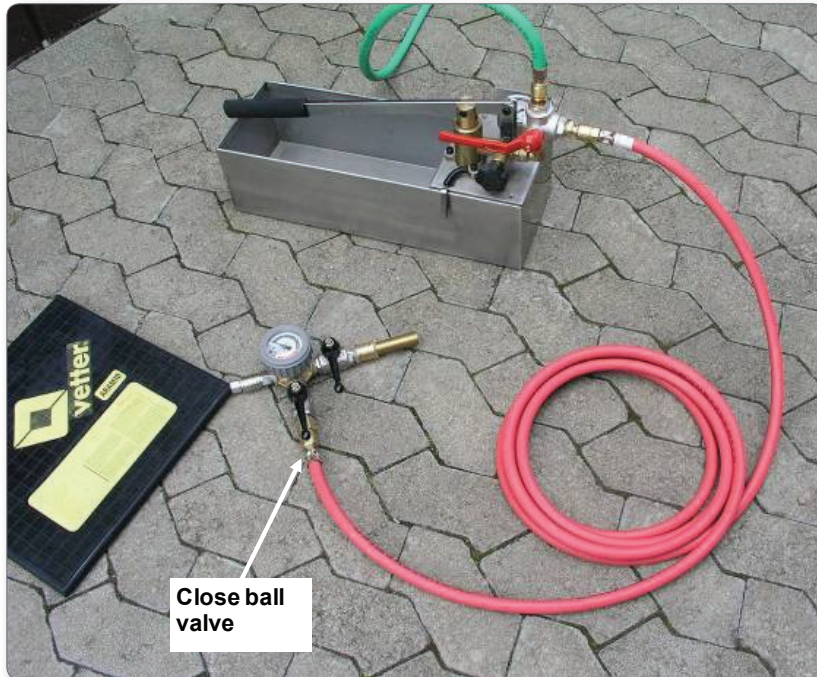


Adapter, hasp, 3/4" with air supply hose



The air supply hose is connected with the nipple to the inlet coupling of the hand pump. The 5 m long, red inflation hose is connected to the outlet nipple of the hand pump on the one side and on the other side to the test and ventilation head. After the test and ventilation head has been connected with the safety coupling to the nipple of the 8.0 bar mini lifting bag to be tested then the

system is ready for the test. Close both ball valves on the test and ventilation head.



### 5.2.3 Carrying out the test

**Before beginning the water pressure test the reserve tank of the hand pump should be filled to at least 75 %.**

Close back-flow valve using the black hand wheel (B). Position the ball valve (A) of the hand pump horizontally and open the blocking valve on the water supply location. If the ball valve (A) is positioned vertically then the water will flow to the test and ventilation head.

**ATTENTION! Fill the bag only when it is in the laying position. If it is in the standing position and it falls then the manometer could be damaged.**

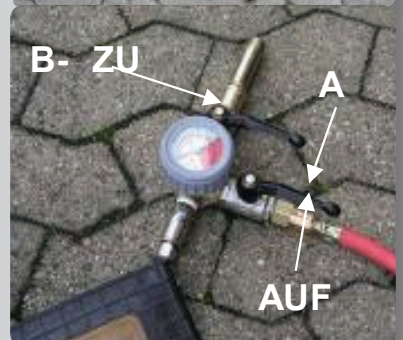
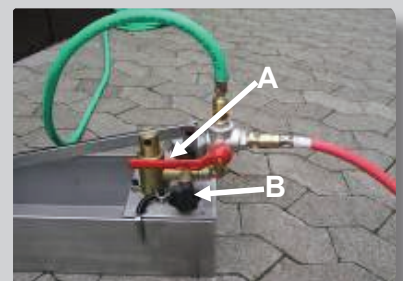


