

Blenders

Blender: Turbula T2F

Blender, V-shell: 1 pt to 2 qt; Patterson-Kelly

Blenders (2); V-shell; 1 pt to 16 qt; with Intensifier Bar: GlobePharma

Blenders (2); V-shell; 8 qt; Keith Machinery

Blender, Cross-flow: 16 qt; Patterson-Kelley

Blender, Bin-type; 1, 2, 3 cu.ft. (5-30 kg capacity); Flo-Bin

Blender, Slant-cone; 3 cu.ft., Gemco, 1 cu.ft.; Gemco

Blender, Double-cone; 10 cu.ft. (120 kg capacity); Bush Industries

Blenders (2), Tumble Tote; Totes: (5) 46 cu.ft., (3) 30 cu.ft., (2) 15 cu.ft., (3) 8.5 cu.ft. (50 kg to 400 kg capacity)

Blender, Bin-type; 1, 2, 4 cu.ft.; Globe Pharma

Blender, Bin-type; 8.5 cu.ft. to 46 cu.ft.; CDM Single Pedestal

Granulators/Mixers

Granulator, Vertical-shaft, High-shear

- Key KG-5; 1.5 kg capacity
- Fielder PMA 25/65; 8-25 kg capacity
- Fielder PMA 10/65; 3-25 kg capacity
- Fuji 10-liter; 3 kg capacity
- Fielder PMA 100; 40 kg capacity
- Sejong SM50; 40 kg capacity
- Fielder PMA 400; 200kg capacity
- Glatt VG-400; 200kg capacity, solvent capable
- Sejong SM-300

Granulator, Oscillating Mill; Frewitt MG-333

Roller-Compactor;

- PowTec RC100x30
- Fitzpatrick L83
- Vector TFC-LABO
- Fitzpatrick IR 220
- Gerteis Mini-Pactor

Mills/Micronizers

Conical mills (6), Quadro Comil Model 1975

Conical mill, Quadro Comil Model 196

Impact mill, Table-top; Fitzpatrick FitzMill Model L1A

Impact mill, Development-scale; Fitzpatrick FitzMill Model M

Impact mill, Production-scale; Fitzpatrick FitzMill Model D

Micronizer, Jet-type; Development-scale; Fluid Energy Aljet Model 0101

Impact mill, Production-scale, XP Rated; Fitzpatrick FitzMill Model D6A

Fluid-Bed Processors/Dryers

Fluid-Bed Processor

- Glatt UniGlatt (Dryer/top spray granulating/bead coating); up to 2 kg capacity
- Glatt GPCG-1 (Dryer/top spray granulating/rotogranulating/bead coating); up to 2 kg capacity
- Glatt GPCG-10 (Dryer/top spray granulating/rotogranulating/bead coating); up to 25 kg capacity
- O'Hara FBDG-30 with 18" Wurster column (Dryer/top spray granulating/bead coating); 45/100 liter bowls with up to 40 kg capacity
- O'Hara FBDG-120 (Dryer/top spray/granulating); 120 kg capacity
- Glatt GPCG-120 (Dryer/top spray/bead coating/solvent capable); with 32" Wurster column

Tray Dryer;

- O'Hara LC II-X
- O'Hara Labcoat M
- Despatch tray oven, 60 kg capacity
- O'Hara 400K, solvent capable

Tablet Presses

Rotary Presses (2); 10 station, B-tooling, GlobePharma MiniPress II, Piccola PLC-C, SMI Instrumentation
Rotary Presses (3); 16 station, B-tooling, SMI Instrumentation; Manesty Betapress
Rotary Presses (2); 27 station, B-tooling; Manesty Diamond Unipress
Rotary Press; 35 station, B-tooling; Stokes BiLayer Tablet Press
Rotary Press; 36 station, B-tooling, Fette 2200i with instrumentation and Gratex Dedusters
Rotary Press; 24 station, B-tooling, Fette 1200i with instrumentation and Gratex Dedusters
Single Station Press; Key Minipress SC-2; Globe Pharma MTCM-11
Rotary Press; 14 station, B/D tooling, SMI Compacta, SMI Instrumentation
Rotary Press; 19 station, B-tooling, SMI Compacta, SMI Instrumentation
Rotary Press; 61 station, B-tooling, Fette 3090 double-sided press with instrumentation and Gratex Dedusters
Korsch XL-100 Instrumented Press

