
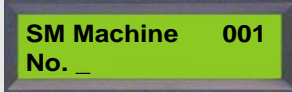
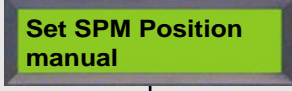
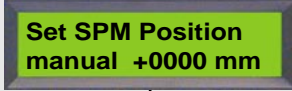
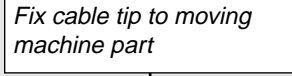
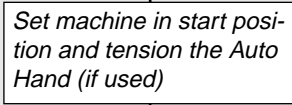
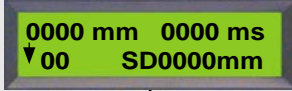


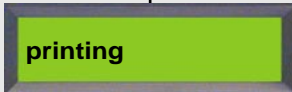


# Stop Time Measuring Manual Mode

Explanation	Walk Through	Operating Advice
Main menu selection: Stop Time Measuring		<b>C</b> to select menu <b>A</b> or <b>B</b> for other functions in main menu
Input of machine identification number for measuring protocols. (Maximum 12 characters)		<b>C</b> for first character place <b>A</b> or <b>B</b> to select character <b>C</b> to confirm and shift to next place
Setting manual of SPM (start point of measuring) position.		Confirm with <b>C</b>
The counter shows the distance from machinestart position (upper dead centre) to SPM position.		Use <b>A</b> and <b>B</b> for setting of counter confirm position with <b>C</b>
Remark: The message „Reduce resol. , Repeat meas.“ indicates a range exeeding. The resolution will be reduced automatically and the measurement has to be repeated. The setting of the resolution will be kept up as long as the device is not switched off.		
		
0000 mm      Stopping distance 0000 ms      Stopping time ▼              Measuring direction 00              Measuring number SD 0000 mm    Safety distance		Confirm with <b>C</b>
		Initiate machine start
System is clear for measuring  Results are displayed 0056 mm      Stopping distance 0104 ms      Stopping time ▼              Measuring direction 01              Measuring number SD 0208 mm    Safety distance If a ▼▲ occurs, a reversion of motion direction has been detected.		Confirm with <b>C</b> Cancel measuring with <b>A</b> or <b>B</b> , then this measuring will be repeated Terminate measuring mode with <b>A + A</b> or <b>B + B</b> in measuring mode “automatic“ (P3) the next measuring starts after delay period (P3)
		

# Stop Time Measuring Teach-in Mode

Explanation	Walk Through	Operating Advice
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Main menu selection:  
Stop Time Measuring

Input of machine identification number  
for measuring protocols.  
(Maximal 12 characters)

Setting of SPM position via **Teach-in**.  
Confirm first start position of the machine

Bring cable end to desired SPM position,  
either by hand or with machine drive.  
The counter will display the distance to start  
position.

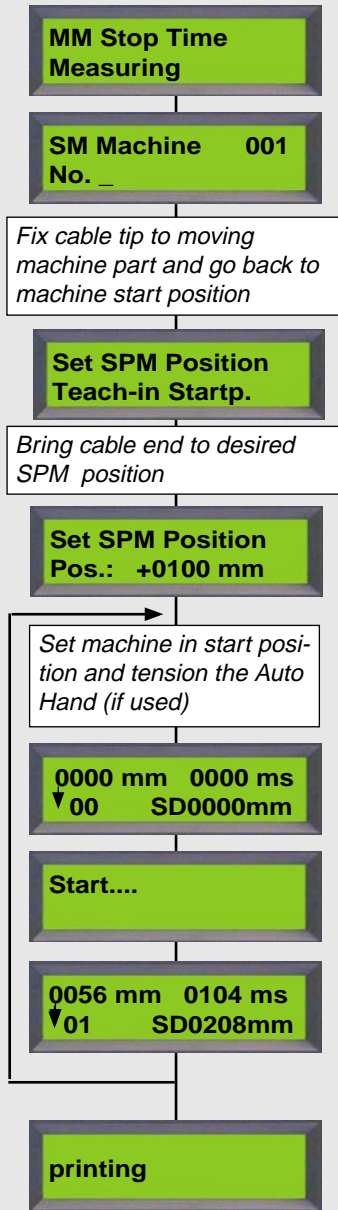
Remark: The message „Reduce resol. ,  
Repeat meas.“ indicates a range exceeding.  
The resolution will be reduced automatically  
and the measurement has to be repeated.  
The setting of the resolution will be kept up  
as long as the device is not switched off.

