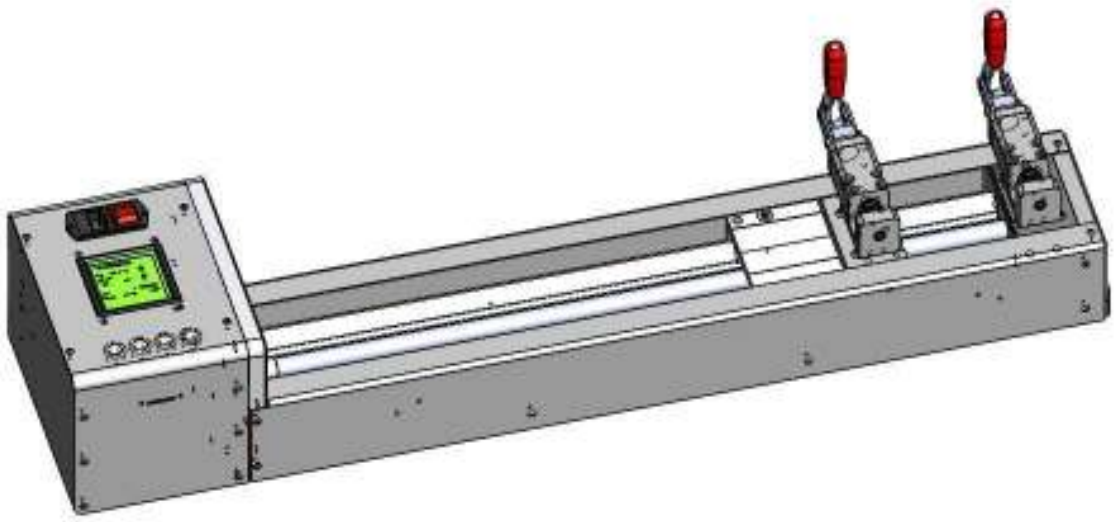
Operating instructions

Tensile Tester
Accura Dat

Serial:	Typenschild klein



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Registergericht/Registration Court: Amtsgericht Montabaur, HRB 3959
Geschäftsführer/Managing Director: Stefan Munsch

Introduction

The tensile tester, developed and manufactured by MUNSCH Kunststoff-Schweißtechnik GmbH, is a machine with an own actuator, which tests welding samples by tension (thermoplastic welded samples). The tensile tester is developed for outdoor use, but may also be used indoor.

ATTENTION

This machine is an electromechanical Unit with moving parts, which are driven my high force. It is necessary to be careful in using the machine, especially with the moving parts (no contact with clothes, hair or body parts).
Crushing hazard!!!

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Note: These operating instructions must always be available to the machine operators. Make sure to read them carefully before placing the unit in service.
Very important!

Technical Data

Voltage	V~	***100, 120, 230***
Power consumption	W	***200***
Max. Force	N	***4000***
Temperature range of use	°C	***-5 bis +80***
Tolerance	%	***<3% FS at 20°C***
Min. carrier distance	mm	***5***
Max. carrier distance	mm	***300***
Prüfgeschwindigkeit	mm/min.	***10 – 300***
Max. sheet thickness	mm	***7***
Max. sheet widness	mm	***40 (60 optional)***
SD-Slot		***Ja***
Loudness	L_{pA} (dB)	***<70***
Weight	kg	***38***
Dimensions (L x W x H)	mm	***1270 x 260 x 270***
Conformity marks		CE
Safety marks		
Protection class		

Safety

	Lebensgefahr beim Öffnen des Gerätes, da spannungsführende Komponenten und Anschlüsse freigelegt werden. Vor dem Öffnen des Gerätes muss dieses allpolig vom Netz getrennt werden. Ein beschädigtes Anschlusskabel kann zu einem lebensgefährlichen elektrischen Schlag führen! Nennspannung, die auf dem Typenschild des Gerätes angegeben ist, muss mit der Netzspannung übereinstimmen. Gegebenenfalls Elektrizitäts-Versorgungs-Unternehmen konsultieren.
	Geräte der Schutzklasse I Gerät nur an Steckdosen mit Schutzleiter anschließen; jede Unterbrechung des Schutzleiters ist gefährlich! Nur Verlängerungskabel mit ausreichendem Kabelquerschnitt und Schutzleiter verwenden!
FI	FI-Schalter ist für den Personenschutz erforderlich!
	Gerät muss beobachtet betrieben werden.
	Gerät vor eindringender Feuchtigkeit und Nässe schützen!
	Während der Betriebsphase dürfen Antriebsspindel und Schlitten nicht berührt werden!
	Schlitten darf bei eingespannter Probe nicht eingefahren werden.

