

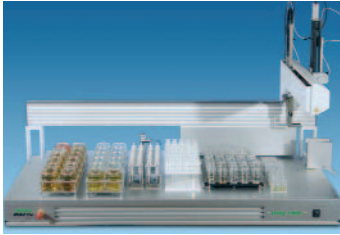
# Blenda®

## Blending System for Viscous Media



The Blending Station BLEND A is designed for the preparation of complex blends of viscous media. Specially designed pumps, liquid delivery tools and powerful software allow high throughput blending without compromise in precision or accuracy.

- Precise gravimetrically controlled distribution of all components
- Liquid handling of solvent arrays
- Variable volume precision powder dispensing pipette
- Viscous media dispenser
- Temperature control
- Mixing and stirring
- Capping and De-capping
- Integrated viscosity meter for viscosity measurement & adjustment
- Additional modules such as solid handling, liquid handling, pH-measurement, etc. can be integrated.



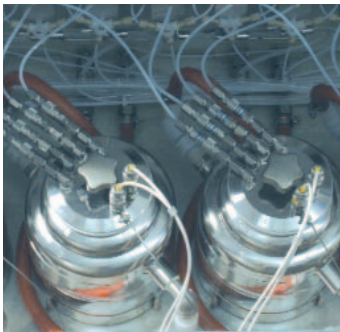
### **The Workbench**

There are different sizes of workbench available from 90cm to 250cm depending on the required throughput. BLENDA can be equipped with one or two independently operating arms. Each arm is equipped with our VISC tool, a viscous media dispenser, and a gripper.



### **Integrated gripper**

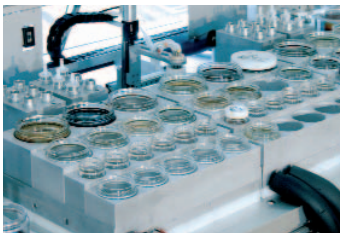
BLENDA is equipped with a gripper arm for the transportation of the blending vessels and the syringes of the viscous media tools.



### **Storage of Source and Blending Containers**

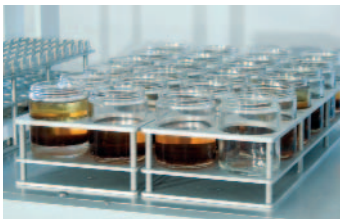
Bulk reagents are stored in their 5 litre cans below the workbench or outside the cabinet.

Standard low cost glass jars are used as source and blending vessels (50ml, 150ml, 200ml, 300ml, 500ml and 1,000ml). The vessels are positioned in racks, made to the dimensions of the vessels on the workbench. For the combination of different volumes our strip racks are available. The storage racks can also be heated to different temperatures.



For smaller volumes Zinsser Analytic's DESYRE reactor blocks are available, which are manufactured from aluminium for efficient heat transfer. The modular blocks contain 96 (1ml), 48 (4 or 6ml), 24 (4,8 or 10ml) or 8 (20, 25 or 40ml) glass or PTFE reactors are used.

Customer's labware can be integrated on request.



### **Viscous Media dispensing**

For precise dispensing of the viscous media, each dispense step is gravimetrically controlled. The software has developed a special algorithm which also considers the drop size of the sample. The combination of volumetric and gravimetric dispensing with the special pipetting algorithm of the software enables outstanding performance. The precision and accuracy are < 1%. There are two different technologies available for the distribution.



Less viscous media and the bulk reagents are dispensed with a manifold. The reagents are stored in 5 litre cans under the workbench or outside the cabinet. A pump tower - under the platform - with 9 high precision rotating piston pumps delivers the reagents from the reservoirs and dispenses them via a special dispensing head into the blending vessels waiting on the balance, a 4-digit weighing cell. Heating of the lines is available as an option.

The dispensing head can move on a linear drive between the two balance positions and the purge station and service both weighing stations.

Highly viscous media (up to 15,000 cps) are dispensed with our VISC tool by positive displacement. The VISC tool is mounted on the robotic arm. For each sample it picks up a syringe, which is placed on the platform. Heating is available as an option for the syringes. The syringes are available from 1 to 10ml and can dispense from 10µl to 10ml.

The software chooses the appropriate syringe for each dispensing step. After dispensing the syringe can be discarded, or it can be returned to the racks so that it can be reused for the same sample in the run. After the run the syringes should be discarded.

### **Throughput**

The throughput very much depends on the number of reagents to be blended together per blending vessel. 160 blends of about 40-50ml with an average of 9 viscous blends can be processed in 24 hours.

