



PHARMACEUTICAL DEVELOPMENT
TECHNOLOGY

PHARMACEUTICAL DEVELOPMENT

EQUIPMENT INDEX

DRY BLENDING

EQUIPMENT	WORKING CAPACITY (Blend density 0.5kg/L)
Turbula T2F Shaker Blender	Up to 0.7Kg
Erweka Y Cone	Up to 2.8Kg
Erweka Double Cone	Up to 4Kg
Manesty Drum Blender	10Kg
Y Cone	Up to 15Kg
Pharmatech MB15	1 – 5Kg
Pharmatech Blending System MB400 & LC400	Wide range of container types and sizes including IBC blend containers, Y cone and double cone from 2.5 to 100Kg

DRY GRANULATION

EQUIPMENT	WORKING CAPACITY
Alexanderwerk WP120V Roller Compactor	Throughput from 250 gram (batch) to ~ 40Kg / hr

WET GRANULATION

EQUIPMENT	WORKING CAPACITY
Aeromatic Fielder Laboratory High Shear Mixer Dryer	1 – 2Kg
Planetary Mixer	Up to 3Kg
Diosna VAC 20 High Shear Granulator Dryer	3 – 7Kg
Diosna VAC 150 High Shear Granulator Dryer	25 – 50Kg
Diosna CAP150 Fluid Bed Dryer	Up to 60Kg as dryer 7.5 – 50Kg for top spray granulation 7.5 – 40Kg for Wurster coating
Diosna Mini-Lab	Up to 3.5Kg as dryer 500g – 3.5Kg for top spray granulation 100g – 2Kg for Wurster coating

COMPRESSION

EQUIPMENT	TOOL TYPES
Riva Minipress	Equipment Specific Tooling
Riva Piccola	D Type Tooling
Korsch XL100	B/D Type Tooling (Interchangeable turret)
Manesty B3B	B Type Tooling
IMA Kilian Pressmatic	Equipment Specific Tooling

ENCAPSULATION

EQUIPMENT	CAPSULE SIZES
Xcelodose 600S Precision Micro-Dosing System	Size 3 and 0 capsule change parts
IMA Lab 16	4, 3, 2, 1, 0, 0el and 00, DB Capsule sizes B and C
Powder Pipette	N/A

SPRAY DRYING

EQUIPMENT	WORKING CAPACITY
Buchi Mini Spray Dyer B-290 Advanced	Max airflow: 35m ³ / hr Evaporating capacity: 1.0L / hr of water (higher for organic solvents)

SACHETING / POUCHING

EQUIPMENT
Universal Pack Model NV5-5-C

COATING

EQUIPMENT	DRUM SIZE	LOAD CAPACITY
Manesty XL Lab	405mm	1.5 – 3.0Kg
Manesty XL Lab	480mm	3.2 – 5.5Kg
Manesty XL Lab	610mm	8 – 11Kg
Glatt GMPC II	2/9/24/56L	1.0 – 35Kg

CHECKWEIGHING

EQUIPMENT	SPEED (THEORETICAL)
Precisa 120 Capsule Checkweigher	4, 2, 1, 0el, 00
SADE SP100	45 – 55 units / min

SMALL-SCALE PACKAGING

EQUIPMENT
Noack Blister Packer
Swiftpack / SwiftCount
Klockner EAS Blister Machine
Sepha EZ Blister Machine II

EQUIPMENT DESCRIPTION

DRY BLENDING

TURBULA T2F SHAKER BLENDER

Almac Pharma Services has 2 x T2F laboratory scale, multi-dimensional shaker blenders. Operation is based on a three-dimensional motion combining a figure of 8 movement with rotation. The Turbula has an operational capacity of up to 2 litres.

ERWEKA Y CONE

The Y cone has a total capacity of 8 litres giving an operational capacity of approximately 2.5 – 5.5 litres. The Y cone fits to a variable speed drive unit, which operates from 0 – 120 rpm. The Y cone geometry produces a tumbling, rolling and folding action resulting in efficient mixing.

