

SESCO PRODUCTS GROUP **BLANK AND STRIP WASHERS**

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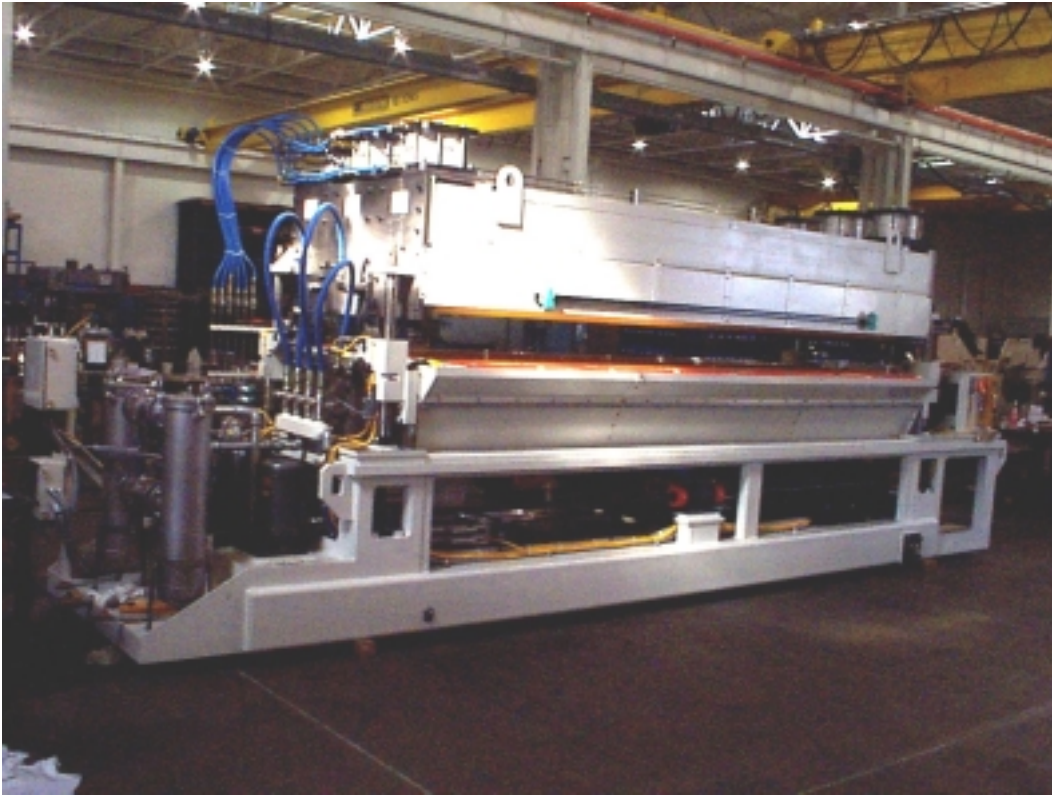


The Sesco Products Group roll type blank washer utilizes 3M non-woven synthetic rolls to provide the optimum washer configuration for the blank cleaning process. The scrubber rolls, pinch rolls and squeegee rolls are made from 3M non-woven synthetic material. All of the rolls are machined to a pre-determined crowned roll profile. These rolls are synchronously driven for positive feeding and consistent speed matching. The pinch rolls, secondary scrubber rolls, and squeegee rolls rotate in the direction of line flow for optimum cleaning and non-marking of sensitive materials.

The roll density, crowning profile, and roll pressures are customized for each washer application based on the fluid type, chemistry, and viscosity. Exact film thickness results are dependent on the exact combination of these design variables. To insure desired results it is recommended that a sample of the wash solution be sent to Sesco Products Group during the design for testing.

Pinch rolls are provided for positive feeding of material and for sealing the wash chamber. At the wash station low-pressure spray headers are provided both before and after the scrubber rolls, both top and bottom, to aid in rinsing off loosened material. The 3M non-woven synthetic scrubber rolls absorb particulates as the material passes through and provide minor mechanical agitation to the material. The rolls can be opened for blank threading by cylinders.





Squeegee rolls at the output end of the unit provide desired film thickness and seal the exit end of the wash chamber. Squeegee roll crown is designed for only one (1) even film thickness across the maximum width of the blank. Changing the roll pressure can provide minor adjustments of the film pattern and thickness. Changes in squeegee roll pressure are air operated and electronically regulated via operator input at the control console.

The Sesco Products Group electronic roll pressure feature provides the customer with an effective and efficient way to set squeegee roll pressure for varying fluid thickness requirements by part number download. This feature incorporates an electronic regulator mounted to a solenoid valve to automatically adjust for the required pressures via operator input at the control console.

The upper washer head is designed for quick and convenient access to allow for roll maintenance. By activation of a screw jack system, the head can be raised for cleaning and providing access to all rolls. Interlocked safety pins and safety blocks maintain the head in the open position for operator and maintenance safety. The safety pins or swivel type hold-downs lock the unit into the closed position before power can be resumed.