0000 mm	Stopping distance
0000 ms	Stopping time
▼	Measuring direction
00	Measuring number
SD 0000 mm	Safety distance
System is clear for measuring	

Results are displayed

0056 mm	Stopping distance
0104 ms	Stopping time
▼	Measuring direction
01	Measuring number
SD 0208 mm	Safety distance

If a ▼▲ occurs, a reversion of motion direc-  
tion has been detected during measuring.  
Printing out of results



**C** to select menu  
**A** or **B** for other functions in main menu

**C** for first character place  
**A** or **B** to select character  
**C** to confirm and shift to next place

Confirm position with **C**

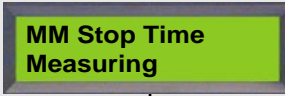
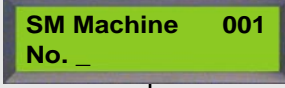
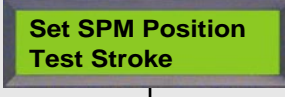
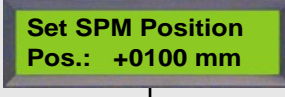
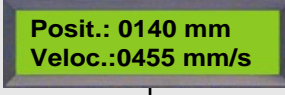
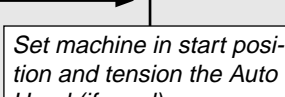
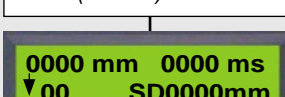
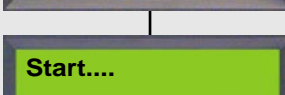
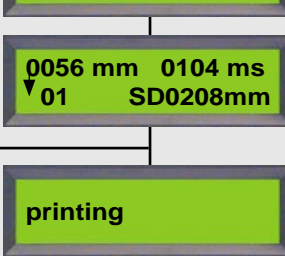
Confirm position with **C**

