# Alpha-Vet Animal Health LTD. Pharmaceutical Plant Veterinary Products Bábolna



## ABOUT THE FACTORY IN GENERAL

#### THE BUILDING

Built by traditional technology according to the production requirements — contains production area and rooms for supporting activities

#### The building contains:

#### Production area:

- Weighing rooms
- Granulation area
- Powder technology for premixes
- Tableting area
- Liquid technology (solutions and suspensions)
- Secondary packaging area

#### Storage area:

- Storages for starting materials
- Storage for quarantine and semi-finished products
- Storage for finished products

#### **Supplying systems**

- HVAC system
- Compressed air system
- Air treating system for fluid granulation
- Purified Water supplying system
- Production and supporting activities are placed on the first floor, offices and quality control laboratory are located on the second floor.
- Size of whole plant including the laboratory and supporting areas is 1.100 m<sup>2</sup>



# PRODUCTION OF POWDER MIXTURES

#### HORIZONTAL BARREL MIXER

Mixing capacity: 300 kg (600 litre)

#### **AUTOMATIC SACK FILLER**

- Prepares sacks from 390 mm wide flat foil by a forming unit
- Suitable for different foils (BOPP or laminated foils)
- Filling range between 50-1000 gram

#### AUTOMATIC BAG FILLING DEVICE

- For dispensing and closing 10 to 50 kg paper bags
- Relocatable to any other machines







# FLUID GRANULATION

#### FLUID GRANULATOR

- Suitable for granulation of powders, maximal batch size is 250 kg.
- Peristaltic liquid dispenser
- Solution preparation tanks for making binder solutions

## 2,000 LITER HOMOGENIZATOR

- For homogenization of dry or slightly damp powders and granulates
- Maximum filling weight: 800 kg

#### OSCILLATION SIEVER AND ROTATION REGRANULATOR

- The oscillation siever for sieving powders
- The rotation regranulator for milling and standardising particles or granulates



# TABLETT PRESSING, BLISTREING

#### TABLETING MACHINE

#### 4 tablet punches tablet press

- Rotary system
- 30.000-70.000 tablets/hour
- 400-1200 milligram tablet weight

#### **BLISTERING MACHINE**

- Suitable for PVC and aluminium packaging materials
- Card size of even 110 mm x 140 mm

#### **V-BLENDER**

- Capacity of 300 I
- For homogenisation of granulates before tableting







### LIQUID TECHNOLOGY

#### SOLUTION PREPARATION HAPPENS IN CLASS "C" AREA

General batch size 250 – 500 litres

#### ROOMS OF LIQUID PRODUCTION PLANT

- Separated material air locks for incoming starting and primary packaging materials from Class D to Class C
- Separated material air lock for outgoing semi-finished products from Class C to Class D, to storing area
- Separated personnel air lock from Class D to Class C
- Weighing room for liquids
- Solution preparation room
- Filling room
- Separated Washing room for assets of liquid production

# AUTOMATIC SOLUTION PREPARATION SYSTEM FOR SOLUTIONS AND SUSPENSIONS

- PLC managed system
- 250 and 500 litres heatable vessels
- 600 litres storing tank for filling
- Mixers
- CIP
- Colloid mill for suspensions

# FILLING SYSTEM FOR SOLUTIONS AND SUSPENSIONS

- Peristaltic pump
- Buffer tank with mixer
- Semiautomatic pneumatic filling machine
   (filling volume: 100-1000 ml solutions and suspensions)

#### CAPPING MACHINE

Suitable for closing flacons with multiform caps

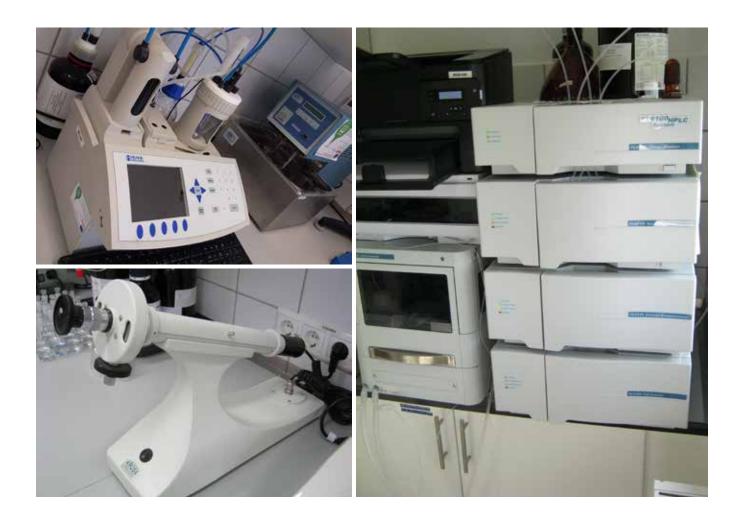
#### INDUCTIVE CLOSING MACHINE

Suitable for closing flacons with inductive seals



## QUALITY CONTROL LABORATORY

- 1. Measurements for API's and
  - a. IR-identification
  - b. Particle size by Malvern Mastersizer
  - c. Assay by HPLC or GC-method or UV-Spectropfotometry or Titrimetric-method
  - d. Optical rotation determination
  - e. Loss on drying or KF-water content
  - f. pH-measurements
  - g. conductivity measurements
- 2. Measurements for different types of products (powders, tablets/film-coated tablets/capsules, granules etc.)
  - a. Physical parameter measurements
    - i. Particle size by Malvern Mastersizer or Sieve-analysis
    - ii. Loss on drying or KF-water content
    - iii. friability, hardness, disintegration for solid dosage forms
    - iv. pH-measurements
    - v. conductivity measurements
  - b. Chemical parameter measurements
    - i. Assay measured by diverse methodology (HPLC, UV-Spectropfotometry or Titrimetric-method)
    - ii. Impurity measurements with adequate methodology (HPLC or GC)
    - iii. Dissolution for solid dosage forms followed by HPLC, UV-Spectropfotometry or Titrimetric-measurement





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