

# Operating Manual SmartCHECK

**Test Bench** 





Order No. 10107834/02

MSA AUER GmbH D-12059 Berlin Thiemannstrasse 1

Germany

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(GB)

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# **1** Safety Regulations

## 1.1 Correct Use

The MSA test benches of the SmartCHECK product family [hereafter referred to as test bench] are designed for testing full face masks, lung governed demand valves, compressed air breathing apparatus, chemical protective suits and closed circuit breathing apparatus. Some of this equipment can only be tested using special adapters.

It is imperative that this operating manual be read and observed when using the product. In particular, the safety instructions, as well as the information for the use and operation of the product, must be carefully read and observed. Furthermore, the national regulations applicable in the user's country must be taken into account for a safe use.

# Danger!

This product is supporting life and health. Inappropriate use, maintenance or servicing may affect the function of the device and thereby seriously compromise the user's life. Before use the product operability must be verified. The product must not be used if the function test is unsuccessful, it is damaged, a competent servicing/maintenance has not been made, genuine MSA spare parts have not been used.

Alternative use, or use outside this specification will be considered as non-compliance. This also applies especially to unauthorised alterations to the product and to commissioning work that has not been carried out by MSA or authorised persons.

# 1.2 Liability Information

MSA accepts no liability in cases where the product has been used inappropriately or not as intended. The selection and use of the product are the exclusive responsibility of the individual operator.

Product liability claims, warranties also as guarantees made by MSA with respect to the product are voided, if it is not used, serviced or maintained in accordance with the instructions in this manual.

## **1.3 Safety and Precautionary Measures**

The test bench is built and tested in accordance with EN 60950 part 1, protection measures for electronic measuring equipment and was released from the factory in a perfectly safe condition. In order to maintain this condition, and to ensure safe operation, the user must observe the instructions and warning notes which are contained in these instructions for use.

#### Calibration

Only use a calibrated test bench. MSA recommends one annual calibration.

#### **Connection to the Supply Voltage**

Prior to switching on, please ensure that the set operating voltage and mains voltage on the test bench concur. The mains connector can only be connected to a socket with sealed contact. The protective effect must not be removed by an extension without protective wire.

#### **Protective Wire**

Any disconnection of the protective wire, inside or outside the test bench, or loosening of the protective wire connection, can make the test bench dangerous. Intentional disconnection is not permitted.

#### **Opening Covers**

Do not open any covers or remove parts.

#### Fuses

Only the stipulated type of fuses with the given rated amperage can be used as a replacement. Do not use patched fuses or short-circuit the fuse holder.

#### **Errors and Unusual Stresses**

If it is ascertained that safe operation is no longer possible, the test bench must be shut down and secured against unintentional switching on. Error recovery must be performed by the manufacturer's customer service or by qualified and authorised personnel.

#### **Breathable Air**

Only use breathable air which complies with the requirements of EN 12021 or USCGA grade D [or better].

#### **Data Base Entries**

All entries in the data base of the test bench have to be checked by the user. The data base entries must comply with the specifications of the devices to be tested.

#### Oxygen

Keep oxygen cylinder and tubing away from any source of heat.

Never use grease or oil on oxygen equipment. Keep equipment away from all flammable materials such as oil, grease, aerosols, paints, gasoline and solvents.

#### **High Pressures**

- Never open filling or shut-off valves when the test bench is under pressure and not connected.
- Always shut down and decompress the complete system prior to carrying out any repair or maintenance work on the test bench.
- In case of damage to the high pressure lines from heat, chemicals, mechanical impact or similar that can be detected, the test bench must be taken out of service and the components concerned must be replaced without delay by an authorised service centre.



# 2 Description

This manual applies to the test benches according to chapter 2.2. Where content does not apply to all configurations this is explicitly stated.

#### 2.1 Overview

The test bench is designed for testing full face masks, lung governed demand valves, compressed air breathing apparatus, chemical protective suits and closed circuit breathing apparatus. Some of this equipment can only be tested using special adapters. [ $\rightarrow$  chapter 10].

All possible tests are listed in chapter 2.2.

The connections necessary to carry out the tests are described in chapter 6 for all devices.



The test and tolerance values used in the software for MSA devices should be compared with the relevant device servicing manuals.

Tolerance and test values for other device manufacturers must be compared with the respective manufacturers or their servicing manuals. MSA accepts no liability for these values.

The user may modify or adjust the test data.

Standard devices are included in the pool database.



#### 2.2 Tests Possible Depending on SmartCHECK Model

#### SmartCHECK Basic Version

- Full face masks:
- Measurement of leak tightness with positive pressure
- Measurement of leak tightness with negative pressure
- Measurement of the opening pressure of the exhalation valve
   Measurement of the inhalation resistance with constant flow of
- Measurement of the inhalation resistance with constant flow of 10 l/min
- Lung governed demand valves:
- Measurement of leak tightness with positive pressure
- Measurement of leak tightness with negative pressure
- Measurement of rise in low pressure
- Measurement of the switch over/activation pressure (positive pressure)
- Measurement of the static pressure (positive pressure)
- Measurement of the opening pressure (negative pressure) Self contained breathing apparatus:
- Measurement of the leak tightness of the medium pressure
- Measurement of rise in medium pressure

Chemical protective suits:

- Measurement of leak tightness with positive pressure
- Measurement of leak tightness of the suit valves with negative pressure

Closed circuit breathing apparatus:

- Complete test of the MSA closed circuit breathing apparatus AirElite 4h

#### Standard High Pressure

Free-adjustable High Pressure Self contained breathing apparatus:

Self contained breathing apparatus:

pressure

Safety Valve Test

See Standard High Pressure with extension with:

Tests with free-adjustable filling pressures (with air consumption the filling pressure stays stable/will be hold)

Maintenance: adjustment of i.e. warning signals, medium

Measurement of the safety valve opening pressure Measurement of the safety valve closing pressure

- Self contained breathing apparatus:
- Measurement of the leak tightness of the high pressure
- Measurement of the opening pressure of the warning signal
   Measurement gauge comparison with varying filling pressures
- including automatic pressure drop
- Measurement of the static medium pressure at a specified high pressure

#### Transponder Reader

All devices:

- Device identification using RFID technology 125 kHz

#### Closed Circuit Breathing Apparatus with constant dosage Closed circuit breathing apparatus:

Complete test of Closed Circuit Breathing Apparatus with constant dosage

(Extension with measurement of the constant dosage)

#### Gauge Camera Self contained breathing apparatus:

 En bloc confirmation and image documentation of the gauge comparisons

#### Artificial Lung Full face masks:

 Measurement of the dynamic inhalation and exhalation resistance

Lung governed demand valves:

- Measurement of the dynamic inhalation resistance
- Self contained breathing apparatus:
- Measurement of the dynamic medium pressure

## Vacuum Device for Standard High Pressure

Lung governed demand valves:

- Measurement of the inhalation resistance with suction and test bench inlet pressure
- Lung governed demand valves:
- Measurement of the dynamic inhalation resistance
- Self contained breathing apparatus:
- Measurement of the medium pressure with suction and test bench inlet pressure

**Breathing Simulation within Residual Pressure Range** Self contained breathing apparatus:

- Dynamic test of pressure reducers and lung governed demand valves within residual pressure range
- Vacuum Device for Free-adjustable High Pressure
- Lung governed demand valves:
- Measurement of the inhalation resistance with suction and variable high pressure
- Self contained breathing apparatus:
- Measurement of the medium pressure with suction and variable high pressure

# MSA

# 2.3 Scope of Delivery (SmartCHECK Basic Version)

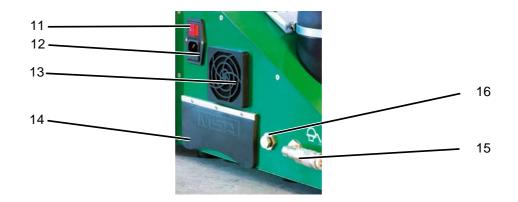
- Test bench
- Quick start guide
- Touch screen pen
- Protective hood for test head
- Microfibre cloth
- Silicone oil
- Transponder antenna (if transmitter reader was ordered)
- High pressure supply line (for High Pressure versions)
- High pressure test line (for High Pressure versions)
- Power supply cable (version depending on country)
- Testing software TecBOS.Tech (depending on license)
- Log-on cards, starter set



#### 2.4 Operating Elements

SmartCHECK Basic Version (depending on ATO configuration)





9

- Fig. 1 SmartCHECK Basic Version
- 1 Connection for lung governed demand valve
- 2 Test head
- 3 Measuring point eye
- 4 Holder for adapter mask helmet combinations
- 5 Touch screen
- 6 Transponder antenna
- 7 Connection for transponder antenna
- 8 Manual pressure release

- Medium pressure inlet [nipple] 4 10 bar
- 10 Push button
- 11 Main switch
- 12 Power connector/fuse
- 13 Test bench ventilation: fan with filter
- 14 PC Interfaces [see next page]
- 15 Medium pressure outlet [coupling]
- 16 Calibration connection test head

## SmartCHECK Modules

Additional features of the Modules version are shown below.







#### Fig. 2 SmartCHECK Modules Version

- 1 Artificial lung and high pressure housing 6
- 2 High pressure test line
- 3 Holder for high pressure test line when not 8 in use
- 4 Test adapter 9
- 5 Microphone

# Minimal Configuration for PC Interfaces

The test bench is at least equipped with:

- 2 USB interfaces
- 1 Ethernet port
- 1 serial interface [COM]
- 1 monitor port

Spring loaded drawer for fixing gauge during test Pressure gauge Pressure gauge camera (internal)

- High pressure inlet
- Pressure gauge (inlet pressure)

7

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# 3 Basic Information Software



## Attention!

To avoid losing saved tests and data base entries, make sure that the main database is backed up continuously.

# 3.1 Touch Screen Functions

$\mathbf{A}$	A
<u>/!\</u>	Т

Attention!

To prevent damage to the touch screen, avoid touching it with sharp objects. Only use fingers or the touch screen pen provided.

While the testing procedure has been optimised for touch screen operation, an external keyboard and a mouse are recommended for data base entries.

## **Calibration Touch Screen**

- Start the program to calibrate the touch screen via: Start -> All programs -> Touchkit -> Configure utility
- (2) Click on tab Tools.
- (3) On this tab, click on 4 Points Calibration.
  - ▷ Touch screen calibration opens.
  - > The display shows a white screen with a reticle in the lower left corner.
- (4) Touch the reticle by finger or touch pen.
  - Keep finger or touch pen on the screen until the reticle turns blue.
- (5) Remove finger or touch pen.
  - ▷ The reticle moves to the lower right corner.
- (6) Carry out this calibration for all corners.
  - ▷ After calibration is finished, a pop-up- window is displayed.
- (7) Confirm this window with "OK", then leave the application with "OK".

## Using the On-screen Keyboard

The handling of the on-screen keyboard is the same as of a standard keyboard.

The on-screen keyboard will appear when necessary. When minimised it can by default be found on the left side of the screen.



Fig. 3 On-screen keyboard

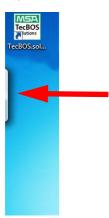


Fig. 4 Minimised on-screen keyboard



#### Symbol Menu 3.2



Fig. 5 Symbol Menu

- 1 Close current module
- 2 Create new data set
- 3 Open data set
- 4 Save data set
- 5 Copy data set
- 6 Delete current data set
- 7 Multiple deletion of data sets
- 8 First preselected data set
- 9 Previous preselected data set

- 10 Next preselected data set
- 11 Last preselected data set
- 12 Collective change
- 13 Print selected data
- 14 Print current data set
- 15 Export data
- 16 Change log
- 17 Mask administration [interface administrator]
- 18 Kat's allocation plan

#### 3.3 Layout Submenus



Fig. 6 Layout of some submenus

- Create new sub entry in list 1
- Allocate entered value [blue arrow] 2
- Delete entry from list
- 3

Attention!

A deleted entry can only be restored through a new allocation.

#### **Keyboard Shortcuts** 3.4

Key/Key combination	Action
<f1></f1>	Start help
<f4></f4>	Open the selection lists [Field lists]
<f7></f7>	Activate selection mode in sub-tables
<f9></f9>	Scroll through selected data sets in decreasing order
<f10></f10>	Save data set, scroll forward to the next data set. If used as save function a new data set will be created automatically.
<f11></f11>	Jump to first data set
<f12></f12>	Jump to last data set
<tab></tab>	Cursor jump to the next input field
<shift+tab></shift+tab>	Cursor jump to the previous input field
<strg+tab></strg+tab>	Change to the next tab
<strg+v></strg+v>	Insert from intermediate document storage



#### 3.5 Search Functions

Search field input	Meaning
amt	String
amt/ amt*	Search of all data sets starting with "Amt"
amt / *amt	Search of all data sets ending in "amt"
amt / *amt*	Search of all data sets containing "amt"
ac / a*c	Search of all data sets from "a to c"
=	Show all data sets which do not have an entry in this input field
/=	Show all data sets which do have an entry in this input field
/a	All data sets except for the string
>1	Larger than string
<1	Smaller than string
x;y;z	Multiple selection

#### How to Search

Module independent, functionality does exist for all modules providing the open button.

Click on *Open data record*. All green fields can now be used to enter search criteria. F10 or another click on the Open button starts the search. If there is more than one dataset matching the entered criteria the application will show the selection window. If there is only one data set matching the entered criteria it will be opened immediately.

The Identification field can be used for a quick search by either

scanning the transponder or bar code

or

entering the object number, serial number or manufacturer number via keyboard.

After pressing Enter the device appears.

Devices	_												- 🗆 🗡
🖆 🗅   😅   🔛	🖻 🗙 💥		• ••		🗸 🖓 🖓 👘		6- 6-	Workshop		Central workshop	-	Reset	
Object number		1			anufacture								
Module			-	Delivery of			·						
Sort			• 😂	Put into o		_		Operational					
Туре			-	Warranty		_	-		C				
Description			-	Life span		_			•	Device code num			
Abbreviation				Sort ou			*			Assets accounting	jno.		
Licence plate				Blocke			•						
Manufacturer			-		nce priority								
Manufacturer no.				Acquisitio						tariff rate			-
Barcode				Location	1				*	Cost centre			•
Transponder				Location :					Ť.,				
Serial number				Location	3				-				
Inventory no.				Status					•				
Tracing of missions	Last date N	Məterial pr			Assembled m		Data si	ext hours	Histories	Appendix Description Months Km Hours	Workboo		oan / blocking
- Quick selection										e.			
	1					1							
Identification						J							

Fig. 7 Identification field

GΒ

#### 3.6 Software Backup Options

The MSA Backup Utility:

- saves the content of the hard disk
- can save the complete operating system including the TecBOS software and TecBOS database
- creates a bootable medium to restore the backup in case of problems with the hard disk
- allows a complete recovery or restoring the database

The MSA Backup Utility will start automatically when Windows starts.

#### **Running a Backup**

#### Required accessory:

- An **empty** external USB storage device (USB flash drive or USB hard disk) with min. 8 GB of memory. (All existing data on the USB storage device will be overwritten in the process.)



#### Attention!

The external disk is to be used exclusively for the backup. It is recommended to backup regularly and to safe the full backup on the external USB storage device!