Product description

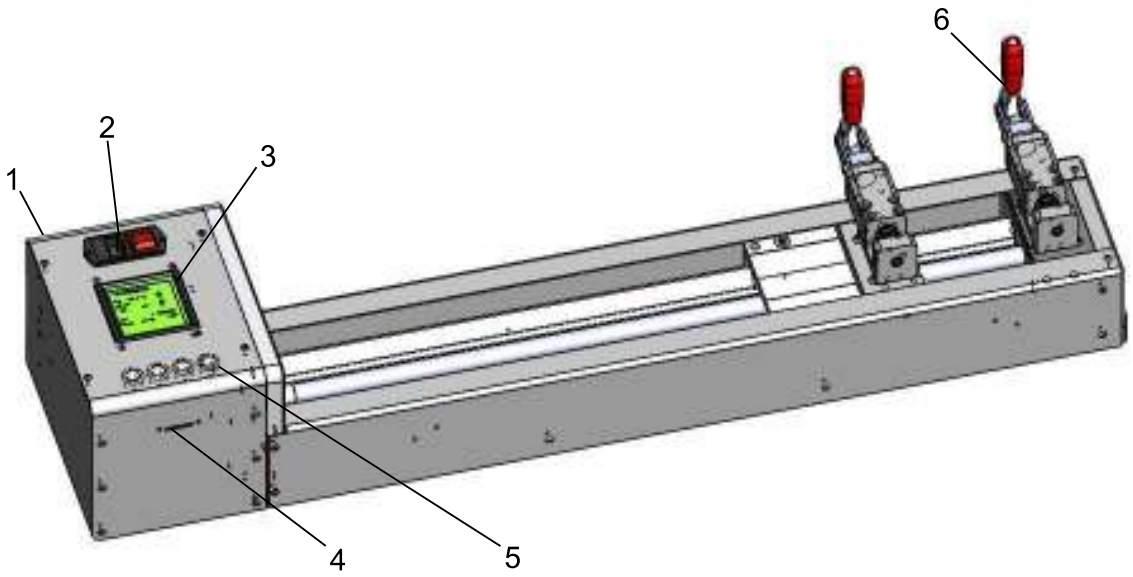


fig. 1

1 - Controller housing
2 - On-/Off-Switch, Main fuse
3 - Display
4 - SD-Slot
5 - Control panel
6 - Probe carriers

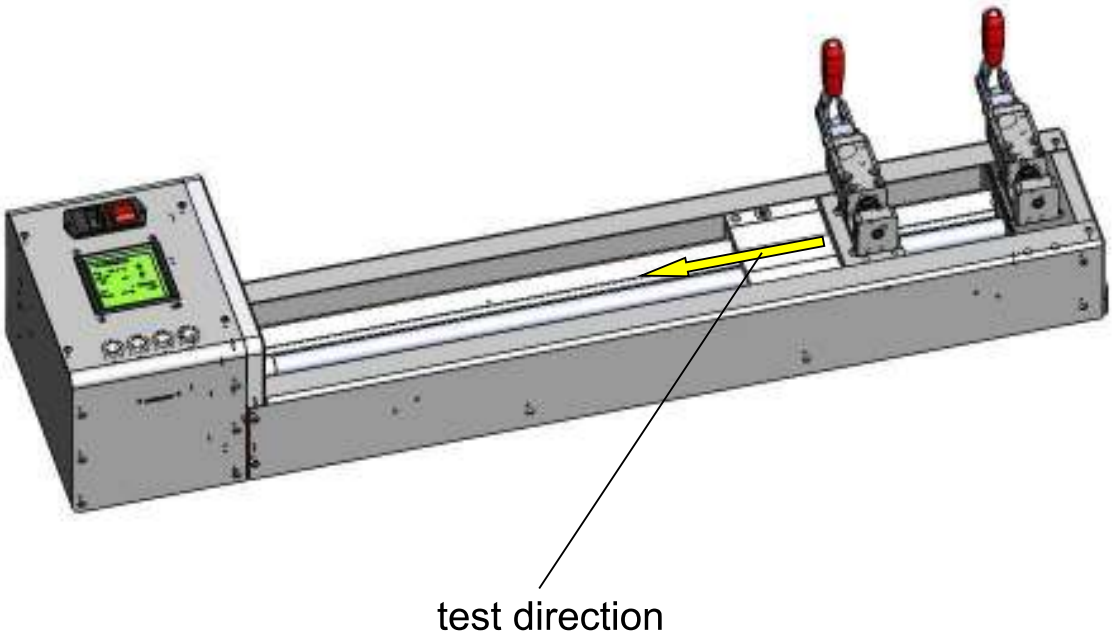


fig. 2

Preparation of the unit

A special preparation or configuration of the working unit is not absolutely necessary. Only the testing speed has be adjusted.

When operating the unit with power supply from a generator set, make sure that the generating capacity is sufficient.