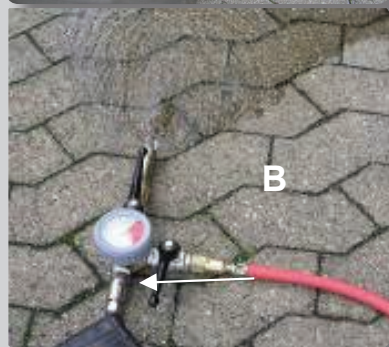
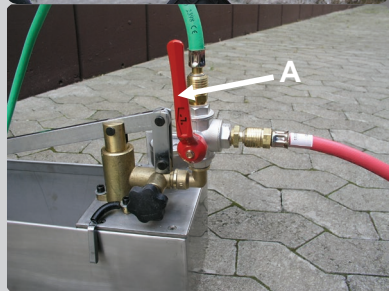
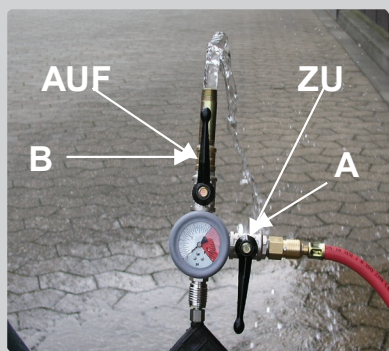
Open the water supply valve (A). The mini lifting bag is now completely filled with water. If the manometer clearly indicates an increase in pressure then the mini lifting bag must be ventilated.

The water supply valve is closed for ventilation and the mini lifting bag must be positioned so that the valve connection is pointing upwards.

If the ventilation valve (B) is now opened then the air remaining in the bag can escape. By alternating between the ball valves (A and B) it can be ensured that there is no air remaining in the bag.

If the bag to be tested is completely ventilated then the bag can be filled to the maximum possible water pressure (network pressure) after opening the water supply valve (A) on the test and ven-





tilation head. Fill the bag to the test pressure by connecting the hand pump.

To do this position the red ball valve (A) vertically and operate the lever on the pump. Slowly and evenly build up a pressure.

### Mini lifting bag 8 bar = 10.4 bar test pressure/water

The bag under pressure should remain like this for a **minimum of 3 minutes but a maximum of 5 minutes**

Within this time the specialist can test the bag for leaks, deformations or other forms of damage.

The water can be drained in order to empty the bag after the test has finished. To do this completely open the ventilation valve (B). Couple the test and ventilation head. Position the bag vertically to completely empty making sure that the nipple is pointing downwards. However the connection nipple must not be loaded down by the weight of the bag.

**Blow the fixtures out with compressed air after use.**

## 6. Testing the S.Tec lifting bags 10 bar

### 6.1 Function test of the inflation device

#### 6.1.1 Required test equipment

- ✓ Test manometer 10 bar

#### 6.1.2 Preparation and implementation of the test

corresponds to the visual test and function test 8 bar

### 6.2 Pressure testing of S.Tec lifting bags 10 bar

The pressure test corresponds to the pressure test for the mini lifting bag 8 bar in individual points.

The S.Tec test adapter must be connected between the S.Tec bag 10 bar and the test and ventilation head.

### S.Tec bag 10 bar = 13 bar test pressure of water

tested:		Info fields for the tests carried out
retested after 5 years		
retested after 10 years		
retested after 15 years		

## 7. Final remarks

The operating instructions for the test equipment was compiled according to the latest state of technology and the legal regulations.

The specialist inspector is to make the test at his own responsibility according to the regulations valid at the time the test was made.

The test requirements represent a guideline of the manufacturer. They are intended to help the specialist.

All rights are reserved for technical changes to the test equipment!

For the pressure test of lifting bags 8 bar and 10 bar it is, according to GUV-G 9102, required that the training for specialist be made by

### **additional training by the manufacturer**

Refer to the Vetter website for information concerning training dates.

## Inspection record lifting bags 0.5 bar / 1 bar

### Visual and function test, lifting bags, 0.5 bar / 1 bar (7.25 psi/14.5 psi)

This test regulation refers only to the visual and function test by the specialist in accordance with GUV-G 9102. The 5 yearly pressure test of the bags is to be carried out by the manufacturer according to DIN EN 13 731 and GUV-G 9102, 4.1.

