



# Equipment List

PRODUCT DEVELOPMENT AND MANUFACTURING



REV.0911



| Manufacturing / Solid Dose |  |  |  |
|----------------------------|--|--|--|
| Process                    | Type of Equipment                              | Brand  | Model Number   |
| Blending                   | Mixers   | 4-16 qt. Patterson-Kelly V w/intensifier bar<br>2 cu. ft. Patterson-Kelly V w/intensifier bar<br>3 cu. ft. Patterson-Kelly V w/intensifier bar<br>5 cu. ft. Keith Machine V-Blender<br>5 cu. ft. Patterson-Kelly V w/Intensifier bar<br>10 cu. ft. Patterson-Kelly V w/ intensifier bar<br>20 cu. ft. Patterson-Kelly V w/ intensifier bar<br>30 cu. ft. Patterson-Kelly - w/ intensifier<br>60 cu. ft. Patterson-Kelly - w/ intensifier<br>60 cu. ft. Servolift - Tote Bin Blender<br>Bohle Tumble Bin Blender (portable)<br>Bohle Tumble Bin Blender<br>70 cu. ft. Day Nauta Mixer | Portable<br>Portable<br>Portable<br>Portable<br>Portable<br><br>BB-3000, 60 cu. ft. - WC<br><br><br>LM 40 with 10, 20, 40 & 50 liter bins<br>PM 400 with 200, 400 & 600 liter bins |
| Granulating                | High Shear Granulators                         | Vector<br>Vector<br>Vector   | GMX 600<br>GMX 25<br>GMX 75  |
|                            | Mixers   | 20 qt Hobart<br>140 qt Hobart  | AS 200T<br>V-1401-UH   |
|                            | Fluid Bed Processors                           | Aeromatic Fielder<br>Aeromatic<br>Fluid Air<br>Vector  | MP-5<br>MP-1<br>0050<br>FLM-3  |
|                            | V-Blender Processor<br>Spheronizer<br>Extruder | 60 cu. ft. Patterson-Kelly<br>Caleva<br>LCI  | 250SPH<br>MG-55-1  |
| Chilsonation               | Chilsonator                                    | Fitzpatrick Chilsonator 2" x 8"<br>Fitzpatrick Chilsonator 4" x 10"  | IR 520<br>MR48SG-6-6   |
| Coating                    | Pan Coaters                                    | O'Hara 10.5" and 19"<br>Thomas Compu-Lab 19" and 24"<br>Thomas Compu-Lab 19", 24" and 36"  | LABCOAT I<br>24<br>36 XR   |
|                            | Fluid Bed                                      | Accela-Cota (aqueous) 48"<br>Accela-Cota (solvent capable & aqueous) 48"<br>Aeromatic Fielder<br>Aeromatic Fielder<br>Fluid Air<br>Vector  | 48-D<br>48-D<br>MP-1<br>MP-5<br>0050<br>FLM-3  |
| Tabletting                 | Tablet Presses                                 | Bonapace 10 station B<br>Korsch 10 station B<br>SMI – fully instrumented<br>Cap Plus Mini Press II-2005<br>Se Jong – fully instrumented<br>Se Jong Bi-layer Press<br>Fette P 2200 – fully instrumented<br>Fette PT 2090 I/C – fully instrumented<br>Hata – fully instrumented<br>Manesty Express<br>Manesty Mark II (2 presses)  | Portable<br>XL 100 Portable<br>Piccola (B)<br>(D)<br>GRC-18S<br>MRC-49D (B, D)<br>P 2200 (B, BB, D)<br>PT 2090 (B, BB, D)<br>HT-AP32 MSU (D)<br>25 (B)<br>Mark II D, Mark II B     |
| Encapsulation              | Encapsulators                                  | Bosch<br>Bosch (liquids into hard gels)<br>Bosch<br>H&K<br>Schaefer<br>MG2 (single or dual plug capable)<br>Qualicaps<br>CI Electronics SADE   | GKF-400<br>GKF-1400L<br>GKF-1500 (two units)<br>GKF-1200<br>Model 10<br>FUTURA<br>S-100<br>SP-240  |
|                            | Capsule Bander<br>Weight Sorter                |  |  |
| Printing                   | Tablet / Capsule Printers                      | Ackley Rotogravure<br>Hartnett Rotogravure   | Servo Drive, Adj. Ramp<br>SP "Delta"   |
| Sizing                     | Particle Sizing Equipment                      | Entoletter Pin Mill<br>Stokes Oscillators (3)<br>Glatt Quick Sieve<br>Quadro Comil (4)<br>Quadro Comil<br>Russell Finex Vibrator / Sifters (2)<br>Vorti – Siv<br>Alpine Pin Mill<br>Fitzpatrick (3)<br>Fitzpatrick<br>Fitzpatrick  | 332 SS<br>900436<br>TR-160-02<br>196S, 197S<br>U10<br>Compact 600 w/ Vibrasonic<br>RVM-22 (22")<br>160UPZ<br>D6<br>M5A<br>LIA  |

| Manufacturing / Liquid & Semi - Solid (non-sterile) |                             |   |   |
|---|-----------------------------|---|---|
| Liquid & Semi - Solid                               | Mixing / Blending Equipment | Jacketed Tanks<br>Portable Tanks<br>Portable Jacketed Tanks<br>Day Tank<br>Homo-Mixer & various pumps | 2000, 1000 (2), 300, 200 gal.<br>300, 150 gal.<br>10, 30, 170, 300 gal.<br>200 gal. |