Menu guide

Activating the machine, the main menu appears on the display (fig. 4).

fig. 4

Menu items

Designation	Description
Position	In this menu you can move the slide left and right manually.
Measure	In this menu cou can test the welding sample
Measure+Autoposition	In this menu you can test the welding sample. The machine sets its own start point.
Show Data	In this menu you can have a look at all measured tests.
Save Data	In this menu you can save the tests to a flash memory.
Delete Data	Saved by Code. Only for qualified personal.
Configuration	Saved by Code. Only for qualified personal.

Tastenbelegung

Taste	Menü/Eingabe	Name	Beschreibung
	Menu	Up	Wandering upwards in the menu
	Value setting		Upscaling of a value
	Movement	Left	Moving the slide to the left
	Menu	Down	Wandering downwards in the menu
	Value setting		Downscaling of a value
	Movement	Right	Moving the slide to the right
	Menu	Back	Jumping back to the previous menu
	Value setting		Cancel value setting
	Menu	OK	Confirming the choice
	Value setting		Jumping forward in the line

Configuration

Please select the menu item “Configuration” from the main menu (fig. 4) and confirm with “OK”. Now you will be asked for a password.
Please change the password from “0000” to “8980” by pushing the “up” and “down” buttons and carry on to the next digit by confirming with “OK”. You will not see any numbers but only stars.
The numbers of each adjustable digit are sorted like the locker of a briefcase.

fig. 5

Proceed as follows:

Old number	0		0		0		0	
Instruction	2x „Down“	OK	1x „Down“	OK	2x „Down“	OK	-	OK
New number	8		9		8		0	

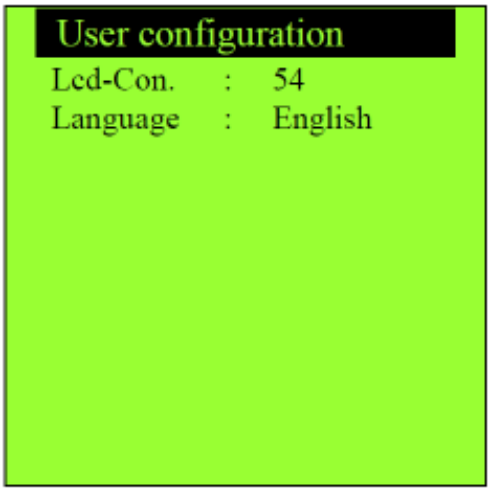


fig. 6

Now the configuration menu appears where you can change the display contrast, the unit of temperature and the language of menu.
If you are working at low outdoor temperatures, it could be reasonable to higher the display contrast and if you are working at high outdoor temperatures, it should be lowered.
To change a value please select it and confirm with “OK”. After having changed it please confirm again with “OK”.
Return to the main menu by pressing “Back”.

Menu „Position“

Select the menu item „Position“ in the main menu (fig. 4) with the cursor and the up-/down- buttons and confirm your choice with the “OK”-button.
The menu „Position“ appears.

Move the slide to the designated position by pushing the right and left buttons. Moving distance is limited by triggers.
Now install your sample and move the slide to the designated starting position.

Return to the main menu by pushing the Back-Button.

fig. 7

ATTENTION!!!

By pushing the emergency button, the machine stops and returns immediately to the main menu. It does not restart automatically!!!
You have to unlock the button to be able to restart again.

Menu „Measure+Autoposition“

Select the item „Measure+Autoposition“ from the main menu and confirm with „OK“.
The menu „Measure+Autoposition“ appears.

fig. 8

Now a number of values appears.
You can change them as follows:
Select the value with the Up- and Down-Buttons and confirm with OK.
Change the value by using the Up- and Down-Buttons and confirm afterwards with OK. [1)]

Name, Nr., Date and Time

Value	Description
Speed	Here you can change the testing speed
Force	Here you can correct the shown force
Name	Here you can enter the name of the construction site or of the worker. By pressing “Up“/“Down“ you can set the letter or digit. [1)] With “OK” you go one sign forward.
Nr.	Here, all of the welding joints are numbered. At every start of the machine, it increases the number (beginning at “1“).
Date	Here you can see/set the actual date.
Time	Here you can see/set the actual time.

If all inputs are confirmed, change to the item “Start action“, and confirm with “OK”.

1) The characters are sorted as follows: a;…;z;A;…;Z;0;…;9;_

Auto positioning starts after confirmation.

fig. 9

After the Positioning the machine asks for confirmation to start the measurement.

fig. 10

Measurement starts after confirmation.