(1) Close all running programs.

The MSA Backup Utility shows two buttons. Initially, only the left button "System Backup" is active.

- (2) Click on the left button "System Backup".
- (3) Confirm the message with "OK".
  - The computer shuts down and starts the backup process automatically.

# Attention!

Ϋ́.

Do not turn off the PC manually. It will reboot automatically after backup process is finished and start Windows.



#### **Create a Bootable Medium**

The image of the hard drive has been created.

- (4) Connect the external USB storage device to a free USB port (on the left side of the SmartCHECK).
- (5) Click on the right button "Create restore device".
- (6) Select the target drive.
  - ▷ Only select the external USB storage device.



# Attention!

Do not select one of the SmartCHECK/test bench disks ("SmartCHECK", "Backup" or "Backup DATA GDB").

- (7) Click "OK".
  - The external USB storage device will be converted to a bootable USB storage device which contains the entire backup.

#### **Recovery from Backup**

#### Required accessory:

- The bootable medium created with the MSA Backup Utility
- Externally connected keyboard

#### **Complete recovery**

In the case of total failure of hard disks the external USB storage device with the entire backup will restore the complete operating system and the TecBOS software with the TecBOS database. To run the restore process turn off the test bench and plug in the external USB storage device.

- (1) Turn on the test bench.
- (2) Connect externally connected keyboard.
- (3) Press "F12" on keyboard and choose the external USB storage device.
  - ▷ The restore process starts.
- (4) Confirm the displayed message by pressing key Y or Z.
  - ▷ After successful restoration the test bench will restart and Windows will appear.
  - ▷ The recovery process is completed.

## Restoring the database

If the database is faulty, either a database from the drive E:\ called "Backup Data GDB" or a previously externally saved database can be restored.

- (1) Rename the previously saved database to data.gdb
- (2) Copy the renamed database into the folder C:\Program Files\MSA\TecBOS Solutions\data.
  - ▷ The existing database will be overwritten.



#### MSA

# 4 Startup

# 4.1 Setting Up

When setting up the test bench the following conditions have to be met:

- Set up the test bench on an even and stable surface. If necessary fix the test bench.
- Do not block or cover the fans of the test bench. During operation there has to be a minimum distance of 10 cm between the fans of the test bench [→ fig.8] and a wall.
- At the place of use, contact to water or other liquids must be avoided.
- The test bench may only be operated at temperatures between +5 °C and +60 °C and a relative humidity between 15 % and 80 %.
- During a test of devices the ambient conditions [temperature, humidity] must not change significantly.
- Only carry out tests with acclimatised devices.
- Avoid direct sunlight and proximity to strong electromagnetic fields to ensure reliable test results.



Fig. 8 Minimum distances SmartCHECK basic

## 4.2 Switching On



The test bench is fully operational, all necessary software to operate the device is preinstalled. For testing devices and components no further software installation is required.

- (1) Attach the power cord to the test bench and connect to the power supply.
- (2) Optional: Connect transponder antenna [ $\rightarrow$  chapter 2.4, fig. 1].
- (3) Optional: Connect high pressure feeding line, plug in high pressure test line.
- (4) Make sure that the opening of the test head is empty [no adapters attached] and clean.
- (5) Switch on test bench with the power switch on the left side of the test bench.
   Power switch glows red.
- (6) Press push button.
  - ▷ Test bench is powered completely.
  - ▷ Push button glows green continuously.
  - ▷ Integrated computer begins to boot.
  - > Operating system of the computer and testing software are started.

The software can be operated with the touch screen or with mouse and keyboard.



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# 4.3 Logging In

Log -in by typing user name and password:

T User name	he Safety Company				
User name	Administrator				
Abbreviation	AD				

#### Fig. 9 Log-In screen



The user name is **Administrator**, the abbreviation is **AD** and the default password is **Administrator** [not case sensitive].

After logging in for the first time, change the password for the administrator. Using the button "change password" on the bottom of the login dialog. Then follow the password change dialog.

# Using a Card

[→chapter 7.2]



#### Licensing and Activation of the Software

Usually the test bench software has already been licensed when the test bench is delivered.

Choose the user Administrator, enter the password, and choose the Options button from the login dialog box.

Licensing     Show field names	Database creation/check Complete reorganisation Reorganise generators Reorganize rights
	Reset template administration.
ЕN 🗸 ОК 🗶 С	Cancel Change password Options <<

#### Fig. 10 Options

(1) Tick licensing and then click on OK.

Initialisation code	84F4	E23D	3408	41F3	A126	4810	B7E2	1CBB
					Send per mail			
Activation code								
🗸 ОК	]						×	Cancel

#### Fig. 11 Activation code

- (2) Proceed by entering the activation code [has to be entered completely, including hyphens].
- (3) After confirming with OK answer the question [Do you want to execute 'database create/test'?] with Yes. This will start the debug server process to customise the database to your license.



# Attention!

When using the network version, do not use the software on another device while the licensing process is running, otherwise the data base could be compromised.

4.4 Desktop Overview



- 1 Logs off from TecBOS
- 2 Shuts down the computer
- 3 Logs off from the operating system
- 4 Starts the testing module

- 5 Starts the devices module
- 6 Menu bar
- 7 Drop-down menu of menu bar



#### MSA

# 5 Testing Information for all Devices

The following devices can be tested with the SmartCHECK:

- Masks
- Lung governed demand valves
- Breathing apparatus
- Chemical protective suits
- Closed circuit breathing apparatus
- Closed circuit breathing apparatus with constant dosage
- The test bench accesses a database where test procedures and tolerance values are stored.

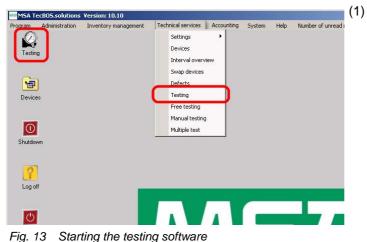
If it is required to add an additional type for implementing in the data pool, enter the required device to your testing database.



# Attention!

Specifications of the device to be tested and national regulations apply. The data base entries must comply with the specifications of the devices to be tested.

## 5.1 Starting the Test Software



- Double click on the icon *Testing* or start via path *Technical servic*es-*Testing*.
  - The test bench starts, the internal pump fills the test head.

## 5.2 Connecting Devices

The testing software describes the connection of standard devices.

Ĭ

For testing special accessories may be necessary. For detailed information  $\rightarrow$  chapter 10 and the operating manual of the device to be tested.

The testing software provides illustrations how to connect a device. Since these hints can be deactivated chapter 6 provides an overview. Depending on the type of construction there may be deviations.

Follow the on-screen instructions [can vary depending on selected type of device].



#### 5.3 Testing Combined Devices

It is possible to test combined devices with the test bench.

- Select all devices that are combined when selecting devices.
  - ▷ Tests for all devices selected will be carried out consecutively.

## 5.4 Overview Test Screen SmartCHECK basic

Testing	×
Visual inspections	2 1 √ Facemask tightness test 48 00
Facemask tightness test 3	Medium pressure 12 Low pressure 12 Low pressure 5 0 5 10 5 0 5 10 5 0 5 10 15 20 20 25 25 30 mbar 7 2 2 10 10 10 10 10 10 10 10 10 10
	$\begin{array}{c} 0.0 \\ \hline 0.0 \\ \hline$
	-9.211
Stop 13	Back16 Next 14

#### Fig. 14 Overview Test Screen

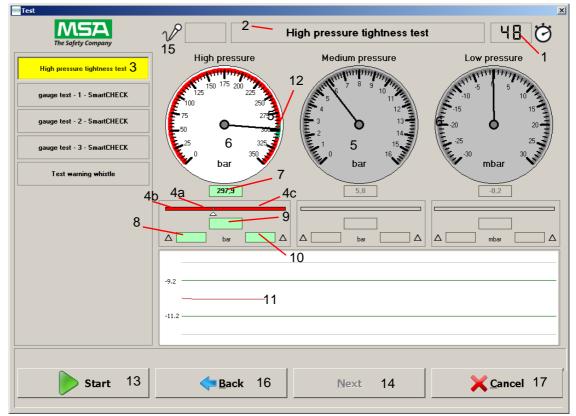
- 1 Timer [Countdown]
- 2 Current test
- 3 List of tests
- 4a Magnified view of the tolerance range
- 4b Lower tolerance level
- 4c Upper tolerance level
- 5 Gauge not necessary for test [dimmed]
- 6 Active gauge
- 7 Current measurement
- 8 Negative pressure deviation from start value

- 9 Start value of measurement
- 10 Positive pressure deviation from start value
- 11 Pressure curve [with graphical tolerance values]
- 12 Display of tolerance range
- 13 Interrupt current test
- 14 Go to next page [active after test has finished or is interrupted, dimmed]
- 15 Measurement warning signal [not active]
- 16 Go to previous page [active after test has finished or is interrupted, dimmed]
- 17 Ends this test and opens device selection

SmartCHECK

## 5.5 Overview Test Screen SmartCHECK Modules

This test screen shows an additional gauge for high pressure, all other fields are the same.

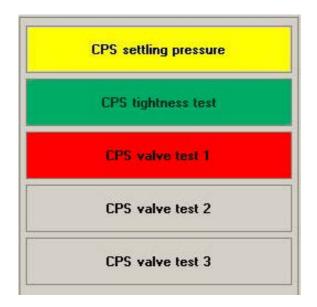


#### Fig. 15 Overview Test Screen

- 1 Timer [Countdown]
- 2 Current test
- 3 List of tests
- 4a Magnified view of the tolerance range
- 4b Lower tolerance level
- 4c Upper tolerance level
- 5 Gauge not necessary for test [dimmed]
- 6 Active gauge
- 7 Current measurement
- 8 Negative pressure deviation from start value

- 9 Start value of measurement
- 10 Positive pressure deviation from start value
- 11 Pressure curve [with graphical tolerance values]
- 12 Display of tolerance range
- 13 Interrupt current test
- 14 Go to next page [active after test has finished or is interrupted, dimmed]
- 15 Measurement warning signal [not active]
- 16 Go to previous page [active after test has finished or is interrupted, dimmed]
- 17 Ends this test and opens device selection

#### 5.6 Manual Operation



#### Fig. 16 During a test

All tests necessary for the device are listed as buttons.

Tests which have been successfully completed are highlighted green. Failed or stopped tests are highlighted red. Active, running tests are highlighted yellow.

During the automatic test process each test is carried out successively. When an error is detected the test stops. The test can be repeated, skipped or aborted.

Each test can also be started individually [by double-clicking on the respective test]. Active manually started tests are highlighted yellow.

Clicking once on a test shows the results of this test if test has already been carried out. Clicking once on a test not yet carried out marks this test, clicking on *Start* starts with this test and the following tests are carried out successively similar to the automatic test routine.



While a test is active and running, only the buttons *Stop* and *Cancel* can be used. It is not possible to mark or start tests while they are carried out and highlighted yellow.

*Stop* stops a running test, but the system stays pressurised. *Cancel* stops a running test, the system depressurises.

#### 5.7 Test Criteria for MSA Respiratory Protection Apparatus

Test criteria are subject to national regulations, applicable national regulations must be observed. For orientation, MSA recommended test criteria can be found in the service manuals for the devices to be tested.

# 6 Testing Devices



For testing special accessories may be necessary. For detailed information  $\rightarrow$  chapter 10 and the operating manual of the device to be tested.

## 6.1 Masks



- (1) Put mask onto test head.
- (2) Pull harness tight in indicated order.
- (3) Screw lock screw into demand valve connector [  $\rightarrow$  arrow].

Fig. 17 Connecting Mask

The following tests can be carried out for masks:

- Mask tightness test.
- Mask opening pressure exhalation valve.

This section describes a test according to default settings. If settings have been changed there may be deviations [ $\rightarrow$  chapter 7 for how to change settings].



Object number	Type	Serial no.	Test process	10.00
MA-2	Ultra elite N	4	Standard test MA neg.	
Identification		Test process		

Fig. 18 Selecting a device for testing

Object number	Type		Serial no.	Test process	
LA-4	DV 96 -AE/-A	S/-ESA	AE/4007732/07	Standard DV pos.	
PA-1	AirMidOC		5	Standard BA	

Fig. 19 Selecting connected devices

#### Selecting Device

- (1) Switch on the test bench and log in  $[\rightarrow$  chapter 4.3].
- (2) Start the testing by double-clicking the testing icon on the desktop [ $\rightarrow$  chapter 4.4].
- (3) Select a device for testing. To select a device type in one of the identification properties press enter to run the selection against the database.

The following identification properties are available:

- Object number
- Transponder
- Bar code
- Serial number
- Manufacturer number
- (4) Click on Next.

Related devices are connected by selection of the main device or one of its sub devices.

For all possible search functions  $\rightarrow$  chapter 3.5.

It is possible to search for devices with the transponder if they are equipped with the necessary tag.

A bar code reader for the test bench is available as an accessory and can be used instead of the transponder reader.

If the device cannot be found,  $\rightarrow$  chapter 7.5 for details on entering data sets.

(5) Click on Next.



Fig. 20 Tests

Object number						
	Number	Description	Last	Next	Serial number	
C-AM	101858	Speech diaphrgm				
/ MA-3	101860	Gold breath valve				
MA-3	101861	Inholation volves				
MA-3	101862	Check valves				

Fig. 21 Overview material

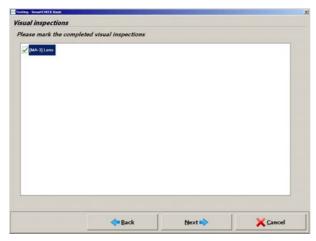


Fig. 22 Visual inspections

After selecting one or more devices you will have an immediate overview of possible and required tests.

Red-marked fields are due and marked automatically by the program. Manual change of tests is possible.

- (6) Tick the test to be performed.
- (7) Click on Next.

An overview of materials to be used appears.

(8) Tick the used material.

If the material cannot be found,  $\rightarrow$  chapter 7.5 for details on entering data sets.

After the material has been chosen the material is booked out of storage management when successfully saving the test.

- (9) To append material, click on *add item*.
- (10) Tick the material to be added.
- (11) Click on OK.

 $\triangleright$  The material is added.

(12) Click on Next.

All necessary visual inspections are listed

(13) Tick the performed visual inspections.

If a visual inspection cannot be found,  $\rightarrow$  chapter 7.5 for details on entering data sets.

If not all visual inspections are confirmed, testing does not proceed and a warning appears. The warning has to be confirmed in order to proceed.

(14) Click on Next.



The test screen appears.

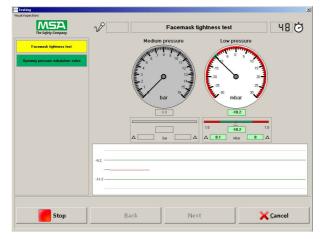


Fig. 23 Test screen



Fig. 24 Connect mask

Facemask tightness lest		Medium pres	sure	Low pressure	
		E o			
		bar	y K	mbar 3	
				0.1	-
		Δ be		- ebar	
	-				

Fig. 25 Test proceeds

(15) Click on Start.

An illustrated description appears to show how the device has to be connected.

(16) Connect mask to test bench according to instructions.