This test regulation was written based on the state-of-the-art technology at the time of publication and the legal stipulations. If these regulations have changed, the tester is obligated to perform the test in accordance with the regulations and standards applicable on the day of the test.

In case of doubt, please contact the manufacturer.

<b>Date of test</b>		
<b>Inspector</b>		
<b>Equipment under test</b>	1 Set Vetter lifting bags (2 bags of the same type)	
	Bag 1	Bag 2
<b>Type</b>		
<b>Serial number</b>		
<b>Nominal Capacity of bag / litre</b>		
<b>Maximum operating pressure</b>		
<b>Year of manufacture</b>		
<b>Date of the last test</b>		

#### 1. Test for completeness

- 1.1 2 Bags
- 1.2 1 Packing bag
- 1.3 2 Inflation hoses
- 1.4 1 Dual controller
- 1.5 1 Pressure regulator
- 1.6 1 Set repair material
- 1.7 Operating instructions
- 1.8 Inspection book or test record

	Available	Not available

#### Comments:

## 2. Visual inspection

If heavily soiled, clean the bag and its accessories before starting the visual inspection. Lifting bags are normally washed off with a lukewarm soap solution. *Never use a high-pressure cleaner!*

### 2.1 Bag 1

	Yes	No
2.1.1 Bag free of damage after visual check		
2.1.2 Side wall material free of cracks, cuts, punctures, splinters or other damages, e.g., hardenings, acid traces, etc.		
2.1.3 Bottom and cover plates free of cracks, cuts, punctures, splinters or other damages, e.g., hardenings, acid traces, etc.		
2.1.4 Adhesive seams and overlap zones free of damage and debondings		
2.1.5 Securing devices (loops) available for the rope		
2.1.6 Inflation coupling with connection free of recognizable damages		

### 2.2 Bag 2

2.2.1 Bag free of damage after visual check		
2.2.2 Side wall material free of cracks, cuts, punctures, splinters or other damages, e.g., hardenings, acid traces, etc.		
2.2.3 Bottom and cover plates free of cracks, cuts, punctures, splinters or other damages, e.g., hardenings, acid traces, etc.		
2.2.4 Adhesive seams and overlap zones free of damage and debondings		
2.2.5 Securing devices (loops) available for the rope		
2.2.6 Inflation coupling with connection free of recognizable damages		

### 2.3 Inflation hoses

2.3.1 Inflation hoses free of cuts, tears, punctures, bends, separations, traces of thermal or chemical effects or other forms of damage, e.g. hardened areas, traces of acid etc.		
2.3.2 Couplings solidly fixed		
2.3.3 Coupling screw connections move freely		
2.3.4 No coupling damage		
2.3.5 Sealings available and undamaged		
2.3.6 Couplings can be connected together		

### 2.4 Dual controller

(F = Fitting design, K = Dead-man switching)

2.4.1 Inlet coupling (plug coupling) undamaged and functional		
2.4.2 Shut-off valves (F) and control lever (K) free of external damages and operate smoothly		
2.4.3 Manometer protective caps (F) present		
2.4.4 Manometer with marking at maximum operating overpressure (0.5 or 1 bar /7.25 or 14.5 psi)		
2.4.5 Safety valve free of visible damage and furnished with lead seals		
2.4.6 Housing (K) is free of visual damage		
2.4.7 Output couplings free of visual damage and functionally operational		

## 2.5 Pressure regulator

- 2.5.1 Inlet seal present
- 2.5.2 Bottle connection thread not damaged
- 2.5.3 Both manometers free of visible damage and are marked with the marking of the max. operating over-pressure
- 2.5.4 Manometer protective caps present
- 2.5.5 Pressure setting operates smoothly
- 2.5.6 Shut-off valve undamaged and operates smoothly
- 2.5.7 Air hose free of cracks, cuts, punctures, splinters or other damages, e.g., hardenings, acid traces, etc.
- 2.5.8 Connection nipple does not have any visible damage
- 2.5.9 Hose assembly fixated


## 2.6 Set repair material

- 2.6.1 Adhesive, patches and roughening paper available
- 2.6.2 Adhesive useable, not dried out


**Caution!** If any kind of doubts concerning the safety arise at this time or at any later time during the test, abort the test and send the bag including the equipment to the manufacturer for further testing.