Confirm with **C**

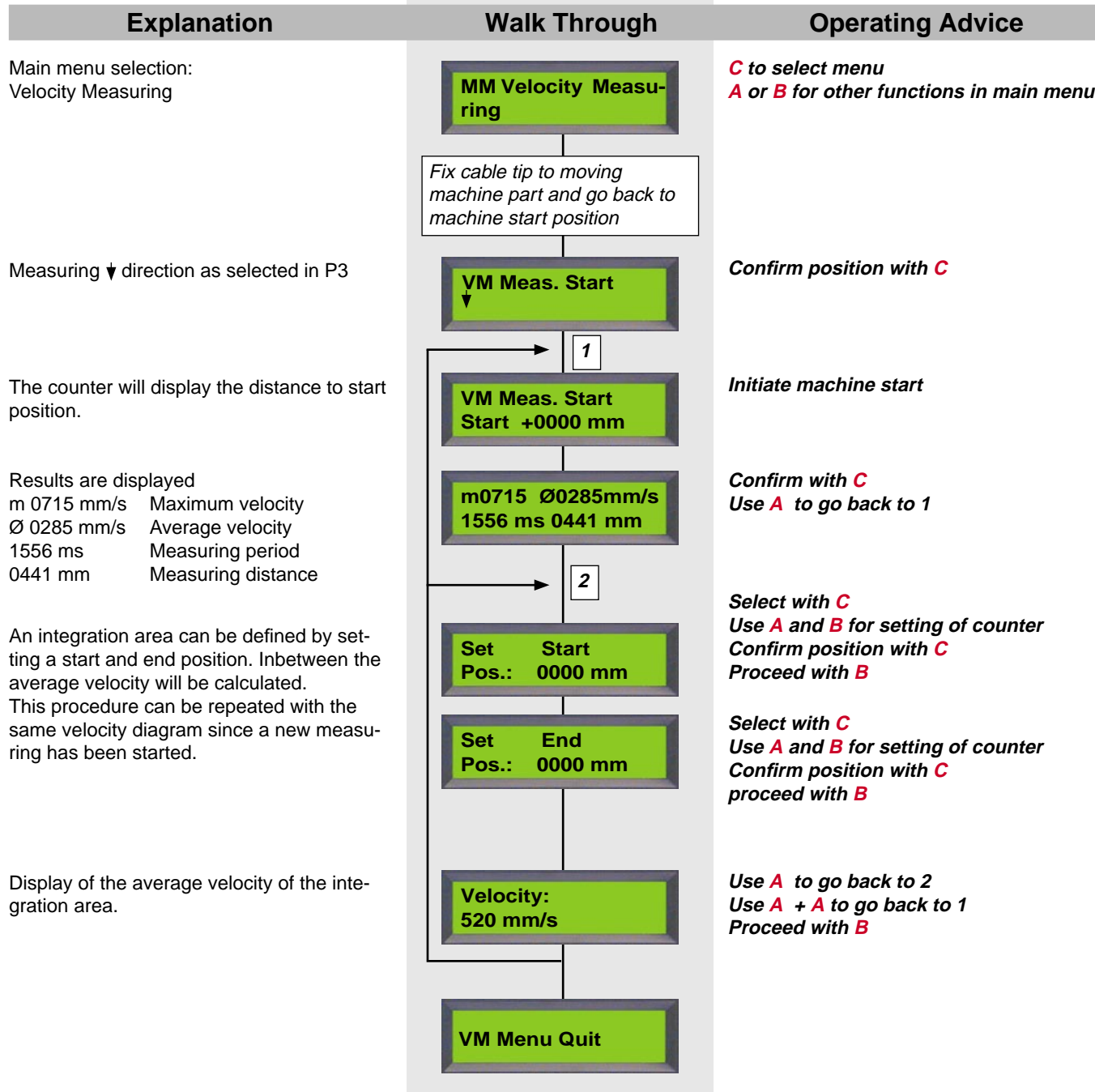
Initiate machine start

Confirm with **C**  
Cancel measuring with **A** or **B**, then  
this measuring will be repeated  
Terminate measuring mode with **A + A**  
or **B + B**. In measuring mode "automa-  
tic" (P3) the next measuring starts after  
delay period (P3)

# Stop Time Measuring Test Stroke Mode

Explanation	Walk Through	Operating Advice
<p>Main menu selection: Stop Time Measuring</p>		<p><b>C</b> to select menu <b>A</b> or <b>B</b> for other functions in main menu</p>
<p>Input of machine identification number for measuring protocols. (Maximal 12 characters)</p>		<p><b>C</b> for first character place <b>A</b> or <b>B</b> to select character <b>C</b> to confirm and shift to next place Finish after last character place</p>
<p>Setting of SPM position via <b>Test Stroke</b>. One stroke without stop is carried out and the position of highest velocity is taken over as SPM position</p>	<p>Fix cable tip to moving machine part and go back to machine start position</p>	<p>Confirm position with <b>C</b></p>
<p>The counter will display the distance to start position.</p>		<p>Initiate machine start</p>
<p>SPM position and highest velocity is displayed.</p>		<p>Confirm position with <b>C</b> Go back with <b>A</b> if you do not want to confirm</p>
<p>Remark: The message „Reduce resol. , Repeat meas.“ indicates a range exceeding. The resolution will be reduced automatically and the measurement has to be repeated. The setting of the resolution will be kept up as long as the device is not switched off.</p>		<p>Set machine in start position and tension the Auto Hand (if used)</p>
<p>0000 mm Stopping distance 0000 ms Stopping time ▼ Measuring direction 00 Measuring number SD 0000 mm Safety distance</p>		<p>Confirm with <b>C</b></p>
<p>System is clear for measuring</p>		<p>Initiate machine Start</p>
<p>Results are displayed 0056 mm Stopping distance 0104 ms Stopping time ▼ Measuring direction 01 Measuring number SD 0208 mm Safety distance</p>		<p>Confirm with <b>C</b> Cancel measuring with <b>A</b> or <b>B</b>, then this measuring will be repeated Terminate measuring mode with <b>A + A</b> or <b>B + B</b>. If "automatic" mode is selected in P3, then the next measuring starts after delay period</p>
<p>If a ▼▲ occurs a reversion of motion direction has been detected during measuring. Printing out of results</p>		

