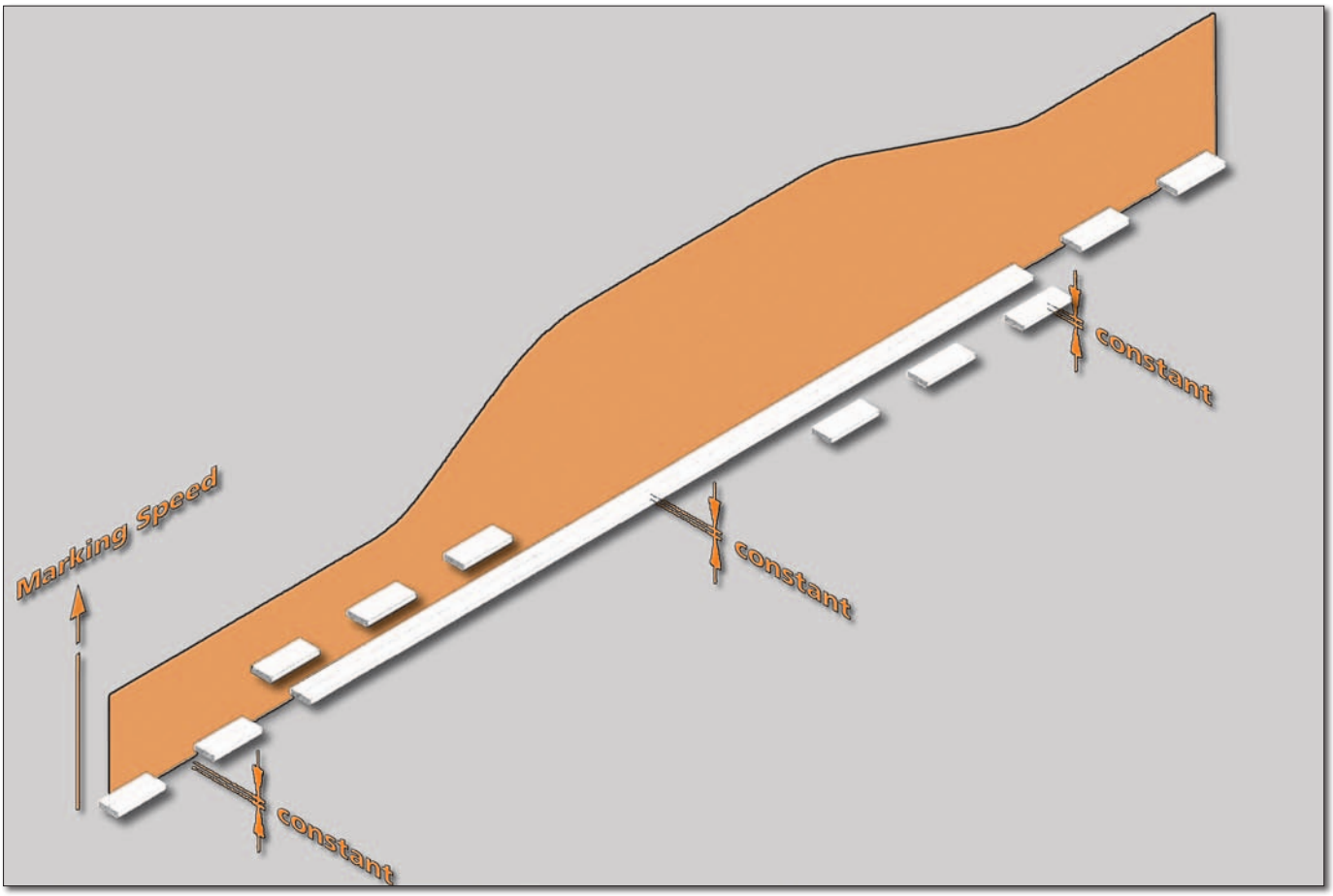
Metering Technology



HOFMANN– Metering technology for marking according to specifications –

... just like the principal asks for!

- Only by complying with the spray-thickness values and bead volumes used in acceptance testing is it possible to guarantee that those test figures will also be obtained in everyday marking operations. In view of the fact that it is not possible to measure the spray thickness in an economical manner after the material has been applied, public works authorities who commission roadmarking were for a longtime on the lookout for a system that allows the spray thickness to be predetermined with a simple setting and ensures that it automatically remains at a constant level – irrespective of marking speed and regardless of changes in material viscosity.
- A key factor in this concept are metering pumps, which have to meet the special applicational requirements of roadmarking technology:

  1. Constant delivery volume irrespective of the number of rotations per minute, as well as regardless of pressure and material viscosity.
  2. No pulsations (without pulsation dampers).
  3. No progressive wear and tear that would reduce delivery volume and make it necessary to calibrate and readjust at regular intervals.
- The technique became known under the name AMAKOS® since 1980.

  AMAKOS® means

  Application of
  Marking materials with
  Automatic
  COnstant maintenance of
  Spray thickness

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ROAD MARKING SYSTEMS

Most of the HOFMANN systems with pumps are suitable for the AMAKOS®-mode of operation as well as the Non-AMAKOS®-mode.