## 3. Function test

**Caution!** Perform only if the visual inspection in Point 2 and the test of the equipment did not result in any complaints.

### 3.1

*Connect pressure regulator to the compressed-air bottle.  
Close the Shut-off valve on the pressure reducer.  
Open the compressed-air bottle valve.*

- 3.1.1 Primary pressure manometer indicates (pressure in the compressed-air bottle)
- 3.1.2 Back pressure manometer indicates (possibly increase pressure on the control knob)
- 3.1.3 Pressure can be regulated across the entire adjustment range
- 3.1.4 Safety valve remains leakproof at the set maximum pressure.
- 3.1.5 Shut-off valve on the pressure-reducer outlet seals tight
- 3.1.6 At a set pressure of approx. 5 bar, the pressure does not increase significantly within 5 min.

	Yes	No

*Connect the pressure reducer to the controller with an air hose  
Open the pressure reducer shut-off valve. Set the pressure to approx. 2 bar.*



3.2 Air hose and inlet coupling are leakproof

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3.3

*Connect the inflation hose on the dual controller. Alternately terminate hoses at the other end with the claw blind coupling (Art. No.: 1700005400) or the bayonet blind coupling (Art. No.: 0350006500) or quick action blind coupling (Art.No.: 0350006501. Slowly and carefully open the ball valve or piston valve.*

3.3.1

Manometer on the controller indicates flawlessly

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3.3.2

Safety valve opens completely at +/- 10 %

--	--

3.3.3

After closing the ball valve/piston valve, the safety valve closes within the 10 % tolerance.

--	--

3.4

*Repeat the procedure for the other termination of the controller.*

3.4.1

Manometer on the controller indicates flawlessly

--	--

3.4.2

Safety valve opens completely at +/- 10 %

--	--

3.4.3

After closing the ball valve/piston valve, the safety valve closes within the 10 % tolerance.

--	--

*Connect lifting bag and fill outdoors to ca. 0.1 bar (1.45 psi)*

3.5

Bag in perfect condition after a repeated test according to Sections 2.1 and 2.2

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*Increase the pressure in the bag to 50 % of the maximum operating pressure. Leave it for 1 hour.*

3.6

Pressure drop less than 10 % after 1 hour

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*Increase to the maximum operating pressure (max. 5 minutes)*

**Caution! Please observe the safety precautions (ear defenders/ safety glasses).**

3.7

Bag without any bulges or other non-typical deformations

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## Test result

The performed test resulted in the following results:

The bag system (Filling device and bag) is

✓ correct   
and there are no objections, with respect to  
technical safety, to its continued use.

✓ not correct

The following was implemented:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature/Tester

Next repeating visual  
and function test:

Next test by the manufacturer:



## 2. Visual inspection Filling device

If heavily soiled, clean the bag and its accessories before starting the visual inspection.  
Mini lifting bags are normally washed off with a lukewarm soap solution.

*Never use a high-pressure cleaner!*

### 2.1 Pressure regulator

	Yes	No
2.1.1 Inlet seal present		
2.1.2 Bottle connection thread not damaged		
2.1.3 Both manometers free of visible damage and are marked with the marking of the max. operating over-pressure		
2.1.4 Manometer protective caps present		
2.1.5 Pressure setting operates smoothly		
2.1.6 Shut-off valve undamaged and operates smoothly		
2.1.7 Air hose free of cracks, cuts, punctures, splinters or other damages, e.g., hardenings, acid traces, etc.		
2.1.8 Connection nipple does not have any visible damage		
2.1.9 Hose assembly fixated		

### 2.2 Filling hose, 5/10 m, yellow/red

2.2.1 Connection nipple does not have any visible damage		
2.2.2 Nipple does not have any visible damage		
2.2.3 Coupling and nipple assembly fixated		
2.2.4 Hose free of cracks, cuts, punctures, splinters or other damages, e.g., hardenings, acid traces, etc.		

