



MANUFACTURING EQUIPMENT*

Equipment	Model	Manufacturer	Capacity/Rate	Available Sizes/Range	Comments
Blending					
Turbula Blender	Type T2F & T10B	Glen Mills	Based on bulk density	<17L	Multiple vessel sizes available
Lab Scale V-Blender	Yoke Model Blend Master	Patterson Kelley	Based on bulk density	1 pt to 2 qt	Designed for small-scale blending
V-Blender	Blend Master	Patterson Kelley	Based on bulk density	4 qt to 16 qt	Dry powder blending with intensifier bar
V-Blender	1 ft ³	Patterson Kelley	Based on bulk density	Approx. 12 kg batch size	Dry powder blending
V-Blender	3 ft ³	Patterson Kelley	Based on bulk density	Approx. 36 kg batch size	Dry powder blending with intensifier bar
Granulation/Mixing					
Fluid Bed Granulator	Model 0002	Fluid Air	~70g to 1kg	2L	Drying, granulating, or Wurster coating
High Shear Granulator	PX1	Fluid Air	~70g to 6.7kg	0.5L to 8.4L	Jacketed mixing bowls
High Shear Granulator	GMX.01	Vector	~90g to 800g	1L to 4L	Jacketed mixing bowls
High Shear Granulator	GMX-25	Vector	~2kg to 5kg	25L	Jacketed mixing bowls
High Shear Mixer	L4RT	Silverson	0-8,000 rpm	<12L	Mixing, emulsifying, homogenizing, disintegrating, and dissolving
Roller Compaction					
Lab-Scale Roller Compactor	TFC-LAB Micro	Vector	1 kg/hour	--	Designed for small-scale dry granulation
Roller Compactor	TFC-220	Vector	20 kg/hour	--	Designed for pilot scale dry granulation
Tableting/Coating					
Tablet Press	Mini Press II	Globe Pharma	10,800 tablets/hour	Size B & D tooling	5 Station B & 5 Station D
Tablet Press	PH-106	Korsch AG	32,400 tablets/hour	Size B tooling	Instrumented
Perforated Coating Pan	LCDS	Vector	Based on bulk density	1.3L to 8L	Fully perforated design for tablet or capsule coating
Metal Detector	Met 30	Lock Inspection Systems	>0.3mm	As required	Detects ferrous and non-ferrous metals

Equipment	Model	Manufacturer	Capacity/Rate	Available Sizes/Range	Comments
Sizing					
Comil	197S	Quadro	360 kg/hour	Based on screen size	Multiple screen sizes available
Sieve Shaker	RoTap RX-30	Tyler	As required	8" and 12"	For bulk sieving
Encapsulation/Banding					
Manual Encapsulator	ProFill	Capsugel	100 capsules/tray	Size 5 to 000, AA capsules	Dry powder filling
Automatic Encapsulator	In Cap	Dott. Bonapace & C.	3,000 capsules/hour	Size 4 to 00 capsules	Liquid and dry powder filling
Automatic Encapsulator	GKF 130	Bosch	7,800 capsules/hour	Size 4 to 00 capsules	Dry powder filling
Automatic Encapsulator	GKF 400	Bosch	23,000 capsules/hour	Size 4 to 00 capsules	Dry powder filling
Microdose Capsule Filler	Powdernium MTM2005	Symyx	1,140 capsules or bottles/day	Size 4 to 00 capsules	Programmable dose weight (mg - gram)
Microdose Capsule Filler	Xcelodose 600S	Capsugel	2,000 capsules/day	Size 4 to 00 capsules	Programmable dose weight (μ g - mg)
Banding Machine	Lab Bander	Dott. Bonapace & C.	1,000 capsules/hour	As required	Capsule banding
Packaging					
Capsule/Tablet Check Weighing	SADE SP100 BT	CI Electronics	3,000 capsules or tablets/hour	As required	Automatic check weighing and sorting
Capsule/Tablet Counter	Vericount	Pallaypack	As required	As required	For bulk counting and bottling
Induction Sealer	Lepel JR	Lepel Inc.	1,200 cycles/hour	As required	Manual induction sealer
Blister Machine	In-Pack	Dott. Bonapace & C.	2 X 20 blister pack/actuation	Thermoform & coldform capability	Custom tooling designs available
Medical Pouch Sealer	MS-350-NG	Van der Stahl	As required	Tyvek and aluminum	Pouch sealing
Other					
Spray Dryer	B-290 Mini	Buchi	1.0 kg H ₂ O/hour	0.5 μ g - 30 μ g (particle size)	Compatible with aqueous and organic solvents
Lyophilizer	Genesis 25 EL	Virtis	Based on vial size	5 shelf unit	Vial stoppering, shelf latching available
Micro Balance	MX5 Automated-S	Mettler Toledo	+/- 1 μ g	Up to 5.1 g	--
Microfluidizer	110S	Microfluidics	14 mL to continuous	3,000psi - 23,000psi	For emulsions and dispersions

* Equipment list current as of March, 2011

Note: Test equipment includes DSC, TGA, Malvern, Surface Area Analyzer, FT-IR, Viscometer, Karl Fischer, LOD Analyzer, Friability, Dissolution, Disintegration, Hardness, Tap Densitometer, and Flowdex. This is not a complete list of Pharmatek's testing and manufacturing equipment. Please contact our Director of Manufacturing, Kevin Rosenthal, at (858) 805-6383 x220 for additional equipment information.

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