ERWEKA DOUBLE CONE

The double cone has a total capacity of 12 litres giving an operational capacity of 4 – 8 litres. It fits to a variable speed drive unit, which operates from 0 – 120 rpm. Mixing is achieved by the rotary action of the cone combined with the sliding / shearing action produced by the inclined sides of the cone.

MANESTY DRUM BLENDERS (10KG)

The diagonal placement of the drum within a hoop, combined with the rotation of the hoop itself produces a uniform, three-dimensional displacement of the material and hence a tumbling mixing action.

Y CONE

The Y cone has a total capacity of 30 litres.

MATCON IBC (300L)

IBCs (Intermediate Bulk Containers) are highly efficient blending containers due to their irregular shape. The Matcon 300L bin is fully scaleable to the 1350L commercial-scale IBCs.

PHARMATECH BLENDING SYSTEM

Almac Pharma Services has 2 model drive units; 1 MB400 and 1 ATEX rated LC400. Each has a variable speed range of 5 – 30 rpm. The drive units are compatible with a range of blend container types (drum, IBC, double cone and Y cone) over a range of total capacities from 15 – 200 litres.

PHARMATECH MB15

The Pharmactech MB15 is a bench-top version of the MB400's with a capacity range of 1-5Kg. It is compatible with a range of shell sizes / types. Almac Pharma Services have 2x MB15 Blenders.

DRY GRANULATION

ALEXANDERWERK WP120V ROLLER COMPACTOR

The WP120V Roller Compactor is a cantilevered compaction roller type machine which is PLC controlled. It is designed to compact powders into a ribbon, which is then broken into flakes that can be sized through an integrated two stage granulating system. The machine can be used to run small-scale batches or in a continuous higher throughput mode.

EQUIPMENT DESCRIPTION

WET GRANULATION

AEROMATIC FIELDER LABORATORY HIGH SHEAR MIXER DRYER

The working capacity of this machine is from 1 - 2 Kg. The machine has a variable impellor and chopper speeds. Drying of granulate can be achieved by heating (jacketed vessel) in combination with vacuum application. Microwave drying is also an option with this machine. Alternatively the wet granulate can be discharged for drying by other means (e.g. Fluid bed).

PLANETARY MIXER

A small-scale mixer with planetary mixing action and a 6 litre capacity bowl. Used for small-scale bench top mixing and granulation processes.

DIOSNA VAC 150 HIGH SHEAR GRANULATOR DRYER

The working capacity of this machine is from 20 - 50Kg. The machine has variable impellor and chopper speeds. Drying of granulate is achieved by heating (jacketed vessel) in combination with vacuum application and optional gas-stripping with nitrogen. Alternatively, the wet granulate can be discharged for drying by other means (e.g. Fluid bed).

DIOSNA VAC 20 HIGH SHEAR GRANULATOR DRYER

The working capacity of this machine is from 3-7Kg. The machine has variable impellor and chopper speeds. Drying of granulate is achieved by heating (jacketed vessel) in combination with vacuum application.

DIOSNA CAP 150 FLUID BED DRYER

This machine works to a capacity of 60Kg when used as a dryer. The capacity ranges from 7.5Kg - 50Kg when used for top spray granulation. The capacity of the dryer ranges from 7.5Kg - 40Kg when used for Wurster coating.

DIOSNA MINI-LAB

This Mini-Lab is a self-contained bench top FBD that can also be used for top spray granulation and Wurster coating of pellets and mini tablets. The machine is available with 3.5L and 7L interchangeable bowls.

COMPRESSION

RIVA MINIPRESS

Almac Pharma Services has 2 Riva Minipress units. The Riva Minipress has a single station, which works at a maximum rate of 6,000 tablet compressions per hour. The Riva Minipress provides a last Compression Force measured read-out.