### 2.3 Controller (F = Fitting design, K = Dead-man switching)

2.3.1 Inlet coupling (plug coupling) undamaged and functional		
2.3.2 Shut-off valves (F) and control lever (K) free of external damages and operate smoothly		
2.3.3 Manometer protective caps (F) present		
2.3.4 Manometer with marking at maximum operating over-pressure (8 bar/116 psi)		
2.3.5 Safety valve free of visible damage and furnished with lead seals		
2.3.6 Housing (K) is free of visual damage		
2.3.7 Labels of the controller (K) are available and can be clearly read		
2.3.8 Output couplings free of visual damage and functionally operational		

**Caution!** If any kind of doubts concerning the safety arise at this time or at any later time during the test, abort the test and send the bag including the equipment to the manufacturer for further testing.

### 3. Function test

Caution! Perform only if the visual inspection in Point 2 and the test of the equipment did not result in any complaints.

		Yes	No
<b>3.1</b>	<p>Connect pressure regulator to the compressed-air bottle. Close the Shut-off valve on the pressure reducer. Open the compressed-air bottle valve.</p>		
3.1.1	Primary pressure manometer indicates (pressure in the compressed-air bottle)		
3.1.2	Back pressure manometer indicates (possibly increase pressure on the control knob)		
3.1.3	Pressure can be regulated across the entire adjustment range		
3.1.4	Safety valve remains leakproof at the set maximum pressure.		
3.1.5	Shut-off valve on the pressure-reducer outlet seals tight		
3.1.6	At a set pressure of approx. 5 bar, the pressure does not increase significantly within 5 min.		
	<p>Connect the pressure reducer to the controller with an air hose Open the pressure reducer shut-off valve. Set the pressure to approx. 10 bar.</p>		
<b>3.2</b>	<b>Air hose and inlet coupling are leakproof</b>		
	<p>Connect filling hose to the controller. Alternately connect inflation hoses at the other end with the VETTER Test manometer. Carefully and slowly open the ball valve or the piston valve.</p>		
<b>3.3</b>	<b>Both couplings (controller and test manometer) can be coupled without difficulty.</b>		
3.3.1	When opening the blocking valve/piston slide valve, the manometer on the controller indicates the same pressure as that indicated on the test manometer.		
3.3.2	Both couplings are sealed.		
3.3.3	Safety valve opens completely at +/- 10 %		
3.3.4	After closing the ball valve/piston valve, the safety valve closes within the 10 % tolerance.		
<b>3.4</b>	<p>Connect the bag to the inflation hose on the controller in the open air and inflate to approximately 4 bar.</p>		
3.4.1	Bag is free of atypical bulges.		
3.4.2	Bag is free of punctures, cuts, tears and any other forms of damage.		
	<p>Increase the internal pressure of the bag to the maximum operating pressure. <b>Caution! Please observe the safety precautions (ear defenders/ safety glasses).</b></p>		
3.4.3	Bag is free of atypical bulges.		
3.4.4	The pressure drop must be less than 10 % after 3 minutes.		

## Pressure test of mini lifting bags

Make copies of the test report for the pressure test, one copy for each bag to be tested. A separate sheet, related to the serial number, is to be filled out for each mini lifting bag.

## Test result

The performed test resulted in the following results:

The bag system (Filling device and bag) is

✓ correct

and there are no objections, with respect to technical safety, to its continued use.