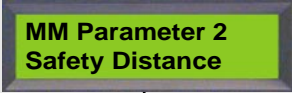
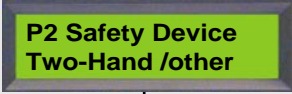
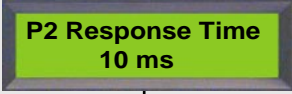
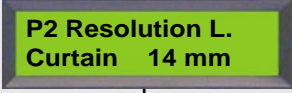
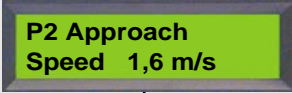
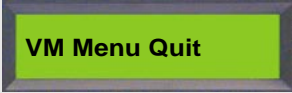
# Velocity Measuring




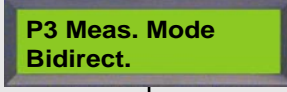
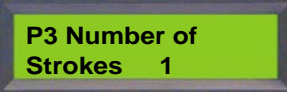
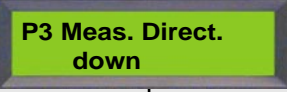
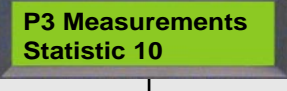
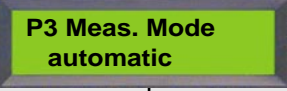
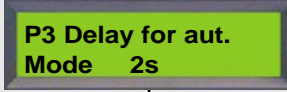
# Parameter 1 Basic Settings

Explanation	Walk Through	Operating Advice
Main menu selection: Parameter 1	MM Parameter 1 Basic Settings	<b>C</b> to select menu <b>A</b> or <b>B</b> for other functions in main menu
Input or modification of time setting	P1 Time Setting Time 10:24	<b>C</b> for first character place <b>A</b> or <b>B</b> to select character <b>C</b> to confirm and shift to next place Finish with <b>C</b> at last character place
Input or modification of date setting	Date Setting Date 10.10.2000	<b>C</b> for first character place <b>A</b> or <b>B</b> to select character <b>C</b> to confirm and shift to next place Finish with <b>C</b> at last character place
Sensor Selection: - # Cable Transducer - Wheel Encoder - Photo Sensor	P1 Sensor Select Cable Transducer	Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection
Language - # German - English - other languages	P1 Language English	Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection
Measuring unit for length: - # mm - Inch	Length Unit mm	Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection
Display Illumination - # on - off	P1 Illumination on	Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection
Remark: # = default setting	VM Menu Quit	Proceed with <b>C</b>

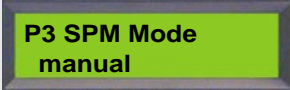
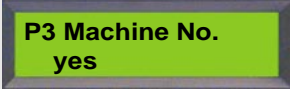
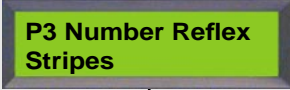
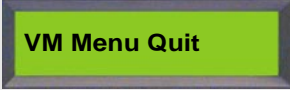
## Parameter 2 Safety Distance

Explanation	Walk Through	Operating Advice
<p>Main menu selection: Parameter 2</p>		<p><b>C</b> to select menu <b>A</b> or <b>B</b> for other functions in main menu</p>
<p>Selection of safety device: - # Two hand control or other Light curtain Scanner</p>		<p>Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection</p>
<p>Input the response time of the safety device. For light curtains and scanners only. Set this figure to 0 if Auto Hand or Auto Flag is used as actuator (over all stop time is measured) - # 10 mm</p>		<p>Select with <b>C</b> Use <b>A</b> and <b>B</b> for setting of counter Confirm with <b>C</b> and proceed with <b>B</b></p>
<p>Input of resolution of light curtain. Do not forget. - # 14 mm</p>		<p>Select with <b>C</b> Use <b>A</b> and <b>B</b> for setting of counter Confirm with <b>C</b> and proceed with <b>B</b></p>
<p>Input the height of the scanning field above floor. For scanners only. - # 300 mm</p>		<p>Select with <b>C</b> Use <b>A</b> and <b>B</b> for setting of counter Confirm with <b>C</b> and proceed with <b>B</b></p>
<p>Selection of approach speed (estimated speed of approach into the danger area) - # 1.6 m/s 2.0 m/s 2.2 m/s</p>		<p>Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection</p>
<p>Remark: # = default setting</p>		<p>Proceed with <b>C</b></p>

