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COMPETING WITH THE GIANTS—  
An "AM" Roundtable Feature

O'Keefe & Merritt Redesigns Cooktops

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# THE INTERNATIONAL AUTOMATIC WASHER INDUSTRY

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**EDITOR'S NOTE:** Mr. Emanuel presented the above titled paper at the first Wonderful World of Washing Seminar at the Illinois Institute of Technology. The seminar was sponsored by Controls Company of America and Appliance Manufacturer magazine. Here are excerpts from Mr. Emanuel's talk.

## The Background

The automatic washer was not even invented until 1937. It had barely been introduced in the United States at the time of Pearl Harbor. Within the free world, starting in 1946, the only basic source of supply of automatic washing machines was the United States. It was only natural that initial overseas product development should follow the American example. However, the initial products which were imported from the U. S. were quite naturally designed in America for American needs and little attention was paid to specific foreign requirements other than their adaptation to the various electrical requirements.

We might also remember that during this early era—the late 40's—there was, of course, no saturation to speak of and practically no local competition in these other countries.

Therefore, most foreign countries were starting in a totally new business with little or no background of their own and following American trends which were in themselves undergoing rapid evolutionary changes.

By the early 1950's, many parts of the Wonderful World were ready to engage in the automatic washer business on a large-scale basis. Primarily with the assistance of various types of technical aid from the United States, local industries began to plan their

own production. It is interesting to note that these pioneer firms overseas either were companies engaged in allied consumer goods production, such as refrigerators, or they were entirely new enterprises founded for the specific purpose of producing and marketing washers. My point is that there were few such firms controlled or entirely owned by American firms.

These early product development ventures were mainly based upon U.S. design. Since at that period the tumble action washer was still popular here in this country, practically all of these initial ventures were based upon this type of washer. Furthermore, its inherent low-water consumption was highly attractive, particularly since one of the first real variations from American design was the inclusion of self-contained heating devices, mostly electric. (It is true that certain American washers of this vintage were equipped with electric water heaters, but these were mainly of the booster type and not designed for effective water heating from a cold-water base.)

These early foreign designs were mainly concerned with solving the various electrical requirements on a more practical basis. Surprisingly, dimensional variations from U.S. usage were not common despite the conflict in Europe in particular where the metric system had long been standard.

Concurrently with the development of national washer designs and production came the development of local suppliers of all sorts and, again, American companies were in the forefront with various types of operations ranging from wholly-owned foreign subsidiaries to straight licensee agreements.

This initial national production, be it in Europe or South America, or even in Can-

ada, overlooked many specific needs of the local populations and neglected, in many cases, proper attention to the selection of materials required for the task at hand. It was quickly found in Europe that the common use of very hot water combined with soaps containing a high percentage of lye produced erosional effects on even the best of porcelain. This is an important fact to remember because, contrary to the situation in this country, porcelain enamel is not popular in many parts of the world today and most especially in Europe.

At this stage, it might be well to note the general trends taken in various parts of the world:

- A. In Europe, product design rapidly began to develop along national patterns and needs with a quickening independency from American practice.
- B. In South America, the tendency was to closely parallel U.S. developments, a natural state since many facets of South American industrial life have tended to follow the U.S. example and this may be particularly true because of the severance of their normal relations with Europe during the World War II era.
- C. Examining our great neighbor to the North, the Canadian market was rapidly shifting to one very closely resembling that of the United States and with a concurrent lessening of English influence in matters industrial and became more American in nature than commercial. (See Appliance Manufacturer, May, 1964)
- D. In Australia, American industry developed relationships with the general result that the Australian market also

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**CANADA:** Top-loading Easy Spiralator 450 has wash programming, fabric selection on top dials.



**UNITED KINGDOM:** Hoover's "Keymatic" has unique plate to select one of 8 programs.



**GERMANY:** Bauknecht's 9 lb capacity machine has 8 programs, infinite temperature selection.

## "We have no monopoly on ingenuity and advanced design"

became more American in nature than English. It is probable that this characteristic was quickened by the generally excellent relationships existing between Americans and Australians as a result of World War II.

E. In Japan, the amazing development of their entire society was just beginning its acceleration under what many people believe to be the enlightened leadership of the American occupation authorities. However, the Japanese were also beginning to develop a truly native approach to their industrial civilization as contrasted to the commonly held belief pre-war that this country was a nation of copiers.

### The Market Today

With the above as background, here is the automatic washer picture today throughout the free world.

### The United Kingdom

In this heavily populated and relatively tiny island, there exists today a highly sophisticated automatic washer industry. Furthermore, this industry is now being stimulated since the market is very rapidly passing from the semi-automatic phase into one that is concentrating heavily on the true automatic. Several factors exist that tend to make English products considerably different from those on the continent of Europe. Some of these are:

- A degree of acceptability of washing at temperatures more like our own than the boiling still predominant in Europe.
- The availability of good, modern detergents.