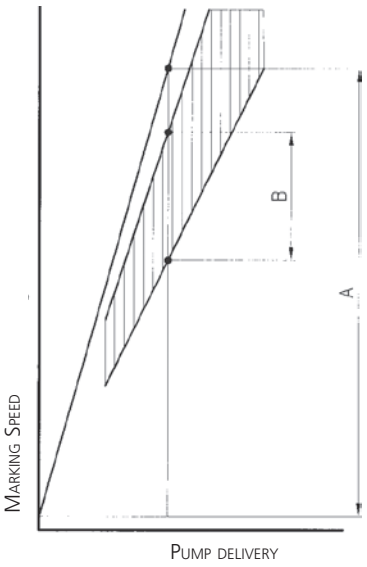
AMAKOS®
Operating mode for the application in proportion to travel speed. When in this mode of operation,you may vary you travel speed at will within a wide range. The spray thickness will nevertheless remain at a constant level. Maintaining a specified spray thickness is no longer dependent on specialist skill and reliability. With AMAKOS®,there is no more need to supervise speed, pressure and viscosity.

Non-AMAKOS®
Operating mode enabling you to set a delivery volume that remains constant irrespective of travel speed. Whenever you alter your travel speed in this mode of operation, also the spray thickness changes.

HOFMANN now offers the AMAKOS® technology for the following methods and marking materials:

	Airspray	Airless	Extrusion
Cold paints	•	•	
2-component cold plastics			•
Spray. 2-comp. cold plastics	•	•	
Thermoplastics			•
Sprayable. Thermoplastics	•		

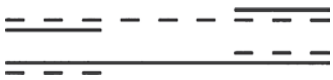
The diagram shows the speed ranges within which it is possible to vary the marking speed.



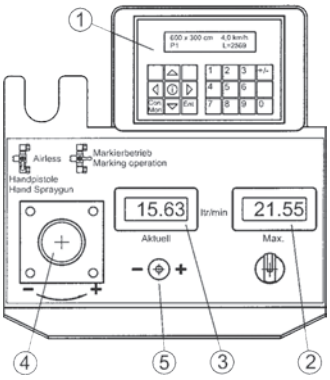
The range of speed variation available with the airless spray method is restricted in comparison with the atomizing air method. The practicable maximum speed is generally equivalent to 1.5 times the practicable minimum speed.

A Atomizing air spraying method
B Airless spraying method

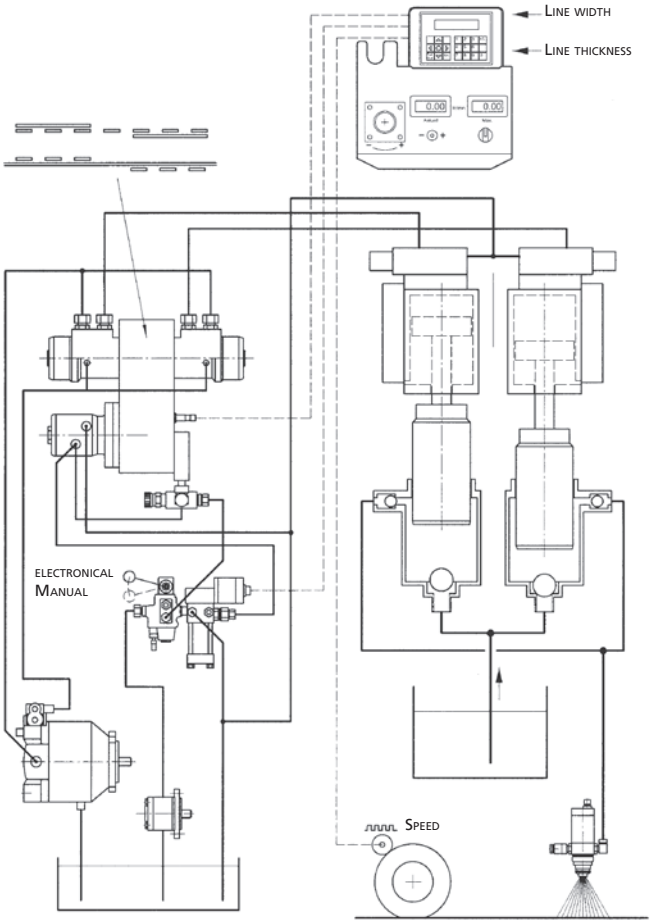
No problem with line combinations in one working operation (does not apply to two-component materials). Whenever a second spraygun is opened, the pump switches over to double the delivery volume of material.



Control unit that allows to enter marking line values for width and spray thickness. In addition, there is a documentation system enabling you to make regular logs of the calculated line thickness or deviations from line thickness that exceed the selectable limits. Entering and recording other specification data provides logs that are often appreciated by customers.



1 Setting of line width and desired spraying thickness
2 Display of max. possible delivery at current engine speed
3 Display of current delivery
4 Setting of pump pressure during line interruption
5 Remote control for setting of constant delivery (backup system)



It goes without saying that HOFMANN also developed alternative systems, namely systems based on flow-volume measurement with their own (no wear and tear built-in) volume meters.

Systems of this kind, which display at any given time the current spray thickness or the volume per square metre, are only a step in the right direction, because they are only control systems. The operator has to keep an eye on the display and react to any deviations by varying the speed accordingly – a tiring task. No wonder that HOFMANN customers opt without exception for systems with metering pumps. After all, metering systems include the measuring process and ensure delivery of the appropriate volume.

Subject to technical changes and errors !

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