(17) Click on OK.

When *Do not show message in the future again* is checked by a user, only the administrator can reactivate these messages for this user.

The test routine starts.

The start button changes into a stop button. By clicking on *Stop* you can interrupt the test at any time.

All test necessary for the device are listed as buttons.

Tests which have been successfully completed are highlighted green. Failed tests are highlighted red. Active, running tests are highlighted yellow [ $\rightarrow$  chapter 5.6].

Once the test procedure has been started, all test sequences proceed completely automatically.





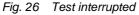




Fig. 27 Successful test

Test comment		
Testing		
Comments		
Training	User/Location	9
Mission		
Comments		
Comments		
		2
	1	. 1
	Sack Next 🔿	

Fig. 28 Commenting test

If one of the test fails, the test is aborted and the test bench is requiring a user interaction.

A dialogue box appears with the choice to repeat the test. Possible causes of fault and troubleshooting directions are listed.

Eliminate the cause of fault and repeat the test.

It is possible to save failed tests.

After a successful test, all individual test buttons are highlighted green.

Click on Next to continue.

A window opens for saving comments for the test:

- training
- mission
- scheduled test
- User/Location

If the required user/location cannot be found,  $\rightarrow$  chapter 7.5 for details on entering data sets,

- (18) Enter the necessary comments.
- (19) Click on OK.
  - $\triangleright$  The test can now be saved.



With Cancel the di-

and test can be re-

alogue is closed

peated.

Options in the saving dialogue:

- Save the test with Yes
   Click on Continue.
- Click No
  - A new dialogue appears.
- Yes ends test routine with saving the data
- No ends the test routine without saving data
- With *Cancel* the dialogue is closed and test can be repeated.

Print	
Open test	
Q Next test	
× Finish test	
[] Close program	

Fig. 29 Options

Information [3]	
internation x	
•	
C Do not show message again	

Fig. 30 Disconnect device

The final screen of the testing procedure offers the following options:

- Print [ $\rightarrow$  chapter 7.9]
- Open test [shows the test data → chapter 7.8]
- Next test [another device for testing can be chosen, → fig. 18]
- Finish test [ends the testing]
- Exit program [ends the program and shuts down the test bench.]
- (20) Remove mask from test bench.
- (21) Remove adapter/plug.

## 6.2 Lung Governed Demand Valves

The following tests can be carried out for lung governed demand valves [DV]:

- DV tightness test positive.
- DV control piston leak test with medium pressure.
- DV switch-over pressure.
- DV static closing pressure.
- DV dynamic breathing resistance with lung simulator [with or without mask]

The test procedure is similar as described for masks [chapter 6.1]. The screens will appear in the same order, but contain device specific information.

# **Connecting Medium Pressure Line (for Basic Configuration)**



(1) Supply test device with medium pressure 6 - 10 bar.

Fig. 31 Connecting medium pressure line



Attention!

In order to test a lung governed demand valve, medium pressure is required.

# Connecting High Pressure Lines (for Configurations with High Pressure Module)



Fig. 32 Connecting high pressure lines

- (1) Open high pressure connection. Watch for sufficient primary pressure.
- (2) Test preparation: Connect breathing apparatus with high pressure outlet (use Clickadaptor when necessary).
- (3) Connect breathing apparatus with medium pressure input (use medium pressure hose extension when necessary).

(1) Demand valve must be in standby.

(3) Connect medium pressure hose to medi-

Connect combination of adapter/demand

(2) Connect DV with adapter.

um pressure coupling.

valve with test head.



# Attention!

In order to test a lung governed demand valve, a compressed air breathing apparatus has to be connected. Use the medium pressure from the compressed air breathing apparatus to carry out the breathing tests.

(4)

## **Connecting Adapter**



Fig. 33 Connecting Lung Governed Demand Valve





Fig. 34 Connecting the lung governed demand valve

# After testing is completely finished

## **Basic Configuration**

- After testing is completely finished, close the medium pressure line [e.g. by closing the cylinder valve] and depressurise the test bench using the button for discharging medium pressure.
  - ▷ Now the medium pressure line can be removed effortlessly.

#### **Configurations with High Pressure Module**

- After testing is completely finished, the test bench depressurises automatically.
  - ▷ Now the pressure lines can be removed effortlessly.

- (1) Proceed as described in chapter 6.1.
- (2) Connect the lung governed demand valve as illustrated.
- (3) Continue with the test as described in chapter 6.1.

## 6.3 Compressed Air Breathing Apparatus

The following tests can be carried out for compressed air breathing apparatus [SCBA]:

- High pressure tightness test
- SCBA Medium pressure test
- Pressure gauge comparison test
- Warning signal test

The test procedure is similar as described for masks [chapter 6.1]. The screens will appear in the same order, but contain device specific information.

#### **Connecting Medium Pressure Line (for Basic Configuration)**



- Connect medium pressure hose of SCBA to test bench medium pressure coupling.
- (2) Open the cylinder.
- (3) Adjust high pressure to 200 bar.

Fig. 35 Connecting Breathing Apparatus



# Warning!

Only start testing after all necessary connections have been made in the correct order. Otherwise the high pressure line could be propelled uncontrollably by the escaping air. Failure to follow this warning can result in serious injury.



Fig. 36 Connecting high pressure line

- (1) Open high pressure connection. Watch for sufficient primary pressure.
- (2) Test preparation: Connect breathing apparatus with high pressure outlet.
- (3) For SCBA not equipped with the alpha-click system: Connect the SCBA test adapter (see chapter 10.4) to the pressure reducer.
- (4) Connect breathing apparatus with medium pressure input (use medium pressure hose extension when necessary).

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- (1) Proceed as described in chapter 6.1.
- (2) Connect the compressed air breathing apparatus as illustrated.
- (3) Continue with the test as described in chapter 6.1.

Fig. 37 Connecting the compressed air breathing apparatus

## After testing is completely finished

#### **Basic Configuration**

- After testing is completely finished, close the medium pressure line [e.g. by closing the cylinder valve] and depressurise the test bench using the button for discharging medium pressure.
  - $\,\triangleright\,$  Now the medium pressure line can be removed effortlessly.

#### **Configurations with High Pressure Module**

For SCBA equipped with the alpha-click system:

- After testing is completely finished, the test bench depressurises automatically.
  - $\,\triangleright\,$  Now the pressure lines can be removed effortlessly.

For SCBA not equipped with the alpha-click system:

#### Warning!

Always carry out the disconnection procedure completely as described below in the correct order.

Failure to follow this warning can result in serious injury.

- After testing is completely finished, the test bench depressurises automatically.
- (1) Disconnect the SCBA test adapter (see chapter 10.4) from the high pressure test line.
- (2) Disconnect the test adapter from the pressure reducer.
  - $\,\triangleright\,$  Now the pressure lines can be removed effortlessly.

#### 6.4 Chemical Protective Suit

The following tests can be carried out for chemical protective suits:

- CPS stabilising pressure
- CPS tightness test
- CPS valve test 1...6

The test procedure is similar as described for masks [chapter 6.1]. The screens will appear in the same order, but contain device specific information.



'!

Watch the filling and test sequence.

#### **Connecting Medium Pressure Line (for Basic Configuration)**



(1) Supply test device with medium pressure 6 - 10 bar.

 Fig. 38
 Connecting medium pressure line

 Connecting High Pressure Lines (for Configurations with High Pressure Module)



Fig. 39 Connecting high pressure line

- (1) Open high pressure connection. Watch for sufficient primary pressure.
- (2) Test preparation: Connect breathing apparatus with high pressure outlet (use Clickadaptor when necessary).
- (3) Connect breathing apparatus with medium pressure input (use medium pressure hose extension when necessary).

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Fig. 40 Connecting CPS

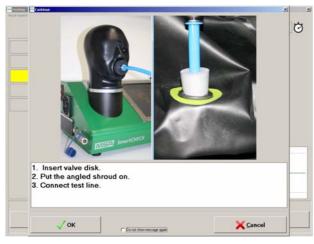


Fig. 41 Connecting CPS



Fig. 42 Spreading out CPS

# After testing is completely finished Basic Configuration

- After testing is completely finished, close the medium pressure line [e.g. by closing the cylinder valve] and depressurise the test bench using the button for discharging medium pressure.
  - $\,\triangleright\,$  Now the medium pressure line can be removed effortlessly.

#### **Configurations with High Pressure Module**

- After testing is completely finished, the test bench depressurises automatically.
   Now the pressure lines can be removed effortlessly.
  - $\,\triangleright\,$  Now the pressure lines can be removed effortlessly.
- (GB

- (1) Spread CPS [ $\rightarrow$  fig.42].
- (2) Close zipper of CPS.
- (3) Remove angled prechamber and valve disks.
- (4) Connect test bench and CPS via adapter.
- (5) Watch the filling and test sequence.
- (1) Assemble valve disk.
- (2) Connect test line.

- (1) Proceed as described in chapter 6.1.
- (2) Spread out and connect the chemical protective suit.
- (3) Continue with the test as described in chapter 6.1.

#### 6.5 Closed Circuit Breathing Apparatus

The following tests can be carried out for Closed Circuit Breathing Apparatus:

- Inhalation valve
- Exhalation valve
- Tightness test
- Surplus valve
- Make device operational ready
- IC-Air test

The test procedure is similar as described for masks [chapter 6.1]. The screens will appear in the same order, but contain device specific information.

#### Attention!

For testing the Closed Circuit Breathing Apparatus the battery must be disconnected from the electronic distributor. Otherwise the respiratory protective device will be started.

Tightness test must be executed with dry air only.

The testing procedure requires the tester to change connections at certain points for certain tests. All safety related steps regarding the equipment will be displayed at the appropriate time, showing these messages cannot be switched off. Here all necessary actions are listed for an overview.

#### **Disconnecting battery**



Fig. 43 Disconnecting battery of closed circuit breathing apparatus

#### Inhalation/Exhalation Valve



Fig. 44 Connecting adapter hose to test head.

(1) Disconnect battery from the electronic distributor before test.

 Connect adapter hose with inserted adapter unit to test head.



#### Inhalation/Exhalation Valve



Fig. 45 Screwing adapter into inhalation side



Fig. 46 Screwing adapter into exhalation side

#### **Tightness Test/Surplus Valve**



Fig. 47 Connecting breathing hose assembly to test head

(2) Screw adapter into inhalation side (marked white at the top) of the respiratory protective device.

(3) Screw adapter into exhalation side (bottom) of the respiratory protective device.

- Remove the breathing hose assembly from the socket on the left hand shoulder harness.
- (2) Connect the breathing hose assembly with adapter to the test head.



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#### **Tightness Test/Surplus Valve**



Fig. 48 Blocking surplus valve on exhalation bag



1. Remove the breathing hose assembly from the socket on the left-hand

Remove the breathing hose assembly from the social of the rest head.
 Connect the breathing hose assembly with adapter to the test head.
 Block surplus valve on exhalation bag laterally with metal bracket to stop the valve from blowing off air.

/ OK Fig. 49

Block surplus valve on exhalation bag laterally with metal bracket to stop the valve from blowing off air.

- (1) Proceed as described in chapter 6.1.
- (2) Follow the instructions regarding adapters and connections displayed by the software.
- (3) After testing is finished, make sure that the apparatus is ready for use again:
  - Unblock surplus valve on exhalation bag laterally (remove metal bracket).
  - Carry out self-test (IC-Active test).

Y Cancel

#### 6.6 Closed Circuit Breathing Apparatus with Constant Dosage



The SmartCHECK has been tested by BAM (Federal Institute for Materials Research and Testing) for safety with regards to operating with oxygen.

The following tests can be carried out for Closed Circuit Breathing Apparatus with Constant Dosage:

- Low pressure warning
- Leak test with negative pressure
- Inhalation valve
- Exhalation valve
- Drainage valve
- Relief pressure valve
- High pressure leak test
- Constant dosage
- Minimum valve
- Bypass valve
- Residual pressure warning

The test procedure is similar as described for masks [chapter 6.1]. The screens will appear in the same order, but contain device specific information.



#### Attention!

During the testing procedure the software displays several warnings.

Follow all instructions given in those warnings to avoid damage to the equipment tested or the test bench.

The testing procedure requires the tester to change connections at certain points for certain tests. All safety related steps regarding the equipment will be displayed at the appropriate time, showing these messages cannot be switched off. Here all necessary actions are listed for an overview.

#### Low Pressure Warning, Inhalation/Exhalation Valve, Draining Valve



- (1) Connect breathing hose to demand valve adapter.
- (2) Bodyguard switched off.

Fig. 50 Connecting device

#### **Bypass Valve**



Fig. 51 Bypass

#### **Constant Dosage**



(1) Put the open side of the sealing cap R 22 086 over the plunger.

Push red button of the bypass valve briefly.
 ▷ Oxygen shall be audible when flowing into the closed circuit system (flow noise).

(2) Hold sealing cap until the filled breathing bag is holding it.

Fig. 52 Sealing cap



Fig. 53

- (1) Proceed as described in chapter 6.1.
- (2) Follow the instructions regarding adapters and connections displayed by the software.
- (3) After testing is finished, make sure that the apparatus is ready for use again.



## MSA

#### 7 Using the Software

The illustrations featured may vary due to software updates and different licences.

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While the testing procedure has been optimised for touch screen operation, an external keyboard and a mouse are only recommended for data base entries.

#### 7.1 General



Attention!

To avoid losing saved tests and data base entries, make sure that the main database is backed up continuously.

- It is recommended to install an antivirus software on the test bench.



MSA offers software maintenance contracts, contact MSA for details.

If the test bench is integrated in a network, further licenses may be necessary, because the license included in the scope of delivery is a single-user license [ $\rightarrow$  chapter 10].



If problems occur with the software that cannot be fixed, contact MSA.

#### 7.2 User Administration

- (1) Choose System User Administration User in the menu.
- (2) Create data set via the menu bar.
- (3) Enter user abbreviation, user name and password. Password can be used when no ID card is used.
- (4) Read in the ID card number using the transponder reader or the bar code with the bar code reader.
- (5) Set up user rights in the Usergroup Administration.
- (6) Activate checkbox User has to change password on next login.
- (7) Save changes by clicking the save button.



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🔲 User	
🖆 🗅 😂 🖬 🐚 🗙 💥 🔍 🔸 🕨 🖨 🚳 🗰 🔁	
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User groups         Additional data         Modules to be executed after log-in.           User groups         Number         Abbreviation	1
Image         AD         Administrator           2         1         Workshop users           3         2         Standard users	
2 1 Workshop users	
3 2 Standard users	

#### Fig. 54

Passwords are not subject to any restrictions concerning choice of characters or number of characters.

(8) If a user ID is no longer needed or an ID card was lost, delete the transponder code. Additionally deactivate the user. If a card was lost it is also possible to overwrite the old number with the number of a new card.



## Attention!

Do not delete the user, tests may be stored under the ID number.

#### 7.3 Mandator

The letterhead in the reports and the report language can be changed via the mandator module. MSA's address is set by default. Change the information on first use.

Menu: System - Mandators

- (1) Open the existing mandator by double clicking the Open button.
- (2) Overwrite the existing information with the information of your organisation.
- (3) Modify the footer for print outs on register under *Report settings*.
- (4) Ensure that the country code is set to your language.