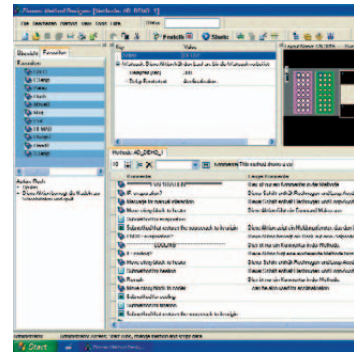
## Software

The system is controlled by the well-established WinBLENDa Software package. The software enables the user to define his own reagent vessels, carriers etc. in the Zinsser Layouter programme.

The Zinsser Designer is a new user-friendly tool for the design and development of methods and the data handling including import and export from peripheral sources and instruments using a simple “drag and drop” technique.

The blending recipes can also be programmed and imported from your LIMS system or from an Excel® file.

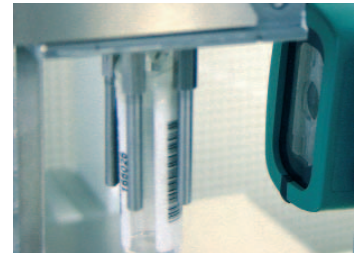
A complete audit trail is provided, which is used to control the system, and for documentation of each run.



## Options

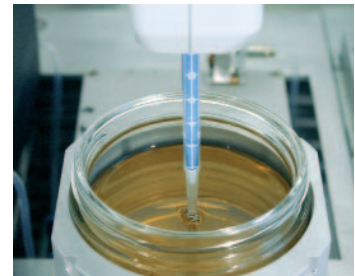
### 2D Barcode Reader

For sample identification BLENDa can be equipped with a barcode camera. The barcode can be used in the blending recipe and the software will recognise where the reagents have been placed. The barcode can also be exported in the result file.



### Level Detection

For accurate pipetting it is important to know the filling height in the vessels. Automated level detection is available as an option.



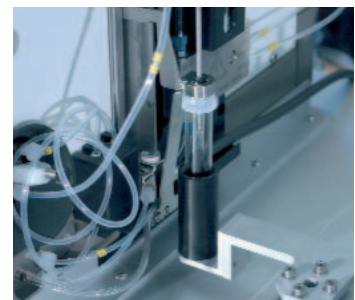
### Capping - Decapping

To prevent evaporation, the samples can be placed on the workbench in screw capped containers. BLENDa will pick up the container and place it to the capper-decapper to open the container just prior to the dispense step. The capper-decapper is available for different diameters.



### Viscosity Measurement & Adjustment

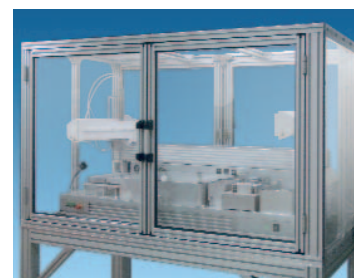
BLENDa can be equipped with an integrated viscosity meter to measure the viscosity at any time during a run. If a target viscosity had been entered it can even adjust the viscosity to the target value.



### Table & Enclosure

BLENDa can be provided with a cabinet and a table. The cabinet can be connected to the customer's exhaust system to remove any hazardous vapour.

The cabinet is made from aluminium and polycarbonated windows, which can be opened for easy access.



### And much more...

As all Zinsser Analytic systems, BLENDa can be customised to your requirements. There is a large number of modules available which can be added to the platform, such as pH-measurement & adjustment, heating, cooling, mixing, addition of solids or liquid handling, HPLC sampling, etc.

## System Configuration of Blenda®

Blending Station with

2 independently working pipetting arms  
2 VISC viscous media dispensing tools

2 4-digit weighing cells, integrated into workbench, including wind shield  
1 9-fold pipetting head for large volumes  
4 heated racks for VISC tips 2x3 pos.  
2 storage racks for VISC tips 5x16 pos.

1 temperature controlled source rack (strip rack) for 500ml vials, 3 pos.  
1 temperature controlled source rack (strip rack) for 250ml vials, 4 pos.  
1 temperature controlled source rack (strip rack) for 125ml vials, 5 pos.  
1 temperature controlled source rack (strip rack) for 60ml vials, 6 pos.  
4 destination racks for 250ml vials, 12 (2x6) pos.

### Dimensions

workbench 2500 x 730mm  
work area 2200 x 420mm for 15 decktrays

software package WinLISSY  
complete with PC, keyboard and TFT monitor