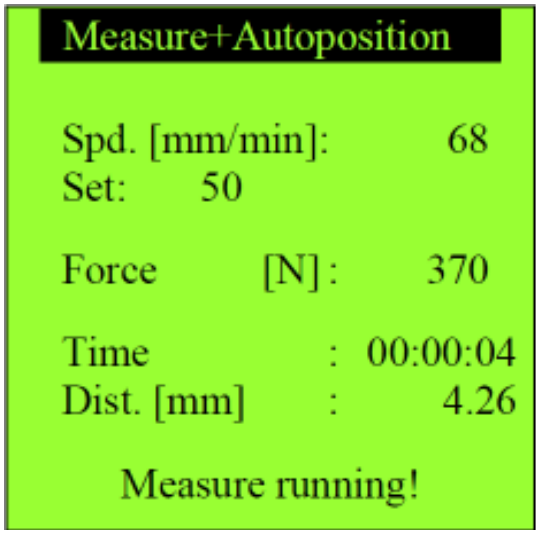


fig. 11

The machine constantly checks the speed and adjusts it.
The machine records pressure and distance. Distance is calculated by time and actual speed.
If the welding sample breaks (decrease of measured pressure below 50N), the measurement automatically stops and the tensile tester goes back to start position.
Measurement can be stopped manually by pushing the Back-Button.
By confirming with OK afterwards, the tensile tester drives back to the start position.
Pressure is shown with a tolerance of 5N and is only used to make out the distance where the welding sample goes defective.

The machine automatically drives back with high speed to the start position.

ATTENTION!!!

By pushing the emergency button, the machine stops and returns immediately to the main menu. It does not restart automatically!!! There is no chance to proceed with the actual measurement!!! You have to unlock the button to be able to restart.

Show data

Please select „Show Data“ from the main menu and confirm with OK.

fig. 12

Please select the preferred test and confirm with OK.

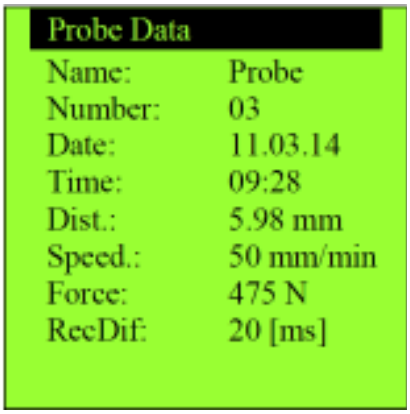


fig. 13

Now appears the result menu of the measurement with all of its data. The shown pressure is the maximum measured pressure and the shown distance is the complete distance the machine passed during the test.

Please confirm with OK to see the power-off chart (fig. 14).

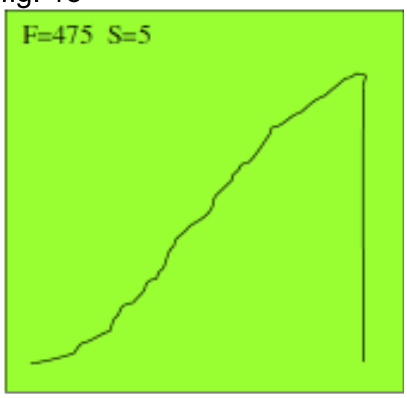


fig. 14

Please confirm with OK to get to the table of values.
To scroll through the data please use the up and down buttons. Therewith you can find out the exact point of failure on the machine.

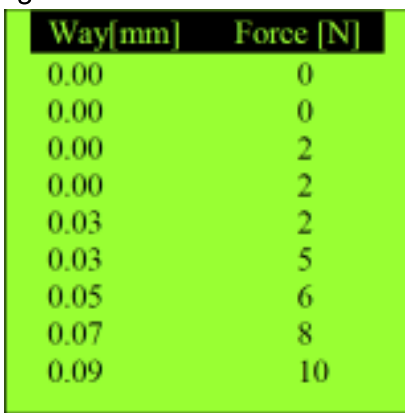


fig. 15

Return to the main menu by using the Back button.

Backup and test protocol

Technical information

Backup-medium	Internal memory
Backup-medium for data backup	SD-flash memory
Maximum capacity of the SD-card	2 GB
Supported manufacturers	DeLOCK
Formatting	FAT 32
Maximum data-amount (at 5cm interval)	2500 Measurements
File format	.txt

To be able to evaluate the measured data, you need Microsoft Office Excel 2003 or higher version.

Backup of measured data

Please insert the supplied SD-flash memory card as shown on the machine with power contacts to the top into the card reader, until it locks in.
Now choose in the main menu the item “Save Data”.

fig.16

After the data backup you may remove the SD-flash memory card by pressing on it again.
Finally you may save the data on your PC or notebook.
Now you can convert, save and print the data with the on the flash memory card supplied evaluation software.
Please look to the following chapter “Creating a test protocol”.

Creating a test protocol

After copying the data from the SD-flash memory card to the PC, you may look at it.
The measurements are structured as follows:

The single values are separated by commas (,).