Capsule Fillers

Very Low Dose Powder in Capsule Filler; Xcelodose Capsule Filler, 600-S
Low Dose Powder in Vial Filler; Mettler Toledo Quantos QB1
Manual Capsule Fillers (8); 100 capsules per tray; Sizes 000, 00, 0, 1, 2, 3, 4, 5; Feton, Inc., Cropharm
Semi-Automatic Capsule Fillers (2); 100 capsules per tray; Sizes 0, 1, 2, 3, 4; Dott Bonapace Minicap100
Semi-Automatic Capsule Filler; 15,000 capsules/hr.; Sizes 00, 0, 1, 3; Elanco Quali-fill Model 8S
Semi-Automatic Capsule Filler; 25,000 Capsules/hr.; Size 0; Shionogi Qualicaps Model 10
Automatic Capsule Filler; 400 capsules/minute; Bosch H&K 400; sizes 0, 1, 2, 3, 4, and beadfilling station
Automatic Capsule Filler; 330 capsule/minute, Sizes 0, 1, 2, 3, 4, Bosch GKF 330
Automatic Capsule Filler; 1500 capsules/minute; Bosch H&K 1500
Automatic Capsule Filler; 100,000 capsules/hr.; IMA Adapta 100; multi-fill, low dose, integrated checkweighing
HiBar PO510; Hard Gelatin Capsule Liquid Filler

Coating & Printing Equipment

Tablet Pan Coater; 15, 24 and 30 inch diameter pans (2 kg to 40 kg); O'Hara LabCoat II-X
Tablet Pan Coaters (3); 8.5, 12, 15 and 19 inch diameter pans (200 g to 5 kg); O'Hara LabCoat M & MX
Tablet Pan Coater; 48 inch diameter pan (120 kg capacity); O'Hara Fastcoat-48
Tablet Pan Coater; 48 inch diameter pan (75L – 300L); Thomas Flex 500, interchangeable pans, solvent capable
Coating Solution Mixing Tanks; 35, 100, and 125 gallon

Packaging Inspecting Equipment (3 packaging lines)

Accumulator Table (3); SureKap Model SKT-36A
Bottle Cappers (3); SureKap Model SK6000-SP
Bottle Labeler (1); NJM-CLI UNI-300V
Cap Retorquer (3); SureKap Model SK600
Cap Torquer; Swanmatic C-300
Conveyor with 2 right angles; SureKap Model SKC4520
Induction Sealer (4); Pillar Model 2KW
Shrink Tunnel; Axon EZ-24-BR
Swift Count/Swift Pack Tablet/Capsule Filler (2)
Tablet/Capsule Bottle Filler; 60 bottles/minute; (1) Countec Model DMC-60; (2) Countec Model DMC-120
Unscrambler Table (2); SureKap Model SKT-36U
Portable Induction Sealer; Enercon Compak Jr. and Enercon SuperSeal Jr.
Cottoner (2); Lakso 52
IMA Bottle Unscrambler (1); Model A300
Omega Bottle Unscrambler (1); Model 3D-RP-1-10
Omega Shrink Bundler (1); Model FSB-SL-20
ZEPF Shrink Bundler (1); Model SA 27
NJM/CLI Topserter (2); Model 305VPL
NJM/CLI Minicolt 120 Labeler (1)

Packaging Inspecting Equipment (3 packaging lines) – continued

Omega Desiccant Feeder; CDF101
Countec Desiccant Feeder; CT-0G-120
Inspector (1); MW Technologies
In-Line Checkweighers (2); Mettler Hi-Speed XE2
Liquid Filler; IMA Fillit and Fillkit
Orifice Seating Device; Tirelli Mini-Nebel
Video Jet Printer; Model 1210
Domino Ink Jet A320
Econocorp Spartan Cartoner
NJM Unisort Bottle Unscrambler
NJM Palace Desiccant Dropper
NJM CF-622 4 Head Cremer Filler
NJM Tablet Elevator
NJM Level Inspection System
NJM CL200 Dual Head Cottoner
NJM Beltorque Capper
NJM Enercon Induction Sealer
NJM Beltorque Retorquer
NJM Bronco 130 Labeler
NJM Automatic Topsorter
IMA Vertical Cartopallet HS Case Packer and Palletizer
Optel TrackSafe Serialization System

Test Equipment

Moisture Analyzers (2); Arizona Instruments Compu-Trac Max 2000, MA-35 Sartorius
Powder/Granule Tap Density Tester; VanKel Model 50-1000
Powder/Granule Sonic Sifter (2); Gilson GA-1
Tablet Hardness Testers (5); Key Int'l HT-300; HT-500
Tablet Friabilators (4); Natoli FT400
Tablet/Capsule Disintegration Tester; Van-Kel 71A660A3