All pinch, scrubber, and squeegee rolls are mounted in removable bearing blocks for ease of removal and maintenance. The lower roll assemblies are bolted to the side plates. The upper rolls assemblies are pinned to the cylinders for easy removal. Adjustment for the lower roll assemblies are provided for pass line height adjustments after roll re-grinds. A precision jack screw arrangement with reference indicator is provided to reposition the lower rolls after grinding.



The main motor of the Sesco Products Group washer is an AC Vector variable speed drive. This motor is used to drive the pinch, scrubber, and squeegee rolls. The motor is attached to a right-angle helical bevel gear speed reducer designed with the proper reduction for the washer speed range. Power is transmitted to the washer transmission box by a main drive belt and pulley arrangement. The belt and pulleys are a synchronous Kevlar type design for optimum power transmission.

A precision machined transmission box is used to transmit power to the lower pinch, scrubber, and squeegee 3M non-woven washer rolls. This assembly consists of a series of synchronous pulleys and belts attached to flange bearing supported jack shafts. Heavy duty flexible couplings are used to drive the lower washer rolls. This feature allows for necessary deflection of the washer rolls while maintaining alignment within the transmission box.

Sesco Products Group blank washers are fully enclosed to keep the wash solution contained within the unit. Drip edges are provided around the entire washer to catch and return any solution that escapes the unit. Dual recovery tanks are built into the washer base to clean and recycle the wash solution. One tank will be used to contain the “dirty” wash solution and a separate tank will be used to contain the “clean” wash solution. Each tank will be provided with a separate pump and filter system for optimum recycling of the wash solution. Each tank will be approximately 1150L (250g) in volume.

Guiding is provided through entire washer to prevent jamming of blanks and provide ease of threading. The guiding consists of a series of urethane covered rollers that span the entire width of the washer. The roller sets will be located between each station of the washer and at the entrance and exit sides of the washer.

SESCO PRODUCTS GROUP WASHER FEATURES AND BENEFITS

- SESCO Products Group is a U.S. based supplier of complete coil processing systems for the metalstamping industry. Our company focus is in the manufacture of high quality Cut-to-Length and Blanking Systems for the Automotive Industry. We are a vertically integrated company with complete R&D, Engineering, Sales, Manufacturing, and Service.
- SESCO Products Group has developed a high quality “self-contained” blank and strip washer to be integrated into our coil processing systems and specialized machines such as destackers and other automation. Our units are installed in demanding applications on a worldwide basis.
- SESCO Products Group has continued to improve our blank and strip washer designs with the input from a worldwide customer base, our dedicated Field Service Staff, and a team of dedicated Engineers to provide the best value washer available in the world today.
- The ease of maintenance is given top priority in all aspects of design and manufacture of SESCO Products Group washer. Our machines work in the most demanding areas of our customer’s metalstamping operation where any unplanned downtime must be avoided.
- SESCO Products Group washers are designed with precision double-row spherical roller bearings that are installed in precision machined bearing housings. High quality bearing seals (two inside and one outside) are utilized to maintain integrity of the bearings. Large capacity grease cavity is provided to optimize grease life effectiveness.
- Following is a brief list of features provided for ease of maintenance:
 - Upper wash head raises 17.0” (430mm) to access rolls and change
 - Electrical interlocked safety blocks are provided while head is raised
 - Upper roll bearing blocks mounted on unique “bridge” to assure even pressure
 - Upper roll assemblies are quickly removed by pulling “lock” pins
- Following is a brief list of high quality construction techniques:
 - Precision machined bronze bearing slides to guide roll bridges
 - Flexible drive couplings maintain drive train when rolls deflect
 - All stainless steel construction of the solution reservoirs
 - All stainless steel construction of spray headers
 - All stainless steel filter vessels
- The SESCO Products Group 3M roll type washer is designed with a total of four (4) headers to provide optimum solution flow and blank cleaning. Four (4) full width headers provide solution to the quick-change nozzles at the primary 3M scrubber roll.
- SESCO Products Group washers are designed as “self contained” units that are capable of fixed position installations or off-line rollout installations. Depending on the filtration requirements, this equipment can also be integrated into the washer machine base to save floorspace.

BLANK AND STRIP WASHER AVAILABLE OPTIONS

WASHER LATERAL ROLL-OUT

The Lateral Roll Out Feature power indexes the washer in a lateral direction and provides the customer with the ability to roll the washer out of line for servicing. An AC variable speed drive is normally utilized to provide smooth traversing of the washer into the off-line position. Limit switches are utilized to allow the washer to come to a controlled stop when moving into final off-line position. The traversing base incorporates 4 wheels, two driven and two idle. One side consists of an "H" type track and wheels to maintain system alignment during traversing, and the other side utilizes two flat type wheels. Necessary track sections are provided. An electrically integrated pushbutton pendant provides the operator or maintenance personnel with full control of the washer when it is in motion. Interlocks are used to provide positive location of the unit before line run can be re-established. A positive shot pin arrangement is provided to maintain location of the washer in the in-line position. The shot pin is actuated by an air cylinder.