✓ not correct

The following was implemented:

\_\_\_\_\_

Date

\_\_\_\_\_

Signature/Tester

Next repeating visual  
and function test:

Next test by the manufacturer:

## Pressure test of mini lifting bags 8 bar / 116 psi

### Note!

This test only applies to the pressure test required after 5 years, respectively 10 years. This test is only to be carried out by a specialist having additional training from the manufacturer or it is to be carried out by the manufacturer himself!

Bag type	Serial no.	Year of manufacture

### 1. Visual inspection

If heavily soiled, first clean the bag with a lukewarm soap solution

	Yes	No
1.1 The inflation connection is free of mechanical damage.		
1.2 The surface of the bag, including the edge areas, are free of punctures, cuts, tears or any other types of damage.		

**Remember! The execution of the 5 yearly test consists of an over-pressure test and is mainly carried out with water pressure. The test pressure is 10.4 bar (8 bar x 1.3) with mini lifting bags.**

### 2. Pressure testing (water pressure test) – Remember: test time from 3 to a max. of 5 minutes

*Pre-fill the bag with the mains supply pressure to approximately 4 - 5 bar.  
Ventilate a number of times using the test head.*

	Yes	No
2.1 Bag is free of atypical bulges on both sides.		
<i>Increase the internal bag pressure to the maximum pressure of 10.4 bar using a hand pump</i>		
2.2 The bag is free of atypical bulges, tears, cuts or any other forms of damage as well as having a nipple connection which is perfectly sealed.		

**After termination of the test time of 3 to 5 minutes, carry out pressure release via the test head and empty completely. Do not load the nipple in any way when emptying and drying.**

The bag is in perfect order

Bag is to be taken out of commission permanently

Reason:

\_\_\_\_\_

Date

\_\_\_\_\_

Signature/Tester





## 2. Visual inspection Filling device

If heavily soiled, clean the bag and its accessories before starting the visual inspection.  
S.Tec lifting bags are normally washed off with a lukewarm soap solution.

*Never use a high-pressure cleaner!*

	Yes	No
<b>2.1 Pressure regulator</b>		
2.1.1 Inlet seal present		
2.1.2 Bottle connection thread not damaged		
2.1.3 Both manometers free of visible damage and are marked with the marking of the max. operating over-pressure		
2.1.4 Manometer protective caps present		
2.1.5 Pressure setting operates smoothly		
2.1.6 Shut-off valve undamaged and operates smoothly		
2.1.7 Air hose free of cracks, cuts, punctures, splinters or other damages, e.g., hardenings, acid traces, etc.		
2.1.8 Connection nipple does not have any visible damage		
2.1.9 Hose assembly fixated		
<b>2.2 S.Tec Filling hose, 5/10 m, yellow/red</b>		
2.2.1 Connection nipple does not have any visible damage		
2.2.2 Nipple does not have any visible damage		
2.2.3 Coupling and nipple assembly fixated		
2.2.4 Hose free of cracks, cuts, punctures, splinters or other damages, e.g., hardenings, acid traces, etc.		
<b>2.3 S.Tec Controller Dead-man switching</b>		
2.3.1 Inlet coupling (plug coupling) undamaged and functional		
2.3.2 Control lever free of external damages and operate smoothly		
2.3.3 Manometer with marking at maximum operating over-pressure (10 bar/145 psi)		
2.3.4 Safety valve free of visible damage and furnished with lead seals		
2.3.5 Housing is free of visual damage		
2.3.6 Labels of the controller are available and can be clearly read		
2.4.7 Output couplings free of visual damage and functionally operational		

**Caution!** If any kind of doubts concerning the safety arise at this time or at any later time during the test, abort the test and send the bag including the equipment to the manufacturer for further testing.

## 3. Function test

Caution! Perform only if the visual inspection in Point 2 and the test of the equipment did not result in any complaints.