Miscellaneous

Capsule Bander, Laboratory-scale; Elanco (Shionogi) Quali-Fill
Capsule Polisher/Selector (2); KeyInt'l CP350
Capsule Checkerweighter; Qualicaps CWI-80
Extruder; Luwa EXKS-1
Spheronizers (2); Luwa QJ-400 and Luwa QJ230
Liquid Filler; Development-scale (5 mL to 2 liter volumes); Accutek Model SAPD1
Metal Detector (3); Metalchek MET 30+
Peristaltic Liquid Pumps (3); Cole-Parmer, MasterFlex
Potent Product Containment Flow Hood; 8 ft; Flow Sciences FS2260BKDVA
Powder Filler, Laboratory-scale; San Diego Scientific Instruments DOA-2300A
Powder Filler (2); All-Fill SHAA SV600 and All-Fill B-350e
Low Dose Powder Dispenser; Mettler Toledo Quantos QB1
Sifters, Mechanical; MM Industries Vorti-Siv RBF-15 (2), RBF-2; Kason Model 24 (2)
Tablet Dedusters (8); Key Int'l CP TD101WD
Tablet Thickness Sorter; MW Technologies, RS-200-12 **Vertical**
Drum Dumper; Custom Design & Machine
M.W. Technologies Tablet Sorter; Model RS200-4 (1), Model RS200-12 (1)
Tablet and Capsule Inspection System; M.W. Technologies, Model RB-300
Tablet and Capsule Printer (2); Hartnett Delta, double sided
Jacketed Tank; 350L with bottom agitation
Blister Packaging; EZ Blister II, Thermoformed and Cold-formed
BÜCHI B-290 Mini Spray Dryer
BÜCHI B-295 Inert Loop

Quantity/Type

- 100 HPLC systems (Agilent 1100–1200 series, Shimadzu LC-2010 CHT, Waters 2695, and Hitachi 7000); HPIC systems (Dionex ICS-5000 and 2500); UPLC systems (Waters Acquity H-Class, Shimadzu Prominence UFLC) Services include refractive index, UV, fluorescence, ELSD, CAD, conductivity, amperometry, and diode-array detection
- LC/MS Agilent 6530 Accurate Mass Q-TOF, Equipped with Jet Stream Focusing, ESI and APCI for MS and MS/MS Analyses
- GC/MS Agilent 6890 with 5975 MSD, Agilent 7890 with 5977 MSD
- 10 GC systems (Perkin Elmer Clarus and Agilent 6890 and 7890's)
Services include capillary and packed column, static headspace, direct injection, FID, TCD, and MS
- 5 UV/VIS Spectrophotometers
- Dissolution Baths (USP Apparatus I, II, III, and Intrinsic Dissolution)
32 Manual sampling
8 Automated sampling

Other Analytical Equipment/Services

- TLC (with photo documentation)
- FTIR, Near-IR
- Titrations (colorimetric and potentiometric)
- pH
- Karl Fischer (oven, homogenizing, blending, volumetric, and coulometric)
- Atomic Absorption (AA) — Flame, Graphite Furnace, and Cold Vapor
- Atomic Emission (AE)
- Inductively Coupled Plasma (ICP/MS and ICD/OES)
- Viscometer, Polarimeter, Refractometer, Osmometer, Fluorometer
- TOC
- Laser Diffraction Particle Size (Malvern Mastersizer 3000 and Mastersizer S)
- Dynamic Light Scattering (Malvern Zetasizer Nano S)
- Air Jet Sieve (Hosokawa)
- TGA-Thermogravimetric Analysis (TA Instruments)
- DSC-Differential Scanning Calorimetry (TA Instruments)
- Olympus Polarized Microscope with Digital Camera
- Melting Range
- Disintegration Apparatus (Agilent 100)

Metrics, Inc. Stability Program

Chambers available (current):

5°C		30°C/65%RH
40°C<25% RH	Photostability (ICH Light Conditions)	30°C/75%RH
40°C/75% RH	-20°C	50°C
25°C/60% RH	-80°C	60°C

Microbiological Equipment/Services

- Sterility Testing (Millipore Steritest Equinox) per USP <71>
- Bacterial Endotoxin Testing (Pyros Kinetix Turbidimetric System and Gel-Clot) per USP <85>
- Particulate Matter (Light Obscuration (HIAC) and Optical Microscopy) per USP <788> & <789>
- Water Testing (Milliflex PumpSystem)
- Microbial Enumeration Tests and Tests for Specified Microorganisms per Harmonised USP <61> and <62>
- Antimicrobial Effectiveness per USP<51>
- Antibiotic Assay (Cylinder Plate Analysis) per USP <81>
- Water Activity Testing (AquaLab 4TEV)