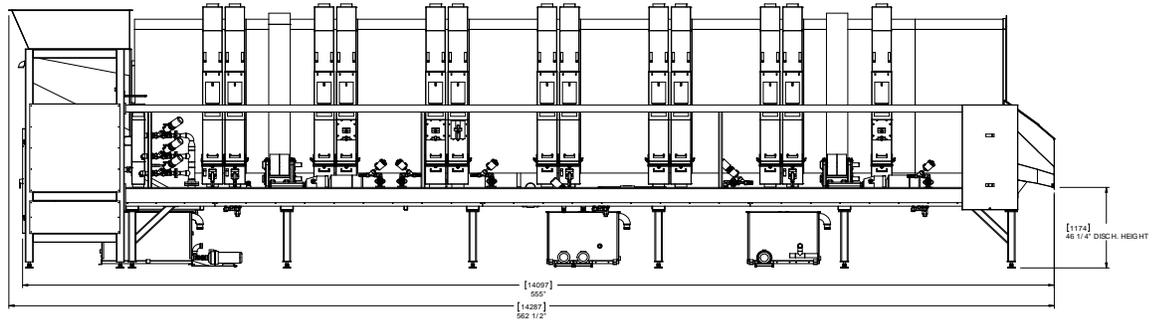
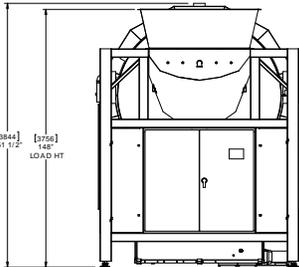
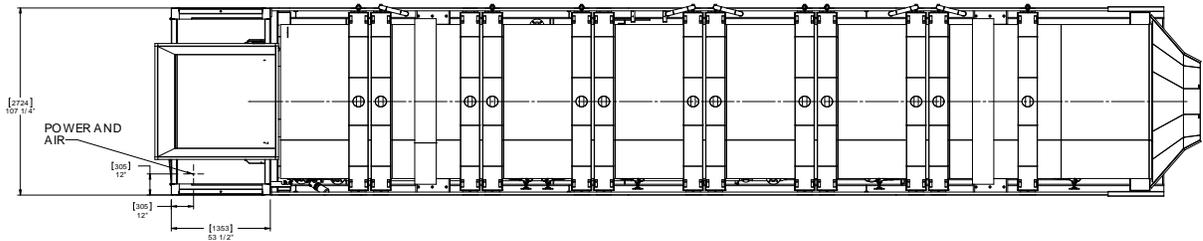




BRAUN BATCH TUNNEL WASHER SPECIFICATIONS  
-----220BTW-14-----  
G.A. BRAUN, INC., P.O. BOX 3029, SYRACUSE, NY 13220, 315-475-3123





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## CAPACITY

Dry Weight: 220 Lbs [100 kg] per chamber; 3,080 Lbs [1,400 kg] entire machine  
Depending on type of goods processed.

## OPENING REQUIREMENTS TO RECEIVE UNIT

Height: 132" [3,353 mm] with legs removed  
Width: 112" [2,845 mm]

## OVERALL DIMENSIONS (not including load/unload chute)

Height: 151.5" [3.84 m] including legs  
Width: 107.25" [2.72 m]  
Length: 562.5" [14.29 m]

## WATER CONNECTION (W)

3" flanged Connection. Pre-connected service shut off valve is mounted for ease in tie-in

## WATER SPECS

Operating Pressure Range: 40-80 PSIG [2.8 – 5.5 bar]  
(Consult factory for other pressures)  
Consumption targets (gallons per pound dry linen):  
Light soil with reduced flows and no bath exchanges: 0.6  
Moderate soil with single bath exchanges: 0.8  
Heavy soil with multiple bath exchanges: 1.0

## ELECTRICAL SERVICE INFORMATION

Total machine motor horsepower: 70 HP (pump motors: 10 HP; drive motors: 60 HP)  
Electrical service requirements (480 Volt): 150 Amps

## FLOOR LOADING

|   |                         |
|---|-------------------------|
| Shipping Weight (cylinder and frame)                    | 32,000 lbs [ 14,545 kg] |
| Operating Weight (typical full load-cylinder and frame) | 75,000lbs [ 34,090 kg]  |

## STEAM CONNECTIONS

3" flanged connection. Pre-connected service shut off valve is mounted for ease in tie in

## STEAM SPECS

Operating Pressure Range: 75 – 85 PSIG [5.1 – 5.8 bar]  
Pressure reducing valve to design pressure & capacity to be furnished by customer. Actual size determined by hourly production capacity.  
Consumption targets (pounds of steam per pound dry linen):  
Low temperature (100F prewash; 140F wash): 0.4  
Moderate temperature (130F prewash; 160F wash): 0.6  
High temperature (150F prewash; 180F wash): 0.8

## AIR CONNECTION/SPECS

Compressed air connection: 1" NPT drop; 80-100 PSIG

## VENT CONNECTIONS/SPECS

(8) 6" OD vents to atmosphere if needed

## DRAIN CONNECTIONS/SPECS

Drain trench (2' x 8" minimum) recommended for best containment of process wastewater