RIVA PICCOLA

The Riva Piccola has 8 stations and can operate at a speed range from 2,000 -20,000 tablet compressions per hour. The Riva Piccola provides a pre and main compression and ejection force measurement.

KORSCH XL100

The Korsch XL100 has an interchangeable turret system allowing the machine to be operated as a 10 station B machine or an 8 station D machine and can output 1500-28000 tablets per hour. The Korsch XL100 provides pre and main compression measurement.

MANESTY B3B

A 16-station, single rotary, tablet machine with a tablet output range of 15,000 - 30,000 tablets per hour (fully tooled).

IMA KILIAN PRESSMATIC

A 20-station rotary tablet press operational in 3 modes:

- Normal compression of up to 40,000 tablets per hour output.
- Compression of up to 30,000 tablets per hour when operated as bilayer or dricoat.
- Compression of tablet-in-tablet product. Material is compressed around a previously compressed core.

ENCAPSULATION

XCELODOSE 600S, PRECISION POWDER MICRO-DOSING SYSTEM

The Xcelodose 600S is a precision instrument that can be used to fill small amounts (100µg-250mg) of drug directly into capsule shells. Almac Pharma Services have size 3 and 0 capsule change parts. Other sizes of change parts are available.

PRECISA 120 CAPSULE CHECKWEIGHER

The checkweigher has an output of 120,000 capsules per hour. Almac Pharma Services has Size 4, 2, 1, 0 and 0el change-parts.

IMA LAB 16

There are 2 dosators in the IMA Lab 16. Almac Pharma Services has sizes 4, 2, 1, 0, 0el and 00 and capsule sizes B and C change-parts for this machine. The machine can fill pellets, powders and tablets, either singly or in combination.

POWDER PIPETTE

The powder pipette is a system for filling small vials, capsules or other containers with powders or granules. The dose range is 15-600mg.

SPRAY DRYING

Buchi Mini Spray Dyer B-290 Advanced

The spray dryer is a bench top system for quick and easy drying of aqueous / organic solutions and suspensions with a maximum drying capacity of 1.0L / hr of water.

SACHETING / POUCHING

UNIVERSAL PACK MODEL NV5-5-C

This is an auger dose type filling operation. It has change-parts for 4 and 5 lane sachet formats and operates at up to 35 cycles per minute.

COATING

MANESTY XL LAB (405/480/610mm)

This machine has 3 interchangeable side perforated drums, allowing film coating of batch sizes from 1.5 - 11Kgs. It is able to coat using aqueous and solvent based coating systems.

GLATT GMPC II

Almac Pharma Services has 2, 9, 24 and 56L drums for this machine, which can take loads between 1 and 35Kg. The machine can be used for solvent coatings. It can also be used for pellet coating.

CHECKWEIGHING

SADE SP100

Accurate weight sorting of capsule and tablet batches. The unit weighs each item individually and according to the weighing limits set into the control unit, it sends items that are within those weight limits into an accept containers. Any tablets out of the weight range are sent to the reject bin.

SMALL-SCALE PACKAGING

NOACK BLISTER PACKER

This blistering unit can be used to produce a range of formats of blisters. It operates as a stand-alone unit and has a theoretical speed of up to 40 strokes / minute.

SWIFTPACK / SWIFTCOUNT

The Swiftpack batch counter is a twin track counting machine used to count tablets (size 2-9mm) or capsules (size <20mm) into containers.

KLOCKNER EAS BLISTER MACHINE

The Klockner EAS Blister Machine can manufacture small scale batches of both thermoform or coldform blisters for stability or small scale clinical trial. Specific blister format tooling can be manufactured by our engineering group. Output rate of up to 80bpm

SEPHA EZ BLISTER II

The Sepha EZ Blister II is a semi-automatic bench top blister packing machine, which can be used for both thermoform and coldform blister manufacture, on a small scale. Tooling can be manufactured in-house to suit clients' product size and required formats(s).



If you require any further information,
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