📟 Mandators					
🖆   D 😂   🔛   X 🗙	<   🕂 🕇 🕨   🚑 🎒	🇰 🔄 Reorganize			
Mandator Report settings					
Abbreviation		Contact person		Superior position	1
Name 1		Phone number		Name 1	
Name 2		Fax		Name 2	
Street	<del>-</del>	Email		Name 3	
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Radio identification no.		Internet address		Zip Code City	<b>•</b>
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Identity number				Country code	
				10 In 19	

Fig. 55 Mandator

(5) Save changes by clicking the save button.

#### 7.4 Settings

- (1) Start the software as described in chapter 4.
- (2) Choose System Settings Settings in the menu.

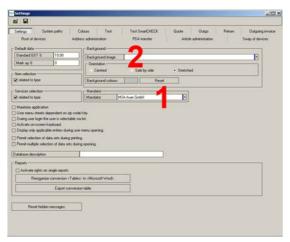


Fig. 56 Data card: Settings

Settings S Root of device	iystem patho Is	Colours Address admir	Test	Test SmatDHECK PDA transfer	Quote	Outgo	Return	Outgoing invoice Swap of devices
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		er / location						
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Show automatical								
Show automatical		•						

- Fig. 57 Data card: Test
- (3) Save settings in accordance with these entries.

- (3) Select mandator [1 in the picture].
- (4) If you want to change the background picture you can select a different background image using the selection box [position 2 in the picture].
- (1) Select the required test bench.
- (2) Select the connected test bench [position 1 in the picture].



7.5 Entering Data Sets

#### **Entering and Modifying Addresses**



Fig. 58 Menu: Administration - Address Administration

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Fig. 59 Menu: Administration - Create data set

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Transponder Contact person					shi   Abu	ences Opera	0	Main contact period     Salutation     Function     Tate     Find name     Sumame     Prone (office)     Mobil phone     Email     Phone (private)     Fac (private)     Fac (private)		
Transponder Contact person					ali   Abi	vences Opera	0	Main contact period Solutation Function Title Float name Phone (plice) Fair (office) Mobil phone Email Phone (plinute) Fair (office) Fair (off		
Transponder Contact person					ali   Abi	vences Opera	0	Man contact period     Subation     Function     Train     Fait name     Summe     Phone (blice)     Fais (office)     Mod (prove)     Exail     Phone (smirel)     Fais (one)     Singer     Zo Code (Dp)		

Fig. 60 Menu: Administration - Entering information

(1) Create data set via the menu bar

- (2) Enter the required information. Address number:
- Part 1: abbreviation for address [e.g. ADR] or supplier [e.g. SUPP]
- Part 2: consecutive number

Name 1: Name of company owner or user For possible invoicing or when creating a delivery note, it is important to enter an owner or user.



N D G M	stration		126563	لملح
Address number Abhreviation	ADR 1			-
Name 1	MSA	10		- 2
Name 1 Name 2	ACM			
Name 3				
Sheet	Thiemannshappe 1			
Zip Code City	12059 + Berlin			
State	Linna Linna	-		
District				
Country				
Category		-		
Category		2		
Customer number				
Phone number				
Fax		100		
Enal		12		
Homepage		9		
	1			
Transponder	Addresses Related addres	ome Bank deta	ces Operating resources Documents Appendix Additional informat	on
Contact person	Addresses Related address		Main confact person Salutation Me. Traction Me. Trace	
Contact person			Anin contact person     Salutation     Me.     Transform     Title     Fer name     John	
Contact person			Man contact person. Salation Me. Taction Tate Part name John Sunnee Mayn	
Contact person			Advancement     Advanceme	
Contact person			A Main context person     Salation     Me     Salation     Me     forunte     Team     Ann     Team     Mon     Team     Mon     Thrane     Mon     Thrane     Ann     Thran     Ann     Thrane     Ann     Thrane     Ann     Thrane     An	
Contact person			Mini control person Selazion Mo. Francison Time Johnson Frances Marine Frances Marine Frances Marine Frances Marine Marine Marine Frances Marine Mari	
Contact person			Affinition of the series     Subject Network     The first Affinition     The first Affini	
Contact person			Anii contarl person     Salasian     Salasian     Ma     Salasian     Ma     Tei	
Contact person			Affair control person     Salazion     Me.     Salazion     Me.     Tencton     Ten man     Adv     Tencton     Tence     Mon     Tence     Mon     Tence     Mon     Tence     Adv     Tence     Adv     Tence     Adv     Tence     Adv     Adv     Tence     Adv	
			Anii contari person     Salatain     S	
Contact person			Affair control person     Salazion     Me.     Salazion     Me.     Tencton     Ten man     Adv     Tencton     Tence     Mon     Tence     Mon     Tence     Mon     Tence     Adv     Tence     Adv     Tence     Adv     Tence     Adv     Adv     Tence     Adv	
Contact person			Anii contari person     Salatain     S	s

Fig. 61 Menu: Administration - Contact information

N D C M		Х н	4 5 10		
Addess number	ADR I		8	Connert	
Abbenviation	son r	1	10	COMMERX	-
Name 1	MSA		12		- 3
Name 1	1934		- 8		
Name 3	_		8		
Sheet	Themanoshas	1.01	1		
Zip Code City		Berlin			
State	1.1000	-			
District		_			
Country		_			
Category		_			
Category					
Customer number		_	-		
Phone number					
Fax			100		
Enal			10		
Homepage			-		
	1		3		
Barcode Transponder	Addresses   Rel	aled address		atala Absences Operating resources Documents Appendix Additional information	1
Nonepage Bacode Transponder Contact person Saktation Funk Me	ction   Title   Fit	ist name		Image: Contract genuen         Statution           Image: Contract genuen         Statu	
Bacode Transponder Contact person Salutation   Fure	ction   Title   Fit	ist name	nt Barik di Sumane	Main contact person     Salabion     Salabion     Tei     Frencen     Sonnee     Proceeding     Frence     Frence	
Bacode Transponder Contact person Salutation   Fure	ction   Title   Fit	ist name	nt Barik di Sumane	Image: Contract genuen         Stadation         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Contract genuen           Image: Contract genuen         Image: Contract genuen         Image: Con	
Bacode Transponder Contact person Salutation   Fure	ction   Title   Fit	ist name	nt Barik di Sumane	Mai contact percent     Mai contact percent     Mai     Mai contact percent     Mai     Mai contact percent     Mai conta	

Fig. 62 Menu: Administration - Saving information

Several contact persons can also be inserted for each address.

(3) Save the contact information entered using the blue arrow button on the right side of the list view box.

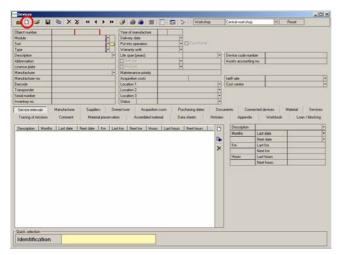
(4) After entering the data save it by clicking on the floppy disk symbol on the menu bar.



#### **Capturing and Modifying Device Data**



Fig. 63 Menu: Technical Services – Devices



Create data set:

(1) Select "create data set" on the menu bar.

Fig. 64 Menu: Technical Services – Devices – Create data set

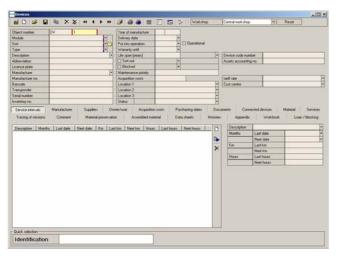


Fig. 65 Menu: Technical Services – Devices – Object number

(2) All fields with a red mark **must** be completed to save the data set.

Object number:

- Part 1: alphanumeric field for abbreviated designation, e.g. DV for Demand valve or RE for Reducer.
- Part 2: consecutive numeric field dependent on part 1. It can be overwritten if required. It is also possible to enter numbers like for example 10000 the application will then select the next available number following the maximum of the last entered number.



Object number Module Sort Type Description	DV	ь I (		ar of manufacture sively date	endional		
Uncomption Unterwistion	-	Select				JDI X	E
Licence plate		Type		Type	Module	1+1	
Manufacharer		10 Ree 200 bar		Culenders	Respiratory protection work shop	-	
Manufacturer no.		35		Market	Respiratory protection workshop	_	
Barcode		3 SP		Marks	Respiratory protection workshop		-
Transponder		4.01 / 200 bar Steel		Cylinders	Respiratory protection workshop		-
Serial number		50.01 / 300 bar		Cylinders	Respiratory protection workshop		
nventory no.		6.01 / 300 har Steel		Culinders	Respiratory protection workshop	1000	
Contractor Constructions and the		6.81 / 300 bar Cone	cole	Cylinden	Respeatory protection workshop		Dance I among
Service intervals	Manufas	ADVANTAGE N		Marka	Respiratory protection workshop		Material Services
Tracing of missions	Conv	ArEke		Closed-circuit breathing apparatus	Respiratory protection workshop		book Loan / blocking
		Arf Remark		Marke	Respiratory protection workshop		Contraction of the second s
Description Month	n Latte	ArG0		BA basic device	Respiratory protection workshop		-
		AirGo 200		BA basic device	Respiratory protection workshop		
	1	AMARC		BA basic device	Respiratory protection workshop		
		AMAGO: SL		BA basic device	Respiratory protection workshop		1000
	1	ALAMANC ALL AS	ZZ-ESA	Demand valve	Respiratory protection workshop		a second and a second as a
	1	ALROM SOCAE INS N	ficro .	Demand valve	Respiratory protection workshop		1000
	i	AutoMaloc N		Demand valve	Respiratory protection workshop		10000
	1	AutoMalOCN Micro		Demand valve	Respiratory protection workshop	-	(1
		Search string	1			1	
		J OK.			X Cano		
	- 2	Number of data record	R 64				
Quick selection							
Identification							

Fig. 66 Menu: Technical Services – Devices – Available device models

Diject number	Iov II	10000	Year of manufacture	01 2006			
Andule	Respiratory protect	fon workshop	Delivery date	01.02.2006 +			
Soft	Demand valve		Put into operation	+ Operational			
ice	ALANMARC AE/ J	IS/ ESA	Warranty until	+			
Description	AutoMalox AS		Life span [years]		Device code rs	mber	
Abbieviation	10000000000		Sot out		Assets account	ing na.	
licence plate	0.000	100	Blocked	•	Construction of the local division of the lo		
fanulacturer	MSA AUER	-	Maintenance priority	100 March 100 Ma			
fanufacturer no.	12345600000		Acquisition costs		tarili rate	10	
acode	A123456789		Location 1	Depot	Cost centre		
tansponder	2		Location 2				
erial number			Location 3	Depot			
riventory no.	0001		Statue		1.5		
teni-annually 6 yearly 12	Consent	Material precervat		aterial Data sheets Histo urs Last hours Next hours D	Description Months	Last date	
Description Month				us Lasthours Nexthours C	Description	Last date Next date Last km	& Loan / blocking
Description Mont termi-acruady 6 pearly 12				us Lasthous Next hours	Description Months Kas	Last date Next date Last km Next km	
Description Mont termi-acruady 6 pearly 12				us Lasthours Nexthours C	Description	Last date Next date Last km Next km Last hours	1.
Description Mont tensionrually 6 yearly 12				us Lasthours Nexthours C	Description Months Kas	Last date Next date Last km Next km	
Description Mont termi-annually 6 pearly 12				us Lasthours Nexthours C	Description Months Kas	Last date Next date Last km Next km Last hours	

Fig. 67 Menu: Technical Services – Devices – Introducing device information

If you click on the right-hand arrow next to Type, the window with the available device models opens.

To enter new types  $\rightarrow$  chapter 7.7. There are two views available for selecting the required device model.

- the selection view by click on type
- the tree view by click on Module or Sort.

The first option will be used here.

(3) Choose the model from this list by double clicking.

(4) Enter the device information.For example:

- Year of manufacture
- Put into operation
- Warranty until
- Life span
- Manufacturer
- Manufacturer number
- Barcode
- Transponder
- Serial number
- Inventory number
- Location [split into 3 levels, e.g. department - car - location on car]

Single part related serial numbers or device numbers can be entered on the materials register after adding the spare part:

- Pressure gauge number
- Pressure reducer number

DV 1 Respiratory protection works Demand valve NatoMałóć: AE/ AS/ ESA NatoMałóć: AS	÷ .	Year of tw Delivery d Put into op Warranty Life span	iate pesation	01 2006 •	Operational				
Demand valve NatioMalOC AE/ AS/ ESA	- 19	Put into or Warranty	peration.		T Desisteral				
NAMANY AE/ AS/ ESA		Warranty							
	•								
CID COLORIN						-	Device code num	will I	
		I Sat ou					Assets accounting		
		Ukcke					in the second se		
ISA AUER		Maintenar			11.0				
2345600000		Acquinition					taril rate		6
123495789	_			Depot	_		Cost centre		
	_	Location	1						
5		Location 3	1			•			
1001		Status							
						×	Km	Last km Next km	
						1000	House		
						-			
	001 Manufacturer Supple Consert Mater	001 Manufacture: Supplers Dw Comment Material preservatio	001 Location 2 Status Manufacture: Supplier: Divener/user Connert: Material preservation A	001 Location 2 Location 3 Status Status Consent Material preservation Ascentibled to	001 Location 2 Location 3 Straw 4 Manufacture: Supplers Dementioner Acquisition costs Part Concernit: Material preservation Assembled material Date	Liceation 2 Liceation 3 Statut Manufachare Supplers Demanture Acquision costs Plachasing dates Concernit Material peervalion Accentration Datas Hereits II	Looden-2 Looden-3 2000 Graduate Soppler: Owner/Luer Acquisition costs Pachasing deter Manning perservation Azonebido shareni O Das hereis Honor Lant dete Next dete I'm Last ten Herei Ite. Hours Last hours Next hours Last dete Next dete I'm Last ten Herei Ite. Hours Last hours Next hours	Conserve J Conserve 2 Conserve 2 Conserve 2 Conserve 2 Conserve 3	Location 2 Location 3 20tatu 20tatu 4 Connert Narelden Acquides cost: Purchang deter Documents Connerted divices Connert Maerial previotes Last deter Next deter Nin. Last init There the Maux Last Non Next North Last deter Next deter Nin. Last init There the Maux Last Non Next North There are an an and there will be the Next Next North Next Next Next Next Next Next Next Next

#### **Data Card Device Intervals**

Intervals are automatically added based on a model link that can be edited in *Technical services - Settings -Service Intervals*.

To allocate/connect new intervals  $\rightarrow$  chapter 7.6.

 Select the data card intervals and then click on the interval to be entered.