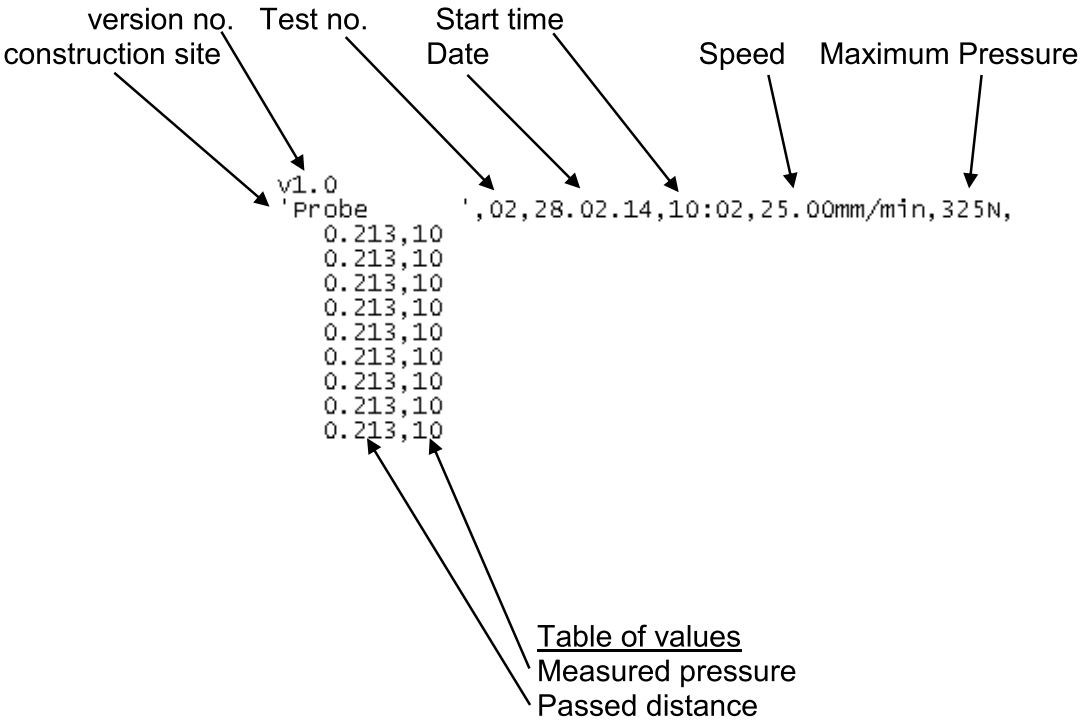


fig. 17

Creating the test protocol

1. Open the delivered evaluation software.
2. Click on „Deutsch“, then on the menu arrow, then on „English“ and then on „Sprache“, to change the language.

fig. 18

3. Click on (…) to select a record file.

Abb. 19

4. Select the file and click on „Öpen“

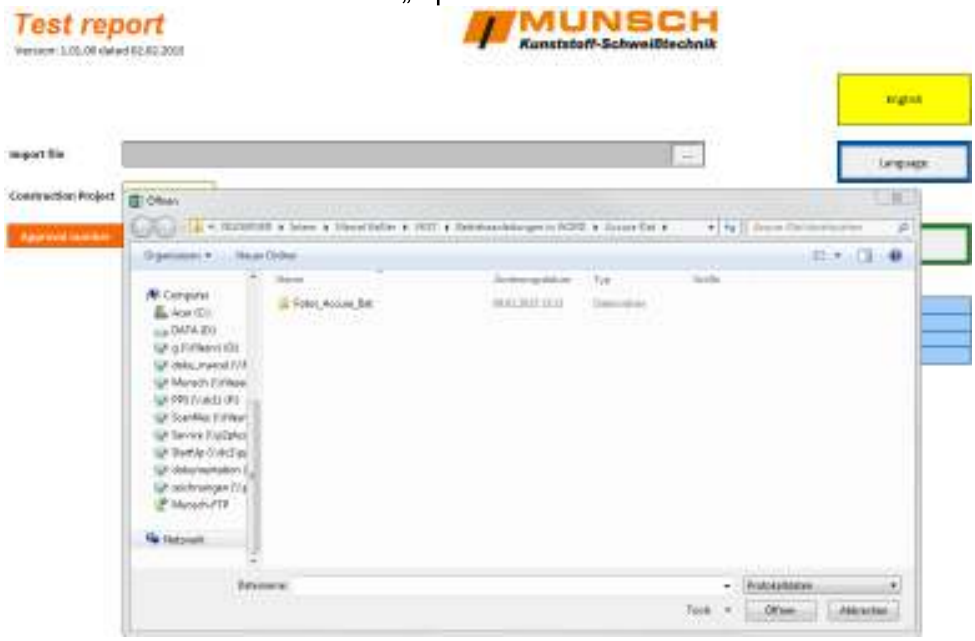


fig. 20

5. Select the construction site / data line. Therefore open the dropdown menu and select the designated line.

fig. 21

6. A list of all at this building site recorded welding joints appears. By setting or deleting of an “x“ in the last column, single joints can be selected for the protocol.