| Packaging                               |   |  |
|---|---|--|
| Type of Equipment                       | Brand   | Model Number   |
| Registration and Small Clinical Batches | BellatRx Small Scale Filler<br>Kinex Handheld Cap Torquer<br>Enercon Handheld Induction Sealer  | Rx-Fill<br>ES-400<br>Super Seal Jr.  |
| Secondary Packaging Equipment           | Cartoner<br>Case Former<br>Case Sealer<br>Metal Detector  | 156VEC<br>TGA2001L<br>RM3-FCS<br>48ALBINT/AB   |
| Solid Dose Bottle Line (slatless)       | NEM Bottle Unscrambler<br>Desiccant Placer<br>Swiftpack Electrical Capacitance Filler<br>Lasko Cottoner<br>KAPS-ALL Capper (6 spindle)<br>Enercon Induction Sealer<br>KAPS-ALL Retorquer (6 spindle)<br>Healthstar/Pago Labeler<br>MGS Topserter<br>High Speed Checkweigher<br>Vibrac Torqo<br>AB Case Sealer   | NEHCL-200AJ<br>APA-1500<br>SV2 (twin 12-lane, 3-tray)<br>71<br>A<br>Superseal 100<br>A<br>Pagomot 6<br>RPT-421<br>Starweigh-X<br>1502-30CRKL<br>SD557                              |
| Solid Dose Bottle Line                  | Omega Bottle Unscrambler<br>Omega Desiccant Placer (Canister style)<br>Merrill Slat Filler<br>Lasko Cottoner<br>Consolidated Capper<br>Lepel Induction Sealer<br>Vibrac Torqo<br>Universal Machine Retorquer<br>NJM Labeler / Outsarter w/ Vision System<br>API Bundler<br>Durable Case Sealer / Erector<br>Accraply Case Labeler / Zebra Label Printer   | 3D-RP1-6<br>CDF-1D1<br>72-16-AH<br>52<br>C-4-F<br>RWAG-2.5<br>1502KL<br>E8025<br>311RDBO<br>1C5KA<br>RM3-FC-3 / TGA200IL<br>35FS / 90XiLL  |
| Solid Dose Bottle Line (slatless)       | NEM Bottle Unscrambler<br>Diamond Machine Works Slatless Filler<br>High Speed Checkweigher<br>Consolidated Capper<br>Domino Ink Jet Printer<br>Pillar Induction Sealer<br>DTM Retorquer (6 spindle)<br>Healthstar/Pago Labeler<br>Thiele Cartoner<br>Poly Pak Bundler<br>AB Sealer Packing Station<br>Little David Case Sealer<br>Acraply Print and Apply Labeler<br>Vibrac Torqo   | NEHCL<br>TC-8210<br>STARWEIGH-XS<br>J-6-15<br>A200<br>U2P4742020016<br>CS 5200<br>PAGOMat 6/2L<br>Series 60<br>PH-16<br>CE-563<br>119ADT<br>PAZ1000-170<br>1502-30CRKL             |
| Solid Dose Bottle Line                  | Omega Bottle Unscrambler<br>Merrill Slat Filler<br>Lasko Cottoner<br>Active Pak-Desiccant Placer<br>Pneumatic Scale Capper<br>Universal Machine Retorquer<br>Filtec Fill Inspection<br>Vibrac Torqo<br>Lepel Induction Sealer<br>High Speed Checkweigher<br>Krones Labeler w/ Vision System & Outsarter<br>Thiele Top Serter w/ Vision System<br>PRB Palletizer<br>Case Packer<br>Print and Apply<br>Domino Ink Jet Printer | 4D-RP2-15<br>72-24-XL<br>150<br>APA-2000<br>400-6HD<br>9251<br>FS/1<br>1502-KL<br>TR-2001<br>SST1100SS CA<br>747-280<br>Rotary Placer<br>MINISTRATUS<br>BFB 3437<br>R-01-T<br>A200 |
| Liquid Line                             | NEM Bottle Unscrambler<br>Pneumatic Scale Bottle Blower<br>Filz-All Liquid Filler<br>Resina Capper<br>New Jersey Mach. Co. Labeler<br>Vibrac Torqo<br>Domino Ink Jet Printer<br>Scotch 7A Adjustable Case Sealer  | NEHSCL-100AJ<br>18356<br>VOL-32<br>S-30<br>311R060/L272<br>1502 KL<br>A200<br>37900  |
| Blister Line                            | Uhlmann Visio Tech Color Vision System<br>GUK unfolded Leaflet Inserter<br>Allen Bradley<br>IMA Cartoner, Tuck and Glue<br>Micromate Checkweigher<br>Domino Ink Jet Printer<br>Klockner Blister Machine<br>Alyward Feeder<br>Gottscho Printer<br>Scanware Vision System   | VA-350-1<br>FA21/4 Cartonac 81<br>Bar Code Scanner<br>K150/C<br>High speed<br>A100<br>CP8, CP11.4 EL<br>CP8, HS-42<br>412510<br>Lynx 11  |