*Fig.* 68 *Menu: Technical Services – Data card device intervals* 

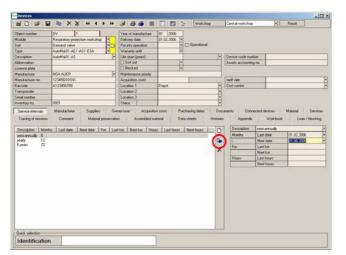


Fig. 69 Menu: Technical Services - Next test date

biect number	DV 1			Year of a	varufacture	01 2006								
lochie	Respiratory protect	tion work shop	-	Delivery	(ate	01.02.2006	7.							
of	Demand valve		13	Put ento e				Operational						
ice.	ALANMARC AE/ J	S/ ESA		Warranty	until		•							
escription	AutoMaloX AS		1	Life spor			1			Device code num	ber			
bieviation .			-	I Sot o						Assets accounting	100			
icence plate	Sugarate.			C Block	ed		•			here a second second				
forval acturer	MSA AUER		•	Maintena	nce pliaity									
anufacturer no.	12345600000		- 1	Acquinite			01			Ranill sale	1		-	-
acode-	A123456789			Location	1	Depot				Cost centre				
lansponder	-			Location	2				•	-				
erial number	1.000			Location	3				•					
wentory no.	0001			Status										
Description   Month	Conment he   Lest date	Material po Next date   Kr	n   Led	(km   Ne	atke Hou	n Last hou	es   N	lext hours	- 0	Description Months	Last date		20200	
rearly 12			n   Led	lkm   Ne	atkes   Hou	n Lasthou	es   N	lext hours	D.		Next date Last km	2		
Description   Month			n   Leol	tkm Ne	st km   Hou	n   Last hou	es   N	lext hours	1000	Kas	Next date List km Next km			
Description   Month rearly 12			n   Lad	(km   Ne	st km   Hou	n Lasthou	es   N	lext hours	D.	Months	Next date Last km Next km Last hours			
Description   Month rearly 12			n   Led	(km   Ne	at kes   Hou	s Last hou	n N	and hours	D.	Kas	Next date List km Next km			
Description   Month rearly 12			n   Lod	tim Ne	et kes   Hou	s Last Hou	rs   N	lest hours	D.	Kas	Next date Last km Next km Last hours			

Fig. 70 Menu: Technical Services – Test is due

- (2) On the right-hand side enter the last test date and jump to the *Next test date* field.
  - ▷ The field is then automatically completed.
- (3) Save the entry by clicking on the blue arrow

The date then appears on the lefthand side.

Red background: test is due.

It is possible that intervals appear in grey. Those intervals have been disabled for the model in the interval module.

Object number	IDV II	Year of manufacture	01 2006					
Module	Respiratory protection work shop	Delivery date	01.02.2006	1				
Soft	Demand valve			Operational				
lice	AutoMator AE/ AS/ ESA	Watarey until		•				
Description	AutoMaloC AS	Life span [years]		1	•	Device code num	ber	
Abbreviation		Sot out	-	•		Assets accounting	100	
Licence plate	Same and the second sec	Blocked		•	_	Providence and		
Manufacturer	MSA AUER	<ul> <li>Maintenance priority</li> </ul>	1	1.1				
Manufacturer no.	12345600000	Acquisition costs	1			taill rate		
avcode -	A123496789	Location 1	Depot			Cost centre		
Transponder		Location 2				-		
Serial number		Location 3						
inventory no.	0001	Status			-			
Tracing of nitrions Description   Mont	Conment Material precent		naterial		Door Histories		ected devices Walkbook yearly Last date	Material Services k Loan / blocking
Description   Mont	Conment Material precent	vation Assembled	naterial	Data sheets 🔰 🤅	Door Histories	Appendis	Wakbool yearly Last date	k Loan / blocking
Tracing of missions Description   Mont ready   12	Conment Material precent	vation Assembled	naterial	Data sheets 🔰 🤅	Doci	Appendix Description Months	Wakbook yearly Last date Next date	k Loan / blocking
Tracing of missions Description   Mont ready   12	Conment Material precent	vation Assembled	naterial	Data sheets 🔰 🤅	Door Histories	Appendis	Wakbook yearly Last date Next date Last km	k Loan / blocking
Tracing of missions Description   Mont	Conment Material precent	vation Assembled	naterial	Data sheets 🔰 🤅	Door Histories	Appendis Description Months 13 Km	Workbook yearly Last date Next date Last km Next km	k Loan / blocking
Tracing of missions Description   Mont	Conment Material precent	vation Assembled	naterial	Data sheets 🔰 🤅	Door Histories	Appendix Description Months	Workbook yearly Last date Last km Next km Last hours	k Loan / blocking
Tracing of missions Description   Mont ready 12	Conment Material precent	vation Assembled	naterial	Data sheets 🔰 🤅	Door Histories	Appendis Description Months 13 Km	Workbook yearly Last date Next date Last km Next km	k Loan / blocking
Tracing of missions Description Mont	Conment Material precent	vation Assembled	naterial	Data sheets 🔰 🤅	Door Histories	Appendis Description Months 13 Km	Workbook yearly Last date Last km Next km Last hours	k Loan / blocking
Tracing of missions Description   Mont	Conment Material precent	vation Assembled	naterial	Data sheets 🔰 🤅	Door Histories	Appendis Description Months 13 Km	Workbook yearly Last date Last km Next km Last hours	k Loan / blocking

Fig. 71 Menu: Technical Services – Other intervals

	1	Year of manufa	chire 01	2006				
	repiratory protection work shop	Delivery date	01.02					
De De	etward valve	Put into operatio		+ Operational				
	mand valve Sa arMalot, AE/ AS/ ESA	Watarity until						
	AMAJOCAS	Life span [years	1		•	Device code number	100	
bbinviation		Sot out				Assets accounting no		
icence plate	and the second se	Blocked				Street, exception of the		
	SA AUER ·	Maintenance p	iolty		_			
tanufacturer no. 12	345600000	Acquisition cost	4	1		taill rate	1	
arcode A1.	23456789	Location 1	Depot	e	•	Cost centre		
tansponder		Location 2				-		
ierial number		Location 3			:			
riventory no. 000	01	Status						
Name 2 Name 3 Street Zip Code City	14	Name     Name     Name     Street     Zip Co		14				
Cop code   cay		-	oe Lony					

Fig. 72 Menu: Technical Services - Data card devices owner/ To enter new addresses user

#### Carry out the same entry for the other intervals.

#### Data Card Owner/ User

(1) To preselect entries press F7 on the keyboard to enter the sub selection.

To enter new users/owners  $\rightarrow$  chapter 7.2.

- (2) Enter the selection criteria and press F10 to perform the search against the database.
- (3) Click on the arrow at address number.
  - > The window with the addresses already entered opens.

- $\rightarrow$  chapter 7.5.
- (4) Proceed to choose the owner, followed, if required, by the user, from this list.

For possible invoicing or when creating a delivery note, it is important to enter an owner or user.

		ALCON.	25. /26 · 400		- Wokał		Central work of		ЪГ	Read	=i0
					e     wood	-op	Cervia voice	op	- CIL	nese	1
	1 (22)										
	on workshop	Deliver		01.02.2006 +	-						
		Put etc			[] uperational	*:					
	SZESA P			•	-	- 1	1. [				
AUROMINES AS				1	1						
							Assets accourt	ring na. [			
MCA AVED				10			12				
					-		-	- 1			
				Dent	-	1		-			
A120405103				1.111			Com Carlos				_
						-	6				
0000			1.5	-		- 1	8				
Connert					a sheets						/ blocking
	Amount Total	More Nor	fte Leit da	In Next date		D		10	1001	-	
Disphragm	0					1000		1			
						E.		Di-			
						×					
						~					
								S. Carro			
						10	Amount	0			
							- Interval				
							Months	Last date	R	01.01.2006	1
							POVINE			1101.2000	
								Next date			
	Detrand valve AutoMs30(: AE/ A AutoMs30(: AE/ A MSA AUER 123456-0000(: A123456-0000) A123456789 0001 Manufacture Consent	Tergestang paterion work the Terminal value Autoria A2 / 45 / 53 Autoria A2 / 54 Autoria A2 / 54 A125460000 A125460000 A1254600 Comment Supplem Example Decorption Ansata	Regradyspectron worksby         Determ           Determed value         Determined value         Determined value           Analysics (AZ) AG2 (EA)         Determined value         Value           Markatolice (AZ) AG2 (EA)         Determined value         Value           Markatolice (AZ) AG2 (EA)         Determined value         Determined value           Q00         Statue         Statue         Determined value           Connexet         Markatolice (AZ) (AZ) (AZ) (AZ) (AZ) (AZ) (AZ) (AZ)	Tergentarge partnerfor workshop Generated value Generated value Generated value Generated value Generated Value Generate Generat	Regestary patiention work Reg.         Onliving year         Onliving year	Regestion pointerior workship         Diffuence data         Diffuence data	Regenting partnerfor workshop     Diffueny data     Diffueny data     Diffueny data       Audited v AJ Ad 2 Ad 2 Ad 4     Diffueny data     Diffueny data     Diffueny data       Audited v AJ Ad 2 Ad 4     Diffueny data     Diffueny data     Diffueny data       Audited v AJ Ad 2 Ad 5     Diffueny data     Diffuence pany     Diffuence pany       Audited v AJ Ad 2 Ad 5     Diffuence pany     Diffuence pany     Diffuence pany       Audited v AJ Ad 2 Ad 2 Ad 5     Diffuence pany     Diffuence pany     Diffuence pany       Audited v Ad 2 Ad 2 Ad 5     Diffuence pany     Diffuence pany     Diffuence pany       Audited v Ad 2 Ad 2 Ad 3     Diffuence pany     Diffuence pany     Diffuence pany       Audited v Ad 2 Ad 3     Diffuence pany     Diffuence pany     Diffuence pany       Audited v Ad 2 Ad 3     Diffuence pany     Diffuence pany     Diffuence pany       Audited v Ad ad 3     Diffuence pany     Diffuence pany     Diffuence pany       Add Ad 3     Diffuence pany     Diffuence pany     Diffuence pany       Add Ad 3     Diffuence pany     Diffuence pany     Diffuence pany       Add Ad 3     Diffuence pany     Diffuence pany     Diffuence pany       Add Ad 3     Diffuence pany     Diffuence pany     Diffuence pany       Add Ad 3     Diffuence pany     Diffuence	Regention protection workshop ausmod value AusMat 24, 24, 24, 24, 24, 24, 24, 24, 24, 24,	Regestargeneticien welchen Desting date Aussität CA 202 CSA Aussität CA 202 CSA Desting date Desting date D	Regedprojenterion wolktung Decemped uder AusMatch 24, 262 (26).     Decemped uder Warrang udet Decemped uder Warrang udet Decemped uder Decemped	Tegesprotection wolf dage Consend value Con

Fig. 73 Menu: Technical Services – Data card devices material

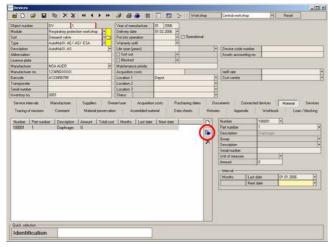


Fig. 74 Menu: Technical Services – Accept information

	DV 1		Year of manufacture	01 2006				
lodule		-	Delivery date	01.02.2006 +				
of		s	Put into operation	Operation	ial C			
ice.	AMMAYOK AE/ AS/ ESA	1	Warranty until	•				
escription	AutoMalox AS	1	Life span [years]			Device code nu	nber	
bbieviation			Sot out			Assets accounts	ng na.	
cence plate	Contractor		C Blocked			- Constanting		
anulacturer	MSA AUER	•	Maintenance priority	1 A A A A A A A A A A A A A A A A A A A		1		
anufacturer no.	12345600000	-	Acquisition costs			Ranill sale		
acode-	A123456789		Location 1	Depot		<ul> <li>Cost centre</li> </ul>		
lansponder	-	-	Location 2			•		
erial number			Location 3		3			
wentow no.	0001	-	Statur			•		
					×	Description Serial number		
						Serial number Unit of measure		
						Serial number	0	
						Serial number Unit of measure	0	
						Setal number Unit of measure Amount Interval	0	ŀ
					<b>^</b>	Serial number Unit of measure Assount Interval Monthe		

Fig. 75 Menu: Technical Services – Save information

## **Data Card Inventory Management**

Material is automatically added based on the model connection made in Article Administration.

- (1) Proceed as for *Intervals*  $[\rightarrow Fig. 68].$
- (2) Select the material and then enter the last replacement date on the right-hand side.

To allocate/connect new material  $\rightarrow$  chapter 7.7.

(3) Accept the information with the blue arrow in the left-hand table.

- (4) Save the information by clicking on the floppy disk symbol.
- (5) In order to enter other devices proceed as described above.

GB

#### **Related Devices**

Pegearby prediction of the Part of generic and th	biect number	Iov II	1		Ven de	variulaciture	01 2006						
Democrate         Type: (segminion)           AddAdeX (24) CSA         Intervention         Intervention         Intervention           Intervention         Intervention         Intervention         Intervention         Intervention           Intervention         Intervention         Intervention         Intervention         Intervention         Intervention           Intervention         Intervention         Intervention         Intervention         Intervention         Intervention         Intervention           Intervention         Intervention         Intervention         Intervention         Intervention         Intervention         Intervention           Intervention         Intervention         Intervention         Intervention         Intervention	lockie		for and day	-				1					
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Fig. 76 Menu: Related devices - data card devices

#### Data Card Devices Connected Devices

If devices which are permanently related to each other should also be tested as one device it is possible to connect these devices using the data card "connected devices". Devices can be related to each other here, the application then automatically selects the connected device for testing if the other is scanned/selected for a test.

- (1) To achieve this, go to the *Object number* field and enter the following information of the device to be linked:
  - ▷ object number
  - bar code /transponder number [scan possible]
- (2) After entering the information press *Enter* to select the device.

After intermediate saving, the connected device can be seen on the lefthand side.

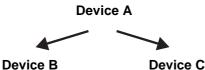
	DV 2	Year of manufacture	1 2006			
Aodule .	Respiratory protection workshop	Delivery date	01.02.2006 +			
Soft	Demand valve	Put into operation	+ 🗆 Operatio	nal		
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Description	AutoMalQX AS ·	Life span [years]			<ul> <li>Device code numb</li> </ul>	er
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Tracing of missions Object number M	Comment Material precervation	on Assembled a	naterial Data sheets	Hato	Converter     Appendie     Appendie     Convert     Appendie     Convert     Appendie     Convert     Module     Sot     Type     Description     Abbenviation     Licence pilate     Manufacturer no.     Barcode	Wakbook Loan / blocking BA-1 Respublies post-clain wolf, phage DA basic devices

Fig. 77 Menu: Related devices - connected devices



When connecting devices, ensure that a main device [e.g. compressed air breathing apparatus] is established and that the connections are created from this main device. Only from this main device the connection to all connected devices can be traced and changed for the other devices automatically.

Example:



Devices are only tested together if the main device is requested for testing.



7.6 Type Settings

**Modifying Type Settings** 

gram Administration Inventory management	(International Action of the International Action of the I	nting System Help Number of unread notes: 0
$\omega$	Settings	Workshop structure
Testing	Devices	Test benches
	Interval overview	Tests
	Swap devices	Service intervals
<b>'</b> @	Defects	Manual values
Devices	Testing	Data sheets
	Free testing	Type settings
	Manual testing	
0	Multiple test	
Log off		57
-	The Sat	fety Company

Fig. 78 Menu: Technical Services – Settings – Type Settings

Type settings	د اهند
<b>1</b> 8	
🐑 ) Wakshop dischae -	

By clicking on the + symbol the next level opens.