fig. 22

7. Please fill in the blue highlighted gaps and save the protocol by a click on “Create test report“.

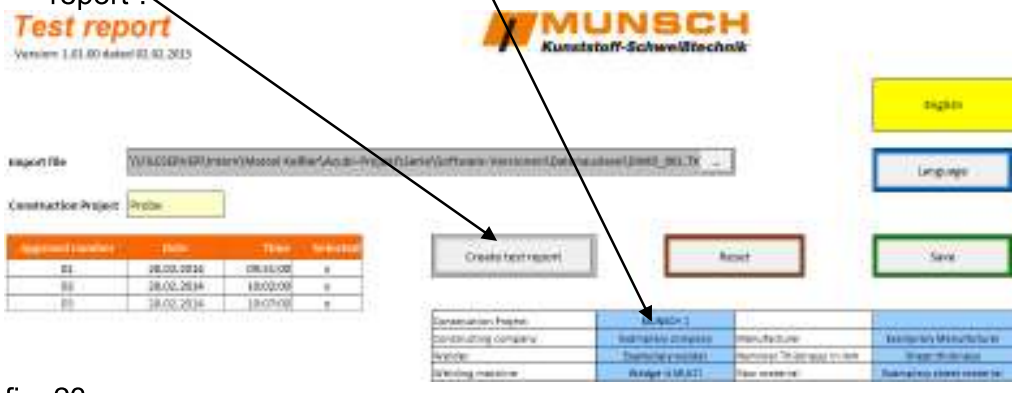


fig. 23

8. In the footer appears a number of tabs.

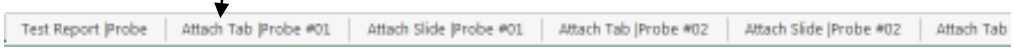
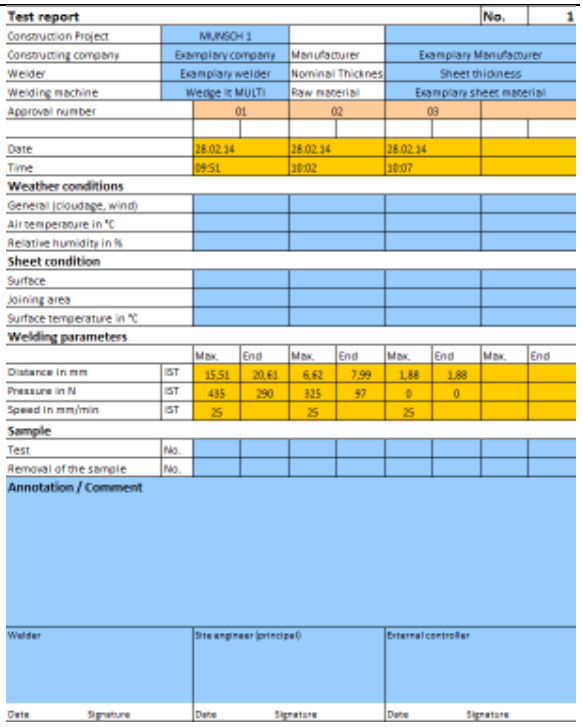


fig. 24

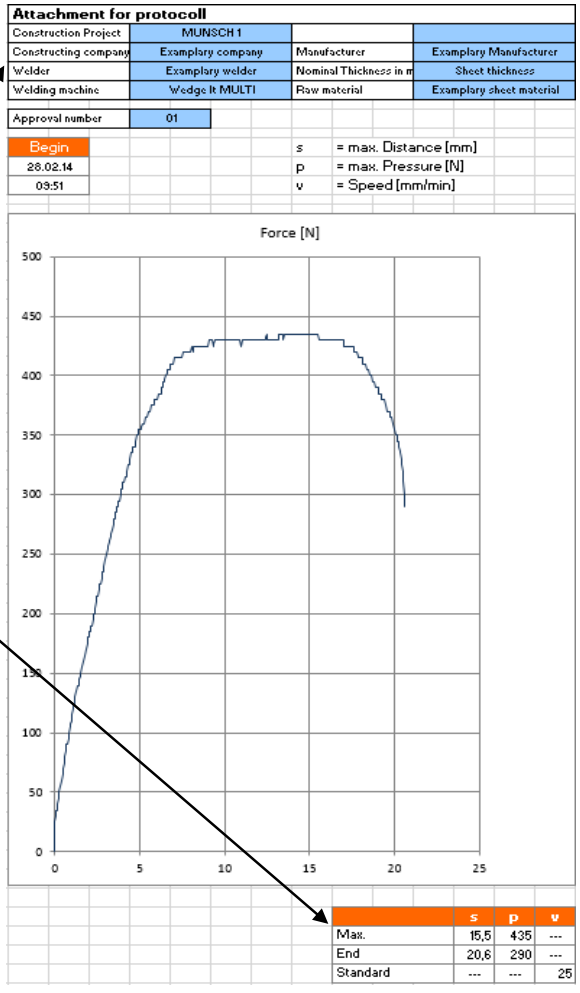
Test report: A protocol gets created with the inserted data and the sheet number in its head. After that exists the possibility to fill in the environmental conditions and the conditions of the welding. After that follow the set values and measured values for maximum 4 welding samples. The blue areas at the bottom may be used for comments and signatures.
If you tested more than 4 joints, the software creates for every 4 joints a new sheet of test protocol.



