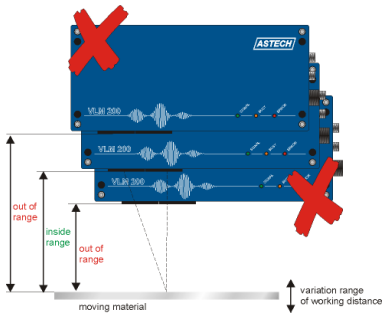
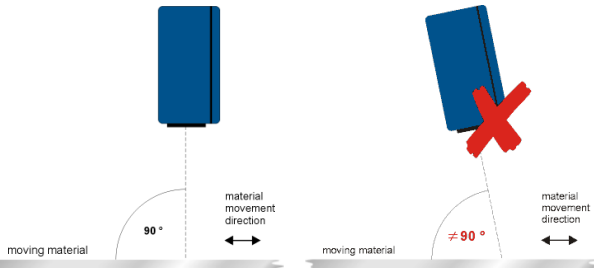
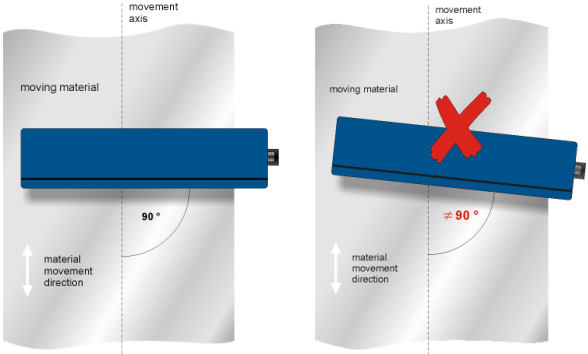
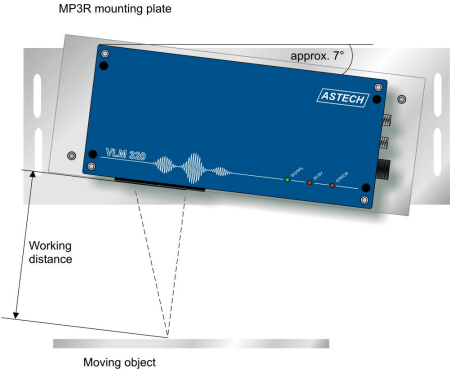
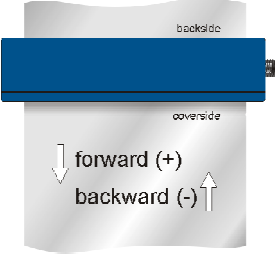


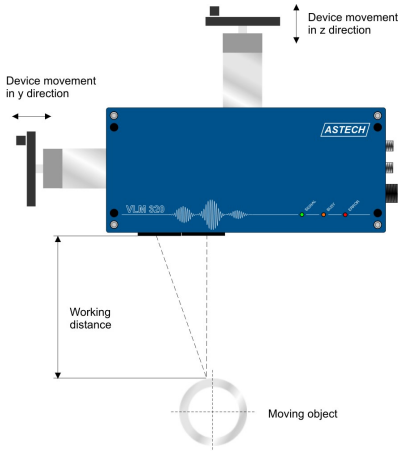
Please fulfill the checklist carefully and completely.

VLM Serial Number: _____ Date: _____
 Company Name: _____
 Installation Place: _____
 Controllers Name: _____
 E-Mail: _____ Phone: _____

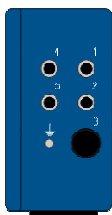
MECHANICS

No.	Point of Interest	Comment	Result
1.	Environment	Take a place for the VLM where environment is clean. If there are dust, steam, heavy dirt, oil or other liquids the gauge has to be protected. Following products are available for this: <ul style="list-style-type: none"> • Air Jet PA2 (only for dry dirt) • Protection- and Cooling Case CB5 • Air Supply Unit AC5 	<input type="checkbox"/> oil or water <input type="checkbox"/> dust <input type="checkbox"/> steam <input type="checkbox"/> heavy dirt <input type="checkbox"/> PA2 <input type="checkbox"/> CB5 <input type="checkbox"/> AC5
2.	Object Guiding	Take a place for the gauge where object guiding is as good as possible. Object runs straight forward without any athwart movement or rotation. Beware of vibrations and mechanical shocks (object <u>and</u> gauge). If there are <u>low</u> vibrations – dampers should be used.	<input type="checkbox"/> no vibrations <input type="checkbox"/> low vibrations <input type="checkbox"/> dampers used <input type="checkbox"/> no athwart move <input type="checkbox"/> no object rotation
3.	Working Distance (WD)	The WD of the gauge is printed on the serial number label. WD has to be kept as good as possible. Report the minimum and the maximum distance between window frame and object surface. 	WD _{min} : _____ mm WD _{max} : _____ mm
4.	Angle Alignment	The angle alignment of the gauge is very important. Two angles have to be aligned to 90° ± 1°: A: Optical axis to object surface 	Angle A: _____ ° <input type="checkbox"/> max. ± 1° tolerance kept