<b>3.1</b>	<p>Connect pressure regulator to the compressed-air bottle. Close the Shut-off valve on the pressure reducer. Open the compressed-air bottle valve.</p>		
		<b>Yes</b>	<b>No</b>
3.1.1	Primary pressure manometer indicates (pressure in the compressed-air bottle)		
3.1.2	Back pressure manometer indicates (possibly increase pressure on the control knob)		
3.1.3	Pressure can be regulated across the entire adjustment range		
3.1.4	Safety valve remains leakproof at the set maximum pressure.		
3.1.5	Shut-off valve on the pressure-reducer outlet seals tight		
3.1.6	At a set pressure of approx. 5 bar, the pressure does not increase significantly within 5 min.		
	<p>Connect the pressure reducer to the controller with an air hose Open the pressure reducer shut-off valve. Set the pressure to approx. 12 bar.</p>		
<b>3.2</b>	Air hose and inlet coupling are leakproof		
	<p>Connect filling hose to the controller. Alternately connect inflation hoses at the other end with the VETTER Test manometer. Carefully and slowly open the ball valve or the piston valve.</p>		
<b>3.3</b>	Both couplings (controller and test manometer) can be coupled without difficulty.		
3.3.1	When opening the blocking valve/piston slide valve, the manometer on the controller indicates the same pressure as that indicated on the test manometer.		
3.3.2	Both couplings are sealed.		
3.3.3	Safety valve opens completely at +/- 10 %		
3.3.4	After closing the ball valve/piston valve, the safety valve closes within the 10 % tolerance.		
<b>3.4</b>	<p>Connect the bag to the inflation hose on the controller in the open air and inflate to approximately 4 bar.</p>		
3.4.1	Bag is free of atypical bulges.		
3.4.2	Bag is free of punctures, cuts, tears and any other forms of damage.		
	<p>Increase the internal pressure of the bag to the maximum operating pressure. <b>Caution! Please observe the safety precautions (ear defenders/ safety glasses).</b></p>		
3.4.3	Bag is free of atypical bulges.		
3.4.4	The pressure drop must be less than 10 % after 3 minutes.		

## Pressure test of S.Tec lifting bags

Make copies of the test report for the pressure test, one copy for each bag to be tested. A separate sheet, related to the serial number, is to be filled out for each S.Tec lifting bag.

### Test result

The performed test resulted in the following results:

The bag system (Filling device and bag) is

- ✓ correct   
and there are no objections, with respect to  
technical safety, to its continued use.

- ✓ not correct

The following was implemented:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature/Tester

Next repeating visual  
and function test:

Next test by the manufacturer:

## Pressure test of S.Tec lifting bags 10 bar / 145 psi

### Note!

This test only applies to the pressure test required after 5 years, respectively 10 years. This test is only to be carried out by a specialist having additional training from the manufacturer or it is to be carried out by the manufacturer himself!

Bag type	Serial no.	Year of manufacture

### 1. Visual inspection

If heavily soiled, first clean the bag with a lukewarm soap solution

	Yes	No
1.1 The inflation connection is free of mechanical damage.		
1.2 The surface of the bag, including the edge areas, are free of punctures, cuts, tears or any other types of damage.		

**Remember! The execution of the 5 yearly test consists of an over-pressure test and is mainly carried out with water pressure. The test pressure is 13 bar (10 bar x 1.3) with S.Tec lifting bags.**

### 2. Pressure testing (water pressure test) – Remember: test time from 3 to a max. of 5 minutes

*Pre-fill the bag with the mains supply pressure to approximately 4 - 5 bar.  
Ventilate a number of times using the test head.*

	Yes	No
2.1 Bag is free of atypical bulges on both sides.		

*Increase the internal bag pressure to the maximum pressure of 13 bar using a hand pump*

2.2 The bag is free of atypical bulges, tears, cuts or any other forms of damage as well as having a nipple connection which is perfectly sealed.		
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**After termination of the test time of 3 to 5 minutes, carry out pressure release via the test head and empty completely. Do not load the nipple in any way when emptying and drying.**

The bag is in perfect order

Bag is to be taken out of commission permanently

Reason:

\_\_\_\_\_ Date

\_\_\_\_\_ Signature/Tester

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