OFF-LINE BLANK CONVEYOR SYSTEM

Sesco Products Group can provide an off-line blank conveyor system to transfer the blank when the washer is rolled into the off-line position. This conveyor will be attached to a heavy duty welded framework. It will be coupled to the washer for indexing in a lateral direction. The blank conveyor system will consist of a minimum of four (4) narrow magnetic belt conveyor sections to positively transfer the blank. These conveyors will be located at the center of the framework. Additional lanes of skate wheel type conveyors will be provided at the outer area of the framework. The conveyors will be driven by a variable speed AC motor.

MIST COLLECTION SYSTEM

A Mist Collection Unit and galvanized duct work can be added to the washer to help minimize overspray and mist from evaporating into the plant environment. The mist collector housing construction is 14, 16, and 18-gauge cold rolled steel with welded and bolted assembly. The mist collector is rated for ± 10 -in. w.g. The housing is powder coated inside and out. The first-stage filter consists of a 4" deep aluminum impinger that turns the airstream so that the entrained particles are removed by impaction against the impinger plates due to their momentum. The second-stage filter is an aluminum mesh that equalizes the airflow and also removes particles by impingement. The third-stage filter is a 36" deep Vee-Bag constructed of collapsible borosilicate glass with 'V' shaped pockets in parallel. This third-stage filter provides 95% efficiency by ASHRAE 52-76 test method. A magnehelic gauge is provided with a range of 0" to 3" w.g. to measure the pressure differential across all three filter stages. Filters are accessed through a hinged door on the face of the filter media module. No tools are required for filter removal or installation.

ELECTROSTATIC TYPE MIST COLLECTOR SYSTEM

As replacement to the media type mist collector Sesco Products Group will provide an electro-static mist collector. Positive means of vacuum is created by properly sized blower and motor to direct any airborne mists into the collection system. The airborne particles of the wash solution pass through an ionizing section of the mist collector. The particulates receive an electrical charge in this section. The charged particles then move into a collector section that consists of a series of equally spaced parallel plates. Each alternating parallel plate is charged with the same polarity as the particles of wash solution causing them to be repelled from these plates. The opposite are grounded to attract and collect the particles of solution. The remaining air is cleaned of up to 99% of impurities.

AUTOMATIC FILTER CHANGE

If selected, this option will be provided to both filters of the duplex type system. When differential pressure in the operating bag filter vessel reaches 15 psi the wash solution flow is automatically switched to the waiting clean filter. Solution flow is switched by first equalizing the pressure in the clean housing then switching the four valves and directing the flow to the clean housing. A control panel shows a light indicating one of the filters needs service. A reset button must be pushed to reset the system after service. If the system is not reset or both vessels become contaminated the blank washer will shut down.

WASH SOLUTION HEATER

The Wash Solution Heater is a thermostatically controlled immersion type heater that is submerged into the solution reservoir to maintain wash solution temperatures of up to 100 degrees F.

MAGNETIC STRAINER

Stainless steel coated magnetic bars are inserted into the filter bag vessels during filtration to retain ferrous particles and avoid their deposit back into the system or onto the filter media, prolonging the life of the filter media.

AUTOMATIC LUBRICATION SYSTEM

“Trabon” automatic lubrication system to supply main roller bearings with lithium based EP-2 grease. 6 lb. grease reservoir with low level and cycle switches

SECOND SET OF SQUEEGEE ROLLS

The washer can be provided with a secondary set of squeegee rolls for the purpose of obtaining a drier film thickness on the blanks or coil strip.

POWERED BRUSH ROLLS FOR PRIMARY CLEANING

The washer can be provided with a primary set of powered brush rolls for optimum cleaning effect on the blanks or strip. These brushes are power driven in a direction that is opposite of normal material. 3M flow-through bristle scrubbing rolls are provided in this case.



WASHER REFERENCE LIST

Sesco Products Group has built a strong reputation for high quality coil processing systems across many worldwide markets. Following is a Customer Reference List of end-users who have improved the quality of their materials with Washing Systems from Sesco Products Group.

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CUSTOMER

Auto Alliance Mazda
Chicago Slitter Company
Ford Motor Company
Ford Motor Company
Ford Motor Company
General Electric
General Electric
General Motors
Marubeni America
Norgren Automotive
Tower Automotive
Whirlpool Corporation
ChangHe Aircraft Industry
ChangHe Suzuki Automobile
FAW Automotive

LOCATION

Flat Rock, MI
Itasca, IL
Buffalo, NY
Campbell, Australia
Geelong, Australia
Bloomington, IN
Louisville, KY
Mansfield, OH
Howell, MI
Fraser, MI
Elkton, MI
Clyde, OH
China
China
China