No.	Point of Interest	Comment	Result
		<p>B: Movement axis to cover</p> 	<p>Angle B: _____°</p> <p><input type="checkbox"/> max. ± 1° tolerance kept</p>
5.	<p>Object Surface Flat Surface</p>	<p>If a flat object surface is glossy or has low contrast (coated materials or same plastic surfaces) the VLM has to be turned about 5 to 7°. For this alignment the mounting plates MP3R or MP5 (for protection case CB5) are available.</p> 	<p><input type="checkbox"/> glossy surface</p> <p><input type="checkbox"/> low contrast surface</p> <p><input type="checkbox"/> MP3R used</p> <p><input type="checkbox"/> MP5+CB5 used</p> <p><input type="checkbox"/> other equipment:</p>
6.	<p>Movement Direction</p>	<p>Report the movement direction of the object. An arrow label beside the windows will indicate forward (+) and backward (-)</p> <ul style="list-style-type: none"> • Forward: from the backside to the cover side • Backward: from the cover side to the backside • Alternatively, direction change 	<p><input type="checkbox"/> forward</p> <p><input type="checkbox"/> backward</p> <p><input type="checkbox"/> direction change</p>
7.	<p>Object Surface Cylindrically Surface</p>	<p>If the object has a cylindrically surface (tube, profile, rod, cable, etc.) the VLM has to be moved across the diameter until the best reading track is found. This position is a little bit out of center from the right to the left (see figure). For this alignment the linear moving units LJ1 (one axis) or LJ2 (two axis) have to be used.</p>	<p><input type="checkbox"/> cylindrically object</p> <p><input type="checkbox"/> LJ1 used</p> <p><input type="checkbox"/> LJ2 used</p> <p><input type="checkbox"/> other equipment:</p>

No.	Point of Interest	Comment	Result
			<input type="checkbox"/> personnel is introduced
8.	Windows	Check the window cleanness. Windows have to be clean and free of fingerprints, liquid films, dirt etc..	<input type="checkbox"/> windows are clean

WIRING

No.	Point of Interest	Comment	Result
9.	Earth connection	The VLM earth screw has to be connected as low-resistant as possible to earth. An earth cable comes with the gauge. Check the ohmic resistance from VLM to earth.	<input type="checkbox"/> earth screw is connected to earth <input type="checkbox"/> resistant = ____ Ω
10.	Power Supply	Depending on gauge type there are three different power supply voltages available. The correct voltage is printed on the serial number label.	Used voltage: <input type="checkbox"/> 24 V/DC <input type="checkbox"/> 115 V/AC <input type="checkbox"/> 230 V/AC
11.	Connectors	Each VLM comes with a wiring scheme. Wiring has to be done according this scheme. Connector meaning is:  <ul style="list-style-type: none"> #1 Programming (RS232) #2 Signal output, control input #3 Power supply (take right voltage!) #4 Signal output, control input, optional #5 Signal output, control input, optional 	Wiring checked: <input type="checkbox"/> connector #1 <input type="checkbox"/> connector #2 <input type="checkbox"/> connector #3 <input type="checkbox"/> connector #4 <input type="checkbox"/> connector #5
12.	Cable	For connectors #2, #4, #5 shielded cable has to be used. The shield has to be connected to earth.	<input type="checkbox"/> shielded cable used <input type="checkbox"/> shield is earthed
13.	Signals	Depending on gauge type and application there are different output signals available: pulses, analog output, serial output and status output (OUT3). Additionally there are two inputs: DIRECTION (IN1) and TRIGGER (IN2). IN1 and IN2 status will be indicated in <i>TEST</i> command. Please check if the used signals come out and go in. Make sure that used outputs are activated (point 16).	In/ outputs are tested: <input type="checkbox"/> stand-by IN0 <input type="checkbox"/> direction IN1 <input type="checkbox"/> trigger IN2 <input type="checkbox"/> error output <input type="checkbox"/> pulse output(s) <input type="checkbox"/> status output <input type="checkbox"/> analog output <input type="checkbox"/> serial output

PARAMETER SETTING

In general the VLM comes pre-programmed on customers demand according the application. However, it is recommend to check the parameter and if necessary to adapt it.

No.	Point of Interest	Comment	Result
14.	Preparation	Hook up a PC or Laptop to the VLM connector #1. Install and start the terminal program VLMTERM.EXE. Power on the VLM. On the computer screen the VLM initialization message will be displayed and the gauge is ready for programming.	<input type="checkbox"/> connection works
15.	Parameter DIRECTION	There are three possibilities to give the gauge the direction information: 1. Direct setting (<i>Direction 0, 1, 5, 6</i>) 2. External direction input (<i>Direction 2, 3, 7, 8</i>) 3. Automatic direction detection (<i>Direction 4, requires optionally PCB board DIR</i>) Depending on the mounting orientation of the VLM (forward, backward, both; see point 5.), the parameter <i>DIRECTION</i> has to be set. If this parameter is set wrong, the measurements will be incorrect depending on the speed! Please notice that the parameter <i>DIRECTION</i> has a double meaning: beside the direction itself the speed range and the working distance tolerance will be set. Read the chapter DIRECTION of the VLM user manual.	<input type="checkbox"/> <i>DIRECTION</i> = __
16.	Parameter VMAX	The Vmax command is used to adjust the maximum plant velocity in m/s. For optimised operation, the value for Vmax must be adjusted to the actual conditions. To ensure that the automatic adjustments are made accurately, it should not be too high or too low. Read the chapter VMAX of the VLM user manual.	<input type="checkbox"/> <i>VMAX</i> =
17.	Parameter for Outputs	Used outputs have to be activated. It can be that the scaling of the pulse- and/or analog output or the string for the serial output has to be changed. Unused outputs should be deactivated. Read the corresponding chapter of the VLM user manual.	<input type="checkbox"/> used outputs activated <input type="checkbox"/> unused outputs deactivated <input type="checkbox"/> scaling checked <input type="checkbox"/> string checked
18.	Parameter Store	Finally the parameter has to be stored (command <i>*STORE</i> , password <i>WEGA</i>). It is recommend to make a backup (command <i>READPARA</i>) and to send a copy to info@astech.de to enable technical support.	<input type="checkbox"/> parameter stored <input type="checkbox"/> backup done



Please send the **filled form**, the **parameter of the VLM** and if possible a **digital photo** of the installation place to ASTECH GmbH Germany **info@astech.de** or **FAX +49 381 44073 20** to enable the best technical support.