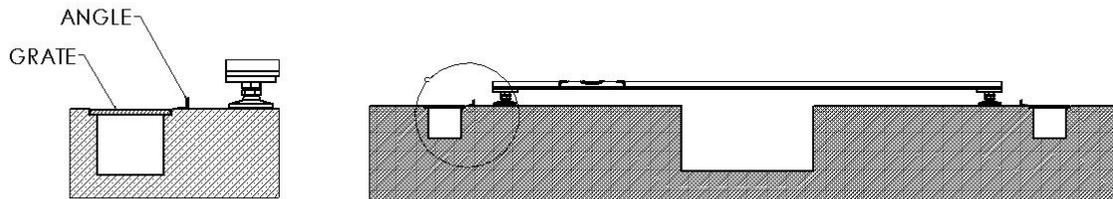
## FOUNDATION/CONTAINMENT SYSTEM

Floor must be able to support operating weight of machine  
-6" reinforced concrete; 4000 psi compression strength  
Braun recommendation is one or more of the following:  
-L channel stainless steel wall around frame base  
-Center trench (12" deep x 24" wide) for waste containment  
-External drain trench around perimeter of tunnel washer

**Customer is responsible to meet all Local, State and Federal Code requirements to include obtaining any applicable permits to install or operate the equipment.**

## FOUNDATION DRAWING

Shown with both containment options





# BRAUN BATCH TUNNEL WASHER SPECIFICATIONS

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## BRAUN 14 CHAMBER 220# BATCH TUNNEL WASHER

|                           |  |
|---------------------------|--|
| Cylinder dimensions       | 88" [2,235 mm] diameter x 469.25" [11919 mm] long  |
| Cylinder wall thickness   | 0.135" (10 gauge) (3.43 mm)  |
| Number compartments       | 14   |
| Load chute opening        | 54" x 54"  |
| Compartment length        | 30" (First compartment is 45" long)  |
| Maximum Capacity          | 220 Lbs per chamber clean dry linen. Depending on type of goods processed.   |
| Bath Exchange             | (4) bath exchange systems to provide quick drain and refill capability to pre-wash (2), post wash (1); and post rinse (1)                |
| Cycle Time                | 90 -210 seconds (typical 120 - 150) depending on type of goods processed and soil content  |
| Steam heating             | (9) total operations: Wetout tank, Bath exchange #1, Bath exchange #2, Wash zones (3 total), Wash flow, Bath exchange #3; Finish section |
| Flow control              | (5) steam heating loops PID controlled, (4) steam heating loops PWM controlled   |
| Flow indication           | (2) PID flow control operations: Rinse flow, wash flow   |
|                           | (3) flow indication operations:  |
|                           | 4-20 mA output: Total flow, rinse flow, wash flow  |
| Drive Motors              | (4)15 hp motors  |
| Pump Motors               | (5) 2.0 hp motors  |
| Water Inlet Size          | 3" flanged main with tie-ins supplied by Braun   |
| Steam Inlet Size          | 3" flanged main with tie-ins supplied by Braun   |
| Compressed Air Inlet Size | 3/8" tubing  |

### ADDITIONAL DETAILS:

#### 1. Materials Used:

- All metal parts in contact with the goods to be of Type 304SS
- Process tanks to be of Type 304SS
- Process piping to be of Type 304SS, PVC, or chemical hose

#### 2. Computer Control: Batch Tunnel Washer program allows setup and monitoring of all operations. Modes of operation include manual and automatic for process control flexibility. Up to 99 programmable recipes can be pre-set in the program to cover numerous soil and goods types based on Customer needs and demands. Additionally, a general setup screen is provided for non-formula specific settings for the Batch Tunnel Washer. Computer control will allow minimal operator interface and notify via alarm when parameters move to levels that require attention (low tank level, low pump pressure, high temperature for example). An overall process flow diagram and an active status screen of all I/O signals provides excellent visible feedback for process monitoring and adjustments. Programming and monitoring capabilities include (but are not limited to):

- cycle time
- temperature set points for all heating zones
- drain and refill rates for bath exchange chambers
- pre-wash water time (wet-out)
- chemical injection setup and injection times

#### 3. Chemical Inlets: Stainless steel injection spades will have chemical injection fittings (1/2" NPT) for chemical supply connections to pre-wash, wash, rinse, and finishing zones. Chemical injection capability in up to 11 chambers if desired.

#### 4. Counterflow: Adjustable direct injection counterflow for both wash and rinse zones. Precision flow monitoring and control provided in these zones to meet customer needs. Additional flowmeters are provided throughout machine for process control.

#### 5. Cylinder:

- Cylinder will be one piece welded construction with all internal and external members integral to unit
- Internal, precision contoured dividers will be solid for zone separation and perforated within zone for direct counterflow. Dividers designed for positive, bottom transfer of all chamber contents to subsequent chamber. Perforations will be electropolished for snag free surface

-Chambers dedicated as follows:

- 2 pre-wash chamber (both with bath exchange)
- 5 wash chambers
- 1 post-wash bath exchange chamber
- 3 rinse chambers
- 3 finishing chambers (one with bath exchange)

-Ribs placed throughout cylinder to provide mechanical agitation of goods

#### 6. Drive: Single belt friction drive for ease of operation and maintenance

#### 7. Interlocks & Safety Devices:

- Guards shall be provided to cover all moving parts accessible from the floor level.
- OSHA Unit shall conform to all requirements

Specifications subject to change without notice.