The directory tree which is opening is subdivided into:

- Module

   [e.g. respiratory protection workshop]
- Sort
   [e.g. lung governed demand valve]
- Type [e.g. AutoMaXX AE AS]

Fig. 79 Menu: Technical Service - Settings - Type Settings -Directory tree

Type settings	
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Fig. 80 Menu: Technical Services – Settings – File

The file is valid for the entire Respiratory Protection Group. The additional description [e.g. respiratory protection workshop - Documents] refers to the groups / type allocation. Documents:

- For incorporating text, PDF documents. Documents and drawings.

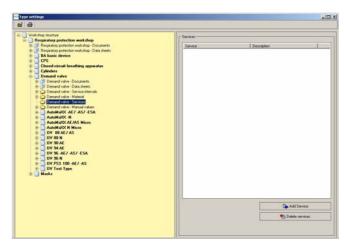
Data sheets:

- For creating own input masks [available from Tech.Professional]



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Well Acquired Section Sec	

Fig. 81 Menu: Technical Services – Settings – Allocations



Specific allocations for a specific type. The allocations then have validity for all subordinate types.

- Documents
- Data sheets
- Intervals settings under path: Technical Services – Settings –Intervals
- Material settings under path: Inventory Management - Item administration
- **Services** settings under path: *Management - Service*
- Manual values under path: Technical Services – Settings – Manual Values

Example: allocate service for a type:

- (1) Select the service for the desired type.
- (2) Select the service to be added on the right-hand side.

Input of new services via path:

Administration - Services

Fig. 82 Menu: Technical Services – Settings – Example

Wokshop shucture		r Services		
Berginders pretection wold hop     Berginders pretection wold hop     Berginders pretection wold hop. Decamere     Borginders pretection wold hop. Detail hereit     DrS     DrS-     DrS-		Service	Desciption	1
B         Drawd vale Manai           B         Drawd vale Stread           B         Anashoot All vale           B         Anashoot All vale           Anashoot All vale         Stread           B         Anashoot All vale           B         Anashoot All vale           B         Anashoot All vale           B         Dava Stread	Service selection Nuber Service Service Description Und d mesure Und d mesure	e X Carco		
				Add Service

Fig. 83 Menu: Technical Services – Settings – Enter number

After clicking the add service button a selection window appears. In the selection window the user can directly select the required service.

(3) Enter a number or use F10/OK button to select a service from the opening selection list.

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ð	
With Regarding protection workshop         Programme protection workshop           With Regarding protection workshop         With Regarding protection workshop           With Regarding protection workshop         With Regarding protection workshop           With Regarding protection workshop         With Regarding protection           With Regarding regarding         With Regarding Protection           With Regarding Protection         With Regarding Protection	- Standard → Demonstrative - - - - - - - - - - - - -

Fig. 84 Menu: Technical Services – Settings – Service

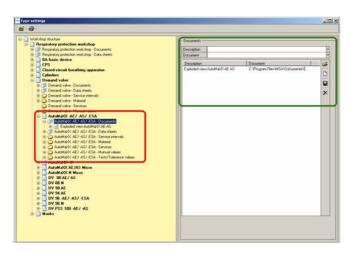


Fig. 85 Menu: Technical Services – Settings – Allocations models

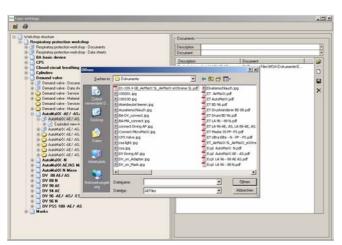


Fig. 86 Menu: Technical Services – Settings – Select document

The service can now be seen on the right hand side.

This service can also be deleted by clicking and then selecting *Delete service*.

The same allocation possibilities as for type also exist for models, the only difference being that here the allocations are only valid for these models. Example: allocating documents for one model:

The prerequisite is that a document is filed on a saving medium, that a permanent access to this medium is available and that the computer can display the selected format, e.g. if a PDF document is selected Adobe Acrobat Reader should be installed.

- (4) Select *Documents* under *Type*.
- (5) Click on the downward arrow on the right side of *Document*.

GΒ

(6) Select the document.

Enter the name of the document

Save by clicking on the floppy

disk symbol on the right-hand

You can now add other documents, those documents can be viewed in the devices or the device selection using the document view button.

under Description.

(7)

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side.

Wakshop structure	C Documents	_
The spectra spectra subset of the spectra	r Douarents Chrolphan Speer par laf Sement - Douard Academic - Angel Carlos - Angel Carlos - Angel Carlos - Douarent -	

Fig. 87 Menu: Technical Services – Settings – Enter name

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 Second Seco

Intervals can be entered specific to type or models. Intervals can be added or removed by setting or removing a tick.

- Tick at type = interval for all models of this type
- Tick at model= interval only for this model

Fig. 88 Menu: Technical Services – Settings – Intervals

Bread of the Sector And Adv Sector Adverted and Adverted and Adverted	Implementation with the December Section with the December Sectin the December Section with the December Section with	Wokshop structure		r Material			
E Aududoo' Ad A Ad S (23 A Manal vola Aududoo' Ad A (24 A) (25 A Manal vola Aududoo' Ad (24 A) (25 A Manal vola (24 A) (25 A) (26 A	K → AuditaCot ALF AVE 251. Manual value     AuditaCot ALF AVE 251. Manual value     AuditaCot ALF AVE 251. TetraTribut     AuditaCot ALF AVE 251.     AuditaCot ALF AVE 251.	C Replace perceive with the Data been     C Replace perceive with the Data been     C PS     C PS	Number Patnumber Desception Group Desception		التالم	Dischergen	
			✓ 0K. ₱10j		X Cancel	]	

Fig. 89 Menu: Technical Services – Settings – Allocations material

Example: allocating material for one model:

- (1) Select the material for the desired model.
- (2) Select on the right-hand side the material to be added.
- (3) Enter a number or use F10 to select a material from the list which is opening.

Input of new material via path:

 Inventory Management - Item administration

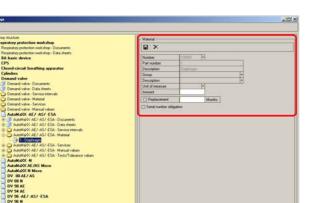


Fig. 90 Menu: Technical Services – Settings – Months/number

Respiratory protection workshop	Teil
Respiratory protection workshop - Documents	R X
Respiratory potection workshop - Diata sheets	
BA basic device	Description Standard DV pos. (MSA)
CPS	Lump sum payment 0
Closed-circuit breathing apparatus	Lizzp sun expenditure 0
Cylinders	Cost centre *
Demand valve	Test pressure 200
	- Standard interval
Demand valve - Service interval:	Desception
E Demand valve - Material	
Demand valve - Services	
Demand valve - Manual values	
🖶 🚺 AutoMaXX -AE7 -AS7 -ESA	
E 🕜 AutoMsiX: AE/ AS/ ESA - Documents	
⊕ → AutoMalOC AE/ AS/ ESA - Data sheets	
B D AutoMaloX AE/ AS/ ESA - Service intervals B D AutoMaloX AE/ AS/ ESA - Material	
H C ALONG ALT AST ESA - Services	
E AutoMakov, AE/ AS/ ESA - Manual values	
- AutoMalX: AE/-AS/-ESA - Teds/Tolerance values	Test intomation before starting the test.
	Display Ne
E Olevo	
Standard DV pos. (MSA)	E3 hitsen disc
AutoMaCC-N	L Monation
AutoMaOC -N     AutoMaOC AL /AS Micro	Information
	https://www.internation
#      #     #     #     #      #      #      #      #	Test information     Test information after the test has been finished
	Test Manuation after the test has been limited.
Image: Second Second Media           AutoMACC: H           AutoMACC: H           AutoMACC: H           AutoMACC: H           DV 0B AL7 AS	Test information after the test has been finalized     Gapting film
	Test Manuation after the test has been limited.

Fig. 91 Menu: Technical Services – Settings – Standard test

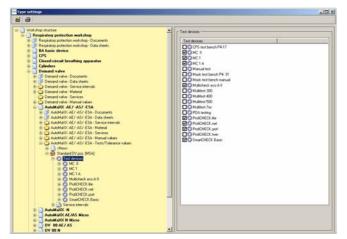


Fig. 92 Menu: Technical Services – Settings – Test Sequences

(4) Click on the material appearing in the directory tree and, if required, add the months for the next replacement as well as the required amount of spare parts for this article.

The monitoring of the interval starts with the next test following this change. Additionally it is possible to mark *Serial number obligation*. The software will then request a serial number when testing the device.

(5) Save the entry by clicking on the floppy disk symbol.

In the settings a standard test is available for each model.

This test is entered for each test bench.

The test process and the tolerance values for a device model are concealed behind the standard test.

- (1) Enter test designation.
- (2) Predetermine standard interval that will be marked in the device selection window after selecting the device if none of shown intervals is due.

To enter new tests: *Technical services - Settings - Tests* 

The matching test values for the specific test bench are entered.

(1) Click on the + before test process and then on test bench.

On the right-hand side you will now see for which device the test process has been set up.

(2) Click on the + before **Test bench**.

Only those test benches are shown which have been activated in the menu *Technical Services – Settings – Test Benches*.



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- On the right you see now all connected test sequences for the selected test bench activated in the test bench module.
- (3) To change one of the test values open the sequence by double clicking on it [located on the left side of the window below the test bench].
- (4) Modify tolerance values by selecting a test and then modifying the values on the right-hand side.
- (5) Save the information by clicking on the floppy disk symbol.

Possible intervals:

- After use
- Half annually
- Annually
- Every 2 years
- Every 6 years
- Fig. 94 Menu: Technical Services Settings Intervals directory

Fig. 93 Menu: Technical Services - Settings -

**Test Sequences** 

To enter new intervals: *Technical services - Settings - Service Intervals* If a test is carried out after a certain interval at a certain date, all shorter intervals will also automatically be set to this date.

Fig. 95 Menu: Technical Services – Settings – Tolerance values

AutoMakX: AE/ AS/ ESA - Texts/Tolerance values     B C Alexo	For bearing Fra 162
E PolOE X ret	Description of text
B	
E by DV din. w/ atficial.kmg 40x25 E y Housing	C Testing Womaton before starting the test
IE 2 Medium pressure hase	Deplay file
E 20 Plug nipple	Information
⊕ Q SmartOHEOX Basic ⊕ Q Service intervals	
AutoMaOX -N     AutoMaOX AE/AS Nicro	
E AutoMalOC N Micro	Testing information after finishing the test
DV BBAL/AS	Dirplay Ne
# DV 90 AE	Information
DV 34 AE     DV 96 AE/ AS/ ESA     DV 96 AE/ AS/ ESA	
E DV PSS 100 -AE/ -AS	
E 🛄 Masks	÷

Interval

AutoMalox -AE7 -AS7 -ESA     AutoMalox -AE7 -AS7 -ESA     AutoMalox -AE7 -AS7 -ESA	Teil requencies	-
Auddox XI / Af 18 - Sources     Auddox XI / Af 18 - Sources     Auddox XI / Af 18 - Sources     Auddox XI / Af 18 - Intern     Double If Y on Y Al 1     Double If Y on Y Al     E Do	In the second seco	
Antabalació     Alexandració     Alexandració     Antabalació     Antabalació     Alexandració     Alex	Use web can for testing	



**MSA** 

#### 7.7 Creating New Types

#### **Creation via Pool**

The pool for respiratory protection devices is maintained by MSA. If it is required to add an additional type for implementing in the data pool, follow this instruction to enter the required device to your testing database.

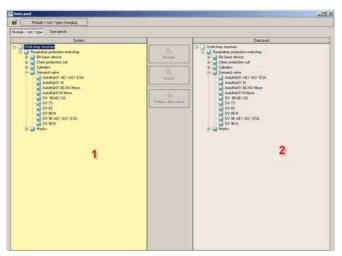


Fig. 96 Menu: System – Settings – Data Pool

**Creation without pool** 

After opening you see a split window with the already entered devices on the left and the available devices in the pool on the right:

To add a device model to your testing database:

- (1) Select the model on the righthand side and the device type on the left-hand side.
  - The insert button in the middle is then activated.

After clicking on this button the device model is available on the left-hand list and you can use this device model in your device database.

(2) Check the values entered under Settings – Type Settings and make sure that all required tests are available and the added values are correct.

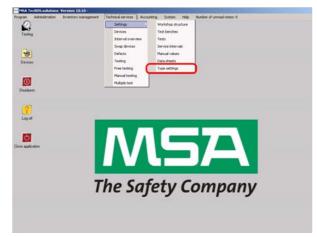


Fig. 97 Menu: Technical Services – Settings – Type Settings



- (1) Open the directory tree.
- (2) Select a device sort.
- the status
   t

Fig. 98 Menu: Technical Services – Settings – Select device model

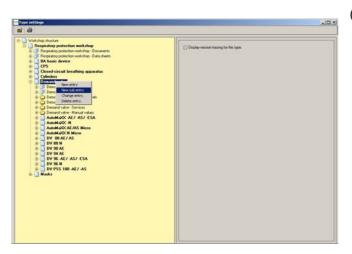


Fig. 99 Menu: Technical Services – Settings – New subentry

lype settings	للح
Montheap Indexe  Terminal Control of the Control o	Digitie minion hacing for this type
AutoMaOC -N     AutoMaOC AE/AS Micro	iet Type

Fig. 100 Menu: Technical Services – Settings – Model designation

(3) Press the right mouse button and then go to *New sub entry*.

(4) Enter the model designation and save the entry.



ype settings	
10	
Media protection methods     Researce protection     Researce     Researc	

Fig. 101 Menu: Technical Services – Settings – Enter required data

ype settings	ala.
a	
Workshop structure	
Workshop stucture	
Tespearcey protection workshop     Security potection workshop	
Respiratory potection workshop - Data sheets	
B IA basic device	
a Cos	
Closed-circuit breathing apparatus	
# Cylinders	
E Demand valve	
Demand valve - Documents	
B S Demand valve - Data sheets	
Oemand valve - Service Intervals	
E 🔁 Demand valve - Material	
Demand valve - Services	
🗟 🙆 Demand valve - Manual values	
E 🗋 AutoMalOX -AE7 -AS7 -ESA	
🗄 🗋 AutoMalXX -N	
E AutoMalOC AE/AS Hiero	
🗄 🚺 AutoMalOX N Micro	
E DV BRAE/AS	
1 DV 98 N	
A DE VO	
E AFE VO 🖸 🗄	
🗄 🗋 DV 96-AE7-AS7-ESA	
🗄 🚺 DV 96 N	
E DV PSS 100-AE/-AS	
😑 🚺 DV Test Type	
E 🖉 DV Test Type - Documents	
🗄 💕 DV Test Type - Data sheets	
DV Test Type - Service intervals	
🗉 🏠 DV Test Type - Material	
OV Test Type - Services	
🗉 🦢 DV Test Type - Manual values	
Tolevance values	
B Claur	

All test sequences can now be set up manually.

(5) Enter the possibly required data

as when modifying the type settings

as described in chapter 7.7.