Test report								No.	1
Construction Project	MUNSCH 1								
Constructing company	Exemplary company		Manufacturer		Exemplary Manufacturer				
Welder	Exemplary welder		Nominal Thickness		Sheet thickness				
Welding machine	Wedge It MULTI		Raw material		Exemplary sheet material				
Approval number	01		02		03				
Date	28.02.14		28.02.14		28.02.14				
Time	09:51		10:02		10:07				
Weather conditions									
General (cloudage, wind)									
Air temperature in °C									
Relative humidity in %									
Sheet condition									
Surface									
Joining area									
Surface temperature in °C									
Welding parameters									
		Max.	End	Max.	End	Max.	End	Max.	End
Distance in mm	IST	15,51	20,61	6,62	7,99	1,88	1,88		
Pressure in N	IST	435	290	325	97	0	0		
Speed in mm/min	IST	25		25		25			
Sample									
Test	No.								
Removal of the sample	No.								
Annotation / Comment									
Welder		Site engineer (principal)			External controller				
Date Signature		Date Signature			Date Signature				

fig. 25

Attach. Slide: In this window you can see, specifically for every joint, the graphical evaluation. Mentioned are the trends of temperature, speed and pressure. Above these graphs, you'll find the head data of the test protocol, the test number, and the start time of the test. Below the graphs, you'll see the maximums and minimums of the graphs.



Attachment for protocoll

Construction Project	MUNSCH 1		
Constructing company	Exemplary company	Manufacturer	Exemplary Manufacturer
Welder	Exemplary welder	Nominal Thickness in m	Sheet thickness
Welding machine	Wedge It MULTI	Raw material	Exemplary sheet material

Approval number	01

Begin
28.02.14
09:51

s = max. Distance [mm]
p = max. Pressure [N]
v = Speed [mm/min]

	s	p	v
Max.	15,5	435	---
End	20,6	290	---
Standard	---	---	25

fig. 26

Attach. Tab: The window „Anlage Tab“ shows you for each welding sample the measured data in figures. Above the lookup table is the head data of the test protocol, the test number, and the start time of the test. Below the table, you’ll find the maximums and minimums of the values.

Attachment to Test report

Construction Project	MUNSCH 1		
Constructing company	Exemplary company	Manufacturer	Exemplary Manufacturer
Welder	Exemplary welder	Nominal Thickness in m	Sheet thickness
Welding machine	Wedge It MULTI	Raw material	Exemplary sheet material

Approval number	01

Begin
28.02.14
09:51

s = max. Distance [mm]
p = max. Pressure [N]
v = Speed [mm/min]

s	p	s	p	s	p	s	p	s	p
0,000	0	1,560	155	3,090	255	4,570	335	6,070	385
0,000	25	1,600	155	3,130	257	4,610	340	6,110	385
0,030	30	1,640	160	3,170	260	4,660	340	6,150	385
0,070	35	1,690	160	3,210	262	4,700	340	6,190	385
0,120	35	1,730	165	3,260	265	4,740	345	6,240	385
0,170	40	1,780	165	3,300	267	4,780	345	6,280	390
0,220	45	1,820	170	3,340	270	4,830	350	6,320	390
0,260	50	1,860	170	3,380	270	4,870	350	6,360	395
0,310	55	1,910	175	3,420	275	4,910	350	6,410	395
0,360	60	1,950	180	3,460	275	4,950	355	6,450	397
0,410	60	2,000	180	3,500	280	5,000	355	6,490	400
0,460	65	2,040	185	3,550	280	5,040	355	6,540	400
0,500	70	2,080	185	3,590	285	5,080	357	6,580	402
0,550	75	2,130	190	3,630	285	5,130	360	6,620	405
0,590	80	2,170	190	3,670	290	5,170	360	6,660	405
0,640	85	2,210	190	3,710	290	5,210	360	6,700	405
0,690	90	2,260	195	3,760	295	5,260	360	6,750	405
0,730	90	2,300	200	3,800	295	5,300	365	6,790	410
0,780	95	2,350	200	3,850	300	5,340	365	6,840	410
0,820	100	2,390	205	3,890	300	5,380	365	6,880	410
0,870	105	2,430	210	3,930	305	5,420	365	6,920	410
0,920	107	2,480	215	3,970	305	5,470	370	6,960	410
0,960	110	2,520	215	4,010	310	5,510	370	7,010	415
1,010	115	2,570	220	4,060	310	5,550	370	7,050	415
1,050	120	2,610	220	4,100	310	5,600	370	7,090	415
1,100	122	2,650	225	4,140	315	5,640	375	7,130	415
1,150	125	2,700	225	4,190	315	5,680	375	7,170	415
1,190	130	2,740	230	4,230	320	5,720	375	7,210	415
1,240	135	2,780	235	4,270	320	5,760	375	7,260	415
1,280	135	2,830	235	4,320	325	5,810	375	7,300	415
1,330	140	2,870	240	4,360	325	5,850	380	7,340	415
1,380	140	2,920	245	4,400	330	5,890	380	7,380	415
1,420	145	2,960	245	4,440	330	5,940	380	7,420	415
1,470	147	3,000	250	4,480	335	5,980	380	7,460	415
1,510	150	3,050	250	4,530	335	6,030	380	7,510	415