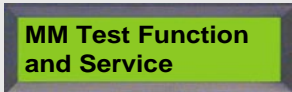
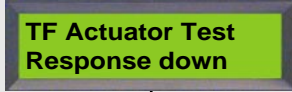
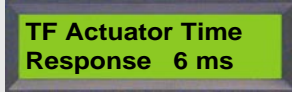
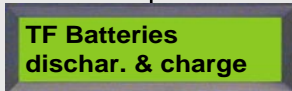
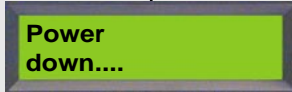
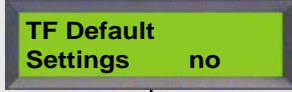
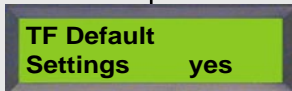
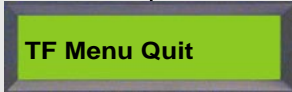
# Parameter 3 Measuring

Explanation	Walk Through	Operating Advice
<p>Main menu selection: Parameter 3</p>		<p><b>C</b> to select menu <b>A</b> or <b>B</b> for other functions in main menu</p>
<p>Selection of measuring mode : - # normal bidirectional Bidirectional - the stop time measuring will be started after a certain number of strokes (used for e.g. punching machines) Also valid for velocity measurement</p>		<p>Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection</p>
<p>Number of strokes before measuring. This window appears with selection bidirectional only.</p>		<p>Select with <b>C</b> Use <b>A</b> and <b>B</b> for setting Confirm with <b>C</b> and proceed with <b>B</b></p>
<p>Selection of measuring direction (direction of machine motion): - # down up</p>		<p>Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection</p>
<p>Input the number of measurement per machine for evaluation: - # 10 ( 1 - 10)</p>		<p>Select with <b>C</b> Use <b>A</b> and <b>B</b> for setting Confirm with <b>C</b> and proceed with <b>B</b></p>
<p>Selection of manual mode or automatic mode. <b>Manual</b> - At the manual mode each single measurement can be confirmed. <b>Manual/ Act</b> - as manual but relais state changes back to n.c. not until pressing C key. <b>Automatic</b> - Using the automatic no confirmation is necessary. The measuring device is in "ready for measuring status" after a certain delay time for driving back the machine.</p>		<p>Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection</p>
<p>Delay period for automatic mode.</p>		<p>Select with <b>C</b> Use <b>A</b> and <b>B</b> for setting Confirm with <b>C</b> and proceed with <b>B</b></p>
<p>To be continued</p>		

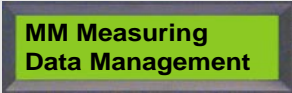
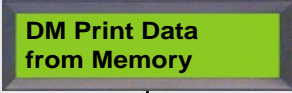

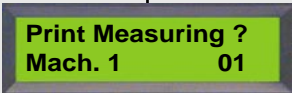
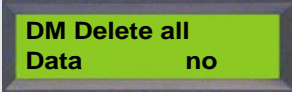
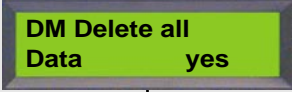
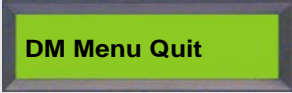
## Parameter 3 Measuring - continuation