Documents

Manual values

Services

Material

-

-

\_

-

Or:

Fig. 102 Menu: Technical Services – Settings – Set values manually

ype settings	No. of Concession, Name of Street, or other		
î @			
E Closed-circuit breathing apparatus	A Test		
E Calinders			
E Demand valve			
E Demand valve - Documents			
🕀 🥩 Demand valve - Data sheets	Description	Standard DV pos. (MSA)	
Demand valve - Service intervals	Lump sum payment	0	
🛞 🎃 Demand valve - Material	Lunp sum expenditu	ne O	
III 🧿 Demand valve - Services	Cost centre		
E Demand valve - Manual values	TT Test pressure 20	1997. St.	
B AutoMalOC -AE7 -AS7 -ESA	- Standard interval -		
AutoMaki AE/ AS/ ESA - Documents     AutoMaki AE/ AS/ ESA - Data sheets	Description	i	
In the second	Cescebook		
AddMarvi AL/ AD/ EDA - Service Mervall (1) (2) AddMarvi AL/ AS/ ESA - Material		<u> </u>	
H AutoMakov, AE/ AS/ ESA - Services			
H AutoMalOC AE/ AS/ ESA - Manual values			
AutoMaloX: AE/ AS/ ESA - Tech/Tolerance values			
E dievo			
a 🎒 Standard DV pos. (MSA)			
E AutoMalCX -N			
E AutoMatOC ALZAS Micro			
E AutoMalOC N Micro			
	Test information be	tire stating the test.	
😇 🗋 DV 88 N 🚦	Display Ne	111	
1 A 00 YO 🗋	17 Information		
1 DV 94 AE			
DV 96 AE AS/ ESA			
E DV 96 N			
B DV F55 10 -AL7 -AS			
E B DV Test type - Documents	Test information all	er the test has been finished.	
The DV Test Type - Data sheets	Dicclau Ne	1000	
E DV Telt Type - Service interval:			
E OV Test Type - Material	Information		
E DV 1 at Type - Services			
Old Inst Type - Manual values			
DV Vist Type - Tests/Tolerance values			
E Olevo			
H Masks			

Fig. 103 Menu: Technical Services – Settings – Copy test process

• Copy the test procedure using drag and drop.

To copy a test process from another device that is tested similarly:

 Select a test process of a model of the same type, press and hold the left mouse button and drag the test process



ð	ولي
Closed-circuit breathing apparatus	A Let
E Cylinders	
E Demand valve	N X
One and valve - Documents     One and valve - Data theets	Description Standard DV pos. (MSA)
Demand valve - Data theets     Demand valve - Service intervals	Lung sum payment 0
E Demand valve - Material	Lung nan expenditure 0
Demand valve - Services	Cost cardina
🛞 🏠 Demand valve - Manual values	Test pressure 200
C AutoMaXX -AE/ -AS/ -ESA	r Standard interval
AutoMable AE/ AS/ ESA - Documents     AutoMable AE/ AS/ ESA - Data cheets	Description
B AutoMarck AE7 457 454 - Data cheets B C AutoMatOL AE7 457 454 - Service intervals	Letoption
IE AutoMalox AE/-AS/-ESA - Material	
E AutoMaloX AE/-AS/-ESA - Services	
B AutoMalOC AE/ AS/ ESA - Manual values	
AutoMaX AE/ AS/ ESA - Texts/Tolerance values	
🛞 🗋 (Nevo	
E Standard DV pos. [MSA]	
AutoMaOC AE/AS Micro	
E AutoMalOC N Micro	
B DV 88 AE/AS	Test information before starting the test
8 DV 88 N	Deplay Ne +
🕀 🖸 DV 90 AE	E3 Information
B DV 94 AE	
⊕ DV 96 -AE7 -AS7 -ESA	
8 DV 96-AE7-AS7-ESA 8 DV 96 N	3
⊕ DV 96-AE7-AS7-ESA ⊕ DV 96 N	2
DV 36-AL7 AS7-ESA     DV 36-NL7 AS     DV 56-100 Test Tope     DV Test Tope	2
	Tari kilomation alter the test hat been finished.
	Tari Monston she fe ter he ben finihed
0         DV 95: AU / AS / 45A           DV 95: NO AU / AS           0         DV PPS 100 - AU / AS           0         DV PIS 100 - AU / AS           0         DV Int Ipp- Concent           0         DV Int Ipp- Concent           0         DV Int Ipp- Statement           0         DV Int Ipp- Material           0         DV Int Ipp- Statement	Tari Monston she fe ter he ben finihed
	Teri information after the test has been finished.     Display life

to the entry "New" of the newly added types under Tests/tolerance values and release the mouse button.

Fig. 1	04	Menu:	Technical Services - Settings -
		Newly	created models

informa	ation
i	Do you really want to copy test?
	Accept

Fig. 105 Menu: Technical Services - Settings - Confirm

9		
AutoMa0C-N     AutoMa0C-N     AutoMa0CAE/AS Histo	Test sequencies	
E AutoMalOC N Micro	Test sequencies	Connert
	DV 6ghtness test positive	
± _ DV 88 N	DV tightness test positive	für Normeldruck LA
= 0 V 90 AE	DV tightness test positive	Fix Micro MalQC
E DV 94 AE	DV tightness test negative	Kir Normaldruck LA
E DV 96 N	DV ssing pressure with MP	
E DV PSS 100 -AE/ -AS	DV doing precoupe with MP	für MicroMasoc
B DV Test Type	DV activating pressure	
E 🕜 DV Test Type - Documents	DV activating pressure	Bar MichAgOC
🗄 🧭 DV Test Type - Data sheets	DV static closing pressure	
E DV Test Type - Service intervals	DV static closing pressure	Kir MicroMaRC
E OV Test Type - Material	DV opening precoure	
DV Test Type - Services     DV Test Type - Manual values	DV opening pressure M K DV dan, w/ atticual king 40x2	Sar MicroMasor
DV Test Type - Testa/Tolecance values	UV on w/atticiationg 4022	
E O Nevo	DV dm. w/ atticiationg 25/2	5 Sar MicroMarch
E Standard DV pos. (MSA)	Housing	
B-O Test devices	Medure pressure hose	
B O MC II	Plug ripple	
8 O MC1		
I O MC1A		
B O Mulicheck eco A II B O PodOEOX.ke		
E O PODLOUR		
E DV tohtness test positive		
E DV sing pressue with MP		
E DV activating pressure		
E CV static closing pressure		
E DV dyn. w/ attiticial lung 40x25		
E 💭 Houring		
E P Medum pressure hose		
🗄 💭 Plug nipole		
B O PolOEDC.pot B O SmatDECX Basic	Use web cars for testing	
E G Starture of Banc		

Fig. 106 Menu: Technical Services - Settings - Check test

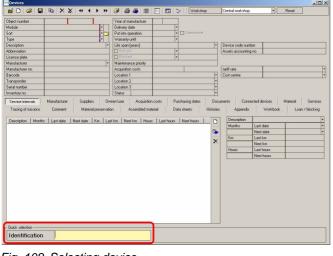
- (2) Confirm the appearing message with Yes, and the complete test procedure will be copied to the new created type.
- (3) Check the individual test procedures

and

AutoMalOC -N	Tolerance values
E 🚺 AutoMalOC N Micro	
OV 88 AE7 AS     OV 88 N	Duration of text in sec. 00
1 DV 90 AE	Meanuing Min value Max value Min Max
OV 94 AE     OV 96 -AE/ -AS/ -ESA	Low pressure 65 85 1 1
E DV 96 ALT AST ESA	
E DV PSS 100 -AE/ -AS	
OV Test Type     OV Test Type     OV Test Type	
OV Test Type - Data sheets	
DV Text Type - Service intervals     DV Text Type - Material	
OV Fest Type - National     OV Test Type - Services	Description of text
DV Test Type - Manual values	Cretoriphon or retr
OV Test Type - Tests/Tolecance values     Ov Test Type - Tests/Tolecance values     Ov Test Type - Tests/Tolecance values	
😑 🛃 Standard DV pos. [MSA]	
E O Test devices E O MC II	
8-0 MC1	Testing information before starting the test
BO MC1A	Display Ne
O Mulicheck.ecoAll     O PotONEOK.ke	Information
E O PolOROCiet	
E DV samp pressure with MP	
IE 20 DV activating pressure	
E DV static closing pressure	Testing information after linishing the test
E DV dyn. w/ atificial lung 40x2.5 E DV dyn. w/ atificial lung 40x2.5	Display Ne
E C Medium pressure hose	I Information
E Dig noole	

Fig. 107 Menu: Technical Services – Settings – Check tolerance values

### 7.8 Open Saved Tests of Devices



Saved test results can be viewed.

- Double-click on icon *Devices* or use path Technical Services – Devices.
- (2) Use the identification field to select a device  $[\rightarrow \text{ chapter 6.1}]$ .

Fig. 108 Selecting device

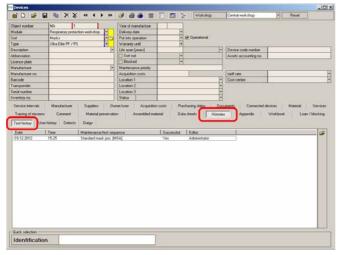


Fig. 109 Selecting test

- (1) Click on *Histories*.
- (2) Click on Test history.
- (3) Double-click on the test to be retrieved.

the tolerance values connected in combination with the device test value card.

**MSA** 



(4) Click on Values.

The test can now be viewed.

	Loo e		13		- Transac	tion					
lbject number	MA-1		-		Tester	nter	1				Z Successful
Association	-				Editor		Advancements				2 Operational
bbreviation Induie	-				Test de	de	19.12.2012				Test disable
100Je	Masks				Test or	quence	Shandard mail	pos (MES.R.)		:	
ype ype				8	Test in	terval				•	Liable for costs
woode	U U U U U U				Test de						Soft out device
sansponder	-				Decorp	ption					
10000000	-				Serial r	nunber					User / Location change
Description											
			10	Abbrevis -	ion Cor	mert					
Manuanarout	Min	Me	Mar	•			Denistron	The	hybeneri	Paramete	
	Min		Max.	Abbrevia Max Min. volu	Value 1	Value 2	Deviation In tolerance Mar		Judgement + alue 1 Value 1034	Parametr  + 2 Deviation	
Facefull Spinster	1	Moa	nurrig point	• Max	Value 1	Value 2		tolerance   Vi	ske 1   Value	2 Deviation	Unit of measure Juds
Description	1	Moa	nurrig point	• Max	Value 1 e Max	Value 2		Indexance Vi	ske 1   Value	2 Deviation	Unit of measure Juds

Fig. 110 Opened test



#### 7.9 Print

00	3 🖻 X X	** * *	9 <b>6 1</b> 11	🖸 🔝 📴 Wokshop	Central workshop	* Reset	
Diject number		10000	Year of manufacture				
fodule		1	Delivery date				
of		10	Put into operation	El Operational			
jpe			Wasarity until	•			
escription	1	20 G	Life span [years]	•	Device code number		
bbieviation .	1		El Sot out	:	Assets accounting no.		
icence plate			E Blocked		Construction of the second		
fanulacturer	1		Maintenance priority.	11			
lanufacturer no.	1		Acquisition costs		taill rate		_
acode		1	Location 1		Cost centre		
lansponder			Location 2		-		
nial number	1.1		Location 3				
wentory no.	1.1		Statur				
Tracing of missions	Manufacturer Comment r history Defects	Material preservatio Dutgo Maintenance/test seg	on Assembled mat	n costs Puschasing dates Do tenal Data sheets Histore Successful Editor		Woldbook Loan / bloc	
Test hotory User	Conment history Defects	Outgo	on Assembled mail	desial Data sheets History		Woltbook Loan / bloc	king 🎯
Tracing of missions Test hotory User Date	Connert history Defects	Outgo Maintenance/fest seg	on Assembled mail	Aenal Data sheets Historie		Waldook   Loan / bloc	

Fig. 111 Printer Symbol

Print out			_(0)
port		Pimary function	
vice list sorted according to u	40ex		
vice tribe sorted according to vicestatistic	i ske		
ricestatictics ordered by own			
icestatistics ordered by user			
ipment schedule ixed intervals (day)			
and intervals (month)			
ired intervals (month/location	4		
pied intervals (period) ervals overview (related interv			
ervals, overview (related inter- entory list	vala)		
entory list user			
ter to owner with overview of	expred intervals		
tter to user with overview of e cation overview	speed intervals		
eded material [Material interv	als)		
ofkshop structure			

Fig. 112 Report selection

Object number	2 1 km × × ≪ • • • •	Year of manufacture	1 2006				
Module	Respiratory protection workshop +	Delivery date	01.02.2006 +				
Soft	Demand valve	Put into operation	Operational				
Туре	AMMAN AE/ AS/ ESA	Warranty until	•				
Description	AutoMalQX AS .	Life span [years]			Nevice code number	20	
Abbieviation	and the second s	Sof out		14	kssels accounting no	00	
Licence plate		Blocked		10			
Manufacturer	MSA AUER •	Maintenance priority		1		122	
Manufacturer no.	12345600000	Acquisition costs			anili rake		
Barcode	A123456789	Location 1	Depot		Cost centre		
Transponder	-	Location 2		1			
Serial number		Location 3					
Inventory no.	0001	Status		•			
peak 12	fre   Last date   Next date   Km   La DN 02 2006 DT 2012 DD	tkm   Nextkm   Ho		4		ast date	1
Description Mont	Pie   Last date   Next date   Km   La DI-D2-DI-K DI-D2-D2-K	tkm   Nextkm   Ho		4	Months L		15
Description Mont	No Let date Next date No Le milit2.00% 01.00.00%	tkm   Neitkm   Ho	D	•	Months L	lext date	
Description Month	the Last date Next date No. La for D2 2006 OF 40 2006	tkm   Neatkm   Ho		•	Months L	lext date ast km	
Description Month	the Last date Next date Trin La 2010/2014 01:00:0015	d kan   Newl kan   Hoa	D	•	Months L	lent date auf km lent km	
Description Month	Pr Latidae Next data Ya La mito 2006 man 2006	d kas   Newt kas   Hoa	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Month	No Lastdare Newtdare Tra La	d km   Next km   Ho	D	•	Months L N Kas L Hours L	lent date auf km lent km	
Description Month	Ne [Lardde   Nerdde   Km   La Diologic - Diologic	stan Nedtan Ho	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Month	ne  Leiden  Neiden  Km  La	stan Neathan Hoo	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Month	Per Lait date Next date Ym La	dim Netlin Ho	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Month	ne [Leidee ] Keidee   Kei  Le	dim Netlim Ho	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Month	Re Landow Needae Fin La Brodinan Brodinan	dim Netlin Ho	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Month	Ne Ladde Netdae To La	atim Neathin Ha	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Mont	Na Landon   Nerdon   Kn   La	atan Neatha Ha	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Month	Ne Ladde Netder To La	sin Neth Ha	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Mont	Nu (Laridee ) Net dee ) Net (La Britanne en protec	sin Neth Ha	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Mont	n (Lordon (Nordon )n (Lo	tin Nethe Ha	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	
Description Month	ny [Laride: ] Net (se ] na ] La	tin Nethe Ha	D	•	Months L N Kas L Hours L	lext date .ext km .ext km .ext hours	

Fig. 113 Printer symbol with arrow

There are two possibilities for printing information.