	s	p	v
Max.	15,5	435	---
End	20,6	290	---
Standard	---	---	25

fig. 27

Optional:

9. Click on „Save“, to backup the test protocol and the graphs and tables to a secured file. You prevent an overwriting of your evaluated data.

fig. 28

This file now can be saved on the hard drive of your computer.

10. By clicking on „Reset“, you empty the window. Now you may load and evaluate a new test file.

fig. 29

Deleting data

fig. 30

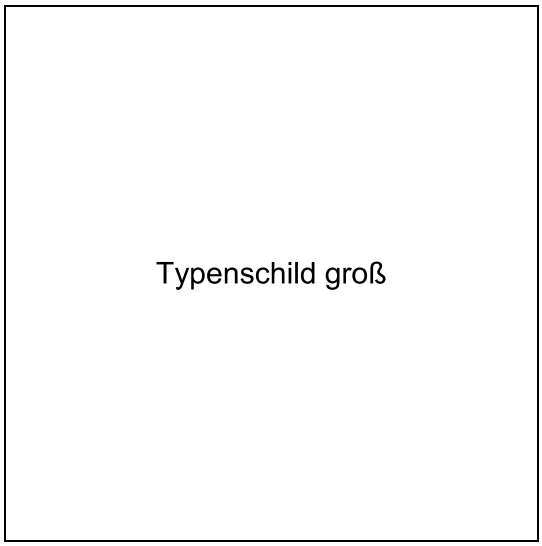
Please select “Delete Data” from the main menu and confirm with “OK”.
Now you will be asked if you really want to delete.
Please confirm deletion with “OK”.

Transport / Storage

The machine may only be stored or transported in the delivered box.
The machine may be used in its box and therefore is usable on construction sites.

Service and Repair

Repairs shall be carried out exclusively by MUNSCH Kunststoff-Schweißtechnik GmbH. Any warranties for units which are no longer in the original condition shall be expressly excluded. The units may not be modified and/or changed in any way whatsoever. Any liability for damage resulting from improper use or normal wear and tear of the units shall be excluded.
Please include always this sheet when sending in the machine for repair or calibration.



Date	Operating hours	Type of repair	Carried out by:

EG-Konformitätserklärung des Herstellers

nach der EG-Maschinenrichtlinie 2006/42/EG Anhang II, Nr. 1 A

EC-Declaration of Conformity by the Manufacturer

as defined by machinery directive 2006/42/EC, Annex II, No. 1 A

MUNSCH Kunststoff-Schweißtechnik GmbH
Im Staudchen
D-56235 Ransbach-Baumbach
Deutschland

Mr. Johann Dausenau,
Kunststoffschweißtechnik GmbH,
is authorised to compile the technical documentation.

We hereby declare that the Tensile tester

Machine type: Tensile tester
Type designation: Accura-Dat

is in accordance with all relevant provisions of the EC Machinery Directive.

The following harmonised standards (or parts of these standards) were applied:

☒	DIN EN ISO 12100: 2010	☐	
☐		☐	

Die Biegeprüfvorrichtungen sind auch in Übereinstimmung mit folgenden EG-Richtlinien:

☒	EU Low-Voltage Directive 2014/35/EU	☒	EU EMC Directive 2014/30/EU
☒	EN 60204-1 (VDE 0113 Part 1): 2011	☐	
☒	VDE 0701 Teil 1: 2008	☐	
☐		☐	
☐		☐	

This industrial tool complies with the aforesaid standards insofar as it is used at the contractually agreed conditions. The operator is responsible for this.

In the event of any modifications to the machine/unit or use not as intended, this declaration becomes invalid unless the manufacturer's prior written approval has expressly been given.

Ransbach-Baumbach, 10.02.2015

Dipl.-Ing. Stefan Munsch
Geschäftsführer