Explanation	Walk Through	Operating Advice
<p><b>Manual Mode</b> - Setting the distance from machine start position to SPM manual by counter in menu SM</p> <p><b>Teach-in Mode</b> - Learning the start position and SPM position by teach-in. (see SM Teach-in)</p> <p><b>Test Stroke</b> - Setting of SPM position via Test Stroke. One stroke without stop will be carried out and the position of highest velocity will be taken over as SPM position</p>		<p><b>C</b> to select menu <b>A</b> or <b>B</b> for other functions in main menu</p>
<p>Input of a machine ident number for the printer protocol: - # yes</p>		<p>Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection</p>
<p>Number of retro reflective stripes for measuring (photo sensors only).</p>		<p>Select with <b>C</b> Use <b>A</b> and <b>B</b> for setting of counter Confirm with <b>C</b> and proceed with <b>B</b></p>
<p>Remark: # = default setting</p>		<p>Proceed with <b>C</b></p>

# Test Function and Service

Explanation	Walk Through	Operating Advice
<p>Main menu selection: Test Function and Service</p>		<p><b>C</b> to select menu <b>A</b> or <b>B</b> for other functions in main menu</p>
<p>This is a test function for the actuator. The reaction time of the actuator is measured.</p>		<p>Select one of the options with <b>C</b> <b>B</b> Store and jump to next selection</p>
<p>The batteries will be discharged completely first and then charged again. In this mode the device switches off. (see also part 1 chapter 9)</p>		<p>Repeat with <b>C</b> or proceed with <b>B</b></p>
<p>The batteries will be discharged completely first and then charged again. In this mode the device switches off. (see also part 1 chapter 9)</p>		<p>Select with <b>C</b> <b>B</b> jump to next selection</p>
		
<p>The default setting for all parameters of P1,P2,P3 and PM are recalled. The existing settings will be deleted.</p>		<p>Select with <b>C</b></p>
<p>Caution: all measuring data will be deleted</p>		<p>Use <b>A</b> and <b>B</b> for setting yes or no Confirm with <b>C</b> and proceed with <b>B</b></p>
		<p>Proceed with <b>C</b></p>

# Measuring Data Management

Explanation	Walk Through	Operating Advice
Main menu selection: Measuring Data Management		<p><b>C</b> to select menu <b>A</b> or <b>B</b> for other functions in main menu</p>
Up to 30 measurings (machines) protocols can be stored in the device. They can be printed out from the memory.		<p>Select one of the options with <b>C</b> <b>B</b> store and jump to next selection</p>
Mach. 1      Machine identification no. 01            The number of the measuring in the memory		<p>Select with <b>C</b> Use <b>A</b> and <b>B</b> for selecting measuring</p>
A complete protocol will be printed out		<p>Confirm with <b>C + C</b> and proceed with <b>B</b></p>
All measuring data stored in the memory will be deleted.		<p>Select one of the options with <b>C</b> <b>B</b> store and jump to next selection</p>
		<p>Use <b>A</b> and <b>B</b> for selection of yes or no Confirm with <b>C</b></p>
		<p>Proceed with <b>C</b></p>

# Print Manager

Explanation	Walk Through	Operating Advice
Main menu selection: Print Manager	<b>MM Print Manager</b>	<b>C</b> to select menu <b>A</b> or <b>B</b> for other functions in main menu
Printout of measuring protocol with or without all relevant settings - #    yes no	<b>PM Printout Head yes</b>	Select one of the options with <b>C</b> <b>B</b> store and jump to next selection
Soft switch for printer on or off yes    printer on no     printer off - #    yes no	<b>PM Values yes</b>	Select with <b>C</b> Use <b>A</b> and <b>B</b> for selecting measuring
The protocol can be printed out once or twice (customer copy) - #    single double	<b>PM Printout single</b>	Select one of the options with <b>C</b> <b>B</b> store and jump to next selection Conf
For paper changing - the printer will be switched on	<b>PM Change of Paper</b>	Select one of the options with <b>C</b> <b>B</b> store and jump to next selection
	<b>PM Change of Printer on</b>	Use <b>A</b> and <b>B</b> for selection of yes or no Confirm with <b>C</b>
	<b>DM Menu Quit</b>	Proceed with <b>C</b>