Printing various data:

- (1) Click on the printer symbol.▷ All fields turn green.
- (2) Enter a search criterion in one of the green fields and then click on the printer symbol again.

(3) Select the corresponding report from the list using the buttons at the bottom of the window.

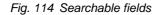
or, if you have already requested a data set and wish to obtain a print-out:

(4) Click once on the printer symbol with the blue arrow.

You now obtain the same list as illustrated above, to select the print out report. The selected print out will only show the information of the requested data set.

biect number	1 I	in the second	Year of manufacture			
lockie	-	I.	Delivery date	-		
out			Put into operation	Fil Operational		
inter .			Watardy until			
Description	1		Life span [years]		Device code number	
Abbieviation			E Sot out		Assets accounting no.	
icence plate	-		El Blocked		Contract of the Contract of th	
fonulacturer	1		Maintenance priority		1	
fanufacturer no.			Acquisition costs	0 53	tarill rate	
lacode		1	Location 1		Cost centre	
Transponder			Location 2	1		
ierial number		-	Location 3		12	
riventory no.	1.6		Status			
Date	history Defects	Gulgo Maintenance/feat seg		Successful Editor	1	1
				Successful Editor Yes Administrator	1	Ø
Date	Tene	Maintenance/test seg				j di

All reports allow a data selection, follow the same selection arguments as described to open change datasets in chapter 3.5. All fields highlighted green can be used for searching.



Startdate	Stortdate
Please enter Date in format "yyyy-mm-dd".	
Inddate	Enddate
Please enter Date in format "yyyy-mm-dd".	
[	

Other reports request a new input mask.

- (1) Click on *Start date* and enter the desired date at Discrete Value.
- (2) Do the same for *End date*.
- (3) Confirm the entry with OK.▷ The report is now printed out.

Fig. 115 Other reports

The explained printing functionality is available for all other modules that provide the two printer symbols in their symbol menu.

## 8 Maintenance and Cleaning

#### Attention!

Before carrying out maintenance work, depressurise the test bench and unplug the power cable from the electrical outlet.

#### 8.1 Test Bench

Check the filters of the fans [ $\rightarrow$  fig. 1] every three months. The filters should only be lightly soiled.

Replace damaged filters.

#### **Cleaning the filters**

- (1) Remove the filter casings by pulling them off.
- (2) Take out the fleece filters.
- (3) Clean the fleece filters under running water.
- (4) Let the fleece filters dry completely.
- (5) Put the filters back into the casings and clip the casings to the test bench.

#### 8.2 Test Head

In order to protect the test head from premature ageing protect test head against sun radiation with the protective hood supplied.

In case it is not in use, keep the test head covered.

When necessary, not more often than every three months, apply the provided silicone oil **sparingly** on the test head [ $\rightarrow$  chapter 10.7] and leave it on overnight [uncovered]. If necessary, remove any excess oil the next day.



### Attention!

Overuse of silicone oil damages the test head.

#### 8.3 Touch Screen

Ţ



#### Attention!

Before cleaning the touch screen, unplug the power cable from the electrical outlet.

- (1) Clean the touch screen only with the provided microfibre cloth or special screen-cleaning tissue.
- (2) To clean the touch screen, lightly dampen the cloth with water. If possible, use a solution suitable for the antistatic coating.
  - ▷ Handle the touch screen with care as surfaces can scratch and show scuff marks.

## Attention!

Do not use benzene, thinner, ammonia, abrasive cleaners, or compressed air. Avoid using detergent of any kind as some detergents leave a milky film on the surfaces. Do not allow water or other liquids to spill on or into the test bench.

#### 8.4 Pressure Gauge Camera

The pressure gauge camera is located behind a window. Clean this window similar to the touch screen.



#### MSA

#### 8.5 High Pressure Lines

In case of damage to the high pressure lines from heat, chemicals, mechanical impact or similar that can be detected, the test bench must be taken out of service and the components concerned must be replaced without delay by an authorised service centre.

#### 8.6 Annual Calibration

Only use a calibrated test bench. MSA recommends one annual calibration.



## 9 Technical Data

The technical data can vary, depending on the test bench configuration. Below three exemplary configurations are listed.

#### 9.1 SmartCHECK - Basic Version

Measurements without test head [L x W x H]	Ca. 600 x 370 x 250 mm
Measurements with test head [L x W x H]	Ca. 600 x 370 x 470 mm
Weight test bench	Ca. 23 kg
Operating temperature range	+5 °C - +60 °C
Operating humidity range	Between 15 % and 80 %
Operating voltage range	110V - 240V AC 50/60Hz
Fuses	2 A
Air supply requirements	Breathable air [min. EN 12021 or USCGA grade D]
Medium pressure	6 - 10 bar

#### 9.2 SmartCHECK - Modules (with Lung and Standard High Pressure)

Measurements [L x W x H]	Ca. 720 x 600 x 250 mm
Weight test bench	Ca. 46 kg
Operating temperature range	+5 °C - +60 °C
Operating humidity range	Between 15 % and 80 %
Operating voltage range	110V - 240V AC 50/60Hz
Fuses	2 A
Air supply requirements	Breathable air [min. EN 12021 or USCGA grade D]
Medium pressure	6 - 10 bar
High pressure	300 - 315 bar
f.	

#### 9.3 SmartCHECK - Modules (with Lung and Adjustable High Pressure)

Ca. 720 x 600 x 250 mm
Ca. 50 kg
+5 °C - +60 °C
Between 15 % and 80 %
110V - 240V AC 50/60Hz
2 A
Breathable air [min. EN 12021 or USCGA grade D]
6 - 10 bar
300 - 315 bar

(GB)

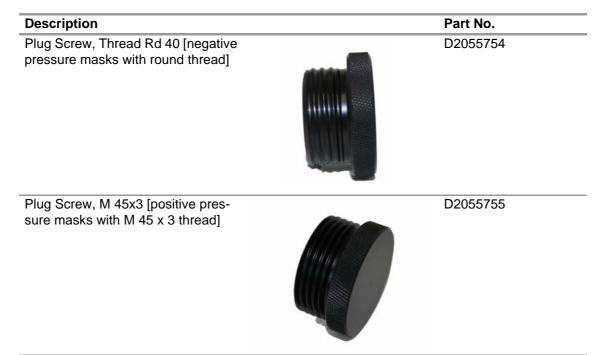
## MSA

## **10** Ordering Information

#### 10.1 Required for putting into service first-time

Description	Part No.
Shut-off valve 300 bar, SmartCHECK	10144939
High pressure supply line	10096973
Test equipment HP Hose Cylinder connection	10099265
Fitting hose 8S/8L, test equipment	10144991
Straight reduction 08L/08S, SmartCHECK	10146804
Elbow socket 08S, SmartCHECK	10146805
Power supply cable EU/CE, test equipment	10144984
Power supply cable UK, test equipment	10145003
Power supply cable US, test equipment	10145004
Power supply cable AU, test equipment	10145005
Power supply cable CN, test equipment	10144983
Gasket 5 pcs, test adaptor, SmartCHECK	10145936
High pressure supply hose, SmartCHECK	10146803
Log-on cards, starter set, SmartCHECK	10144987
TecBOS.Tech standard initial license	10126009
TecBOS.Tech Professional initial license	10126010
TecBOS.Tech Premium initial license	10126021
TecBOS.Tech standard subsequent license	10126022
TecBOS.Tech Professional subsequent license	10126023
TecBOS.Tech Premium subsequent licence	10126024
TecBOS.Tech Mobile Working	10126025

## 10.2 Test Adapters for Testing of Masks





(GB)

Description	Part No.
Adapter, Plug, Mask Leak Test, _GDV 88, 96 AS positive pressure masks with quick connect]	D5175524
Adapter, Mask Leak Test, PS-MaXX positive pressure masks with AutoMaXX quick connect]	10035659
Jltra Elite Sealing cap for sealing the exhalation valve of Jltra Elite masks]	D2056703
S Test cap, assembly for sealing the exhalation valve of he positive pressure 3 S mask]	D4074895
Exhalation Valve Closure for sealing the exhalation valve of he negative pressure 3 S mask]	D5135039-SP
Exhalation Valve Closure 3S/CPS, Spare (for sealing the exhalation valve of the negative pressure & S mask)	D5135047-SP



Holder for MHC masks, complete

**MSA** 

10108526

(GB)

## 10.3 Test Adapters for Testing of Lung Governed Demand Valves

Description	Part No.
LGDV test adapter RD40, SmartCHECK	10144996
LGDV test adapter M45x3, SmartCHECK	10144998
Test Adapter LGDV 88, 96 AS, SmartCHECK	10145001
LGDV Test Adapter ESA, SmartCHECK	10145000
Test LGDV AutoMaXX AS, SmartCHECK	10145002



#### MSA

Description	Part No.
High Pressure Test Line SCBA SmartCHECK	10144992
SCBA test adapter 200 bar, SmartCHECK	10144993
SCBA test adapter 300 bar, SmartCHECK	10144994
Medium pressure extension line 1,5 m	D4066815
Medium pressure extension hose 0,5m	10046165
Test Adapter, AirGo Compact	10103503
BD Compact Test adapter	10029681
Test adapter-Kit MicroMaXX	10056761

## 10.4 Test Adapters for Testing of SCBA



Description	Part No.
CPS Leak Test Accessory [with safety valve]	10108449
CPS Valve Leak Test Accessory	10108450

## 10.6 Test adapters for Testing of Closed Circuit Breathing Apparatus

Description	Part No.
AirElite Leak Test Accessories [complete set in a case]	10108185
AirElite Valve Leaktest Adapt [part of 10108185]	10108187
Air Elite Leak Test Adapter [connects test head with Air Elite quick connect, part of 10108185]	10108186
BG 4 Leak Test Adapter [connects	10108177

test head with BG 4 quick connect]	
BG 4 Leak Test Adapter [connects	10108177

#### 10.7 Accessories

#### Within Scope of Delivery

Description	Part No.
Microfibre cloth 40 x 40 cm SmartCHECK	10109451
Silicon oil/bottle 100 ml	10115053
Touchpen	10115112
Protective Hood for Test Head	10115131



## Not Within Scope of Delivery

Description		Part No.
LP-Leaktest Access. Eye-Mouth		10108271
Log-In card User [10 pcs]	User	10115071
Log-In card Admin [5 pcs]	Administrator	10115093
Printer for Test Equipment		10045962
TFT-Monitor 17" for Test Equipment		10055641
TFT-Monitor 19" for Test Equipment		10093491-SP
Handheld bar code reader		10047444
XCVR:IR, IRDA, PC-JETEYE [jet eye RS 232]		655505
PA 37, DA 300-2 Test gauge, assembly (test gauge for 200 bar cylinders)		D4065902
Test gauge (cylinder press 400bar) (test gauge for 300 bar cylinders)		D4080929
Tool for push to connect Adapters		10035756
Barcode Labels for using inside [masks] or outside [SCBA or cylinders] 100 pieces		
Barcode Labels – outside		10025420
Barcode Labels – inside		10025422
TecBOS.Tech Mod. Read/Write transponder		10115231



D2055038

Description	Part No.
Dust filter, Pkg 2pcs, spare	10093710
Transponder antenna, spare	10088332 -SF





# **MSA in Europe**

[www.MSAsafety.com]

#### **Northern Europe**

#### Netherlands MSA Nederland

Kernweg 20 1627 LH Hoorn Phone +31 [229] 25 03 03 Fax +31 [229] 21 13 40 info.nl@MSAsafety.com

## Belgium

**MSA Belgium N.V.** Duwijckstraat 17 2500 Lier Phone +32 [3] 491 91 50 Fax +32 [3] 491 91 51 info.be@MSAsafety.com

#### Great Britain MSA (Britain) Limited

Lochard House Linnet Way Strathclyde Business Park BELLSHILL ML4 3RA Scotland Phone +44 [16 98] 57 33 57 Fax +44 [16 98] 74 01 41 info.gb@MSAsafety.com

## Sweden

**MSA NORDIC** Kopparbergsgatan 29 214 44 Malmö Phone +46 [40] 699 07 70 Fax +46 [40] 699 07 77 info.se@MSAsafety.com

#### MSA SORDIN

Rörläggarvägen 8 33153 Värnamo Phone +46 [370] 69 35 50 Fax +46 [370] 69 35 55 info.se@MSAsafety.com

#### Southern Europe

## France

MSA GALLET Zone Industrielle Sud 01400 Châtillon sur Chalaronne Phone +33 [474] 55 01 55 Fax +33 [474] 55 47 99 info.fr@MSAsafety.com

#### Italy

MSA Italiana S.p.A. Via Po 13/17 20089 Rozzano [MI] Phone +39 [02] 89 217 1 Fax +39 [02] 82 59 228 info.it@MSAsafety.com

#### Spain

MSA Española, S.A.U. Narcís Monturiol, 7 Pol. Ind. del Sudoeste 08960 Sant-Just Desvern [Barcelona] Phone +34 [93] 372 51 62 Fax +34 [93] 372 66 57 info.es@MSAsafety.com

#### **Eastern Europe**

#### Poland

**MSA Safety Poland Sp. z o.o.** UI. Wschodnia 5A 05-090 Raszyn k/Warszawy Phone +48 [22] 711 50 00 Fax +48 [22] 711 50 19 info.pl@MSAsafety.com

#### Czech republic

**MSA Safety Czech s.r.o.** Dolnojircanska 270/22b 142 00 Praha 4 - Kamyk Phone +420 241440 537 Fax +420 241440 537 info.cz@MSAsafety.com

#### Hungary

**MSA Safety Hungaria** Francia út 10 1143 Budapest Phone +36 [1] 251 34 88 Fax +36 [1] 251 46 51 info.hu@MSAsafety.com

#### Romania

MSA Safety Romania S.R.L. Str. Virgil Madgearu, Nr. 5 Ap. 2, Sector 1 014135 Bucuresti Phone +40 [21] 232 62 45 Fax +40 [21] 232 87 23 info.ro@MSAsafety.com

#### Russia

**MSA Safety Russia** Походный проезд д.14. 125373 Москва Phone +7 [495] 921 1370 Fax +7 [495] 921 1368 info.ru@MSAsafety.com

#### **Central Europe**

#### Germany MSA AUER GmbH

Thiemannstrasse 1 12059 Berlin Phone +49 [30] 68 86 0 Fax +49 [30] 68 86 15 17 info.de@MSAsafety.com

#### Austria MSA AUER Austria Vertriebs GmbH

Modecenterstrasse 22 MGC Office 4, Top 601 1030 Wien Phone +43 [0] 1 / 796 04 96 Fax +43 [0] 1 / 796 04 96 - 20 info.at@MSAsafety.com

#### Switzerland MSA Schweiz

Eichweg 6 8154 Oberglatt Phone +41 [43] 255 89 00 Fax +41 [43] 255 99 90 info.ch@MSAsafety.com

#### European International Sales

[Africa, Asia, Australia, Latin America, Middle East]

#### **MSA Europe**

Thiemannstrasse 1 12059 Berlin Phone +49 [30] 68 86 0 Fax +49 [30] 68 86 15 58 info.de@MSAsafety.com