—A heavy influence of and liking for synthetic fabrics.

—A climate that is extremely wet.

—The existence of various approval authorities with stringent requirements, electrical and mechanical.

On the other hand, certain conditions exist that are typical of Europe as a whole:

—A great shortage of space in the home or flat.

—The disappearance of servants.

—The extreme pressure on prices, and therefore, costs.

Under all these conditions, the United Kingdom today represents a market where the tumble action washer and the agitator washer are competing side-by-side; perhaps the market is a parallel to that of our own some years back. However, whatever the type of automatic washer, there is a tremendous squeeze on physical dimensions. The counter-height standard is the same as that of our own country—36 in.—but there is also a high demand for products that will store under-the-counter. This leads us to another important product specification, namely, mobility. Because of the great shortage of space in the home, these automatic washers are invariably mobile presenting very special demands on the designer because of the strict requirement for very high spin speeds. This demand for first-class extraction is completely rational if we refer back to the climatic conditions existing.

Another special problem facing the English designer is that of water supply since English codes forbid the mixing of hot and cold water at any point other than inside the wash-basket itself and to further compli-

cate the matter, there is a great pressure difference between the hot and cold water supplies. This is about the only country in Europe today that readily accepts porcelain enamel as a wash-basket finish and the reasons are tied back directly to the use of less than boiling water plus the availability of good detergents. The English have been particularly style-conscious but this aspect is changing too, with a definite trend toward the American backsplash approach. Since household physical space is at such a premium, there has not been much pressure for increased capacities. Therefore, in summary, the automatic washer today in England is either an agitator or a tumble but in small physical dimensions without its own hot water heating element, mobile, and with high spin speeds. I might add that costs and selling prices are high by European standards and that there is now the beginning of an attack on the market by low cost Italian imports.

### Germany

This very rich and prosperous country is now a heavy consumer of automatic washers. Furthermore, it is a country practically dominated by products of its own design and manufacture; other Common Market countries have scarcely been able to make a dent, even at lower prices. The German automatic washer of 1965 is in all cases a reverse action, tumbler machine with stainless steel cylinder, built-in electric hot water heating, and very elaborate and fancy programming devices. While the machine is the standard European counter-height, more or less, of 85 cms. there is not so much pressure for reduction in the other dimensions.





**ITALY:** Candy automatic washer offers 10 dial-controlled programs and two water level choices.



**BRAZIL:** Karina "Special" has choice of water levels for three load sizes and pre-wash option.



**FRANCE:** Compact, top-loading Brandt washer has 8 lb capacity, "regular, prewash" programs.

sions. In all cases, the machines are extremely heavy and very ruggedly built. They are also expensive. Spin speeds are quite high and suspension systems are elaborate, involving multiple use of shock absorbers, springs, and torsion bars. Styling-wise, there is little effort made in this direction; a few machines have elementary backslashes but mainly for functional reasons. Indeed, functional is a good word for German automatic washers which, by the way, all really boil or nearly so. Another attribute of German automatic washer design is that all the machines are so basically very similar that they are extremely difficult to tell apart. A few other characteristics more or less peculiar to the German design is the use of different water levels for washing and rinsing and the application of a very large number of special cycles designed to handle a specific fabric only. However, this German design approach very definitely appeals to consumers in Austria, in parts of Switzerland, and in Scandinavia. In other countries, the machines are frankly too expensive to sell in any great volume.

#### France

In France, we find yet another family of automatic washers with specific national characteristics. While the French adhere to the standard 85 cm counter-height dimension, internal water heating, and stainless steel wash baskets, they differ significantly in most other respects. One important element is that gas is relatively cheap in France so that a great proportion of French automatic washers are gas heated. The French also place high stress on mobility but their spin speeds are relatively low in comparison to the English and the German. The width dimension is considered very important because such a high proportion of the popula-

tion live in flats with tiny kitchens and bathrooms; the bathroom is a popular location for the washer. Furthermore, a very high percentage of French washing machines are top loading tumblers. By this, I mean that they have a top-opening lid and that one manually rotates the wash basket until its own separate access door becomes available. This approach is, of course, dictated by the pressure for narrow widths. The basic machine, while completely automatic, is not nearly as sophisticated as its German neighbor and is therefore lower in cost. On the other hand, some companies make high-end, front-loading tumblers with very sophisticated control systems and the French industry has had some success in exporting.

#### Italy

In this country there has been a fantastic growth of a native home laundry industry displaying great ingenuity in product design and manufacturing efficiency. Furthermore, in less than three years, home consumption has become almost entirely an automatic washer market. On top of rising national consumption, the Italians have been quite successful in exporting their products. Once again, we see a standard 85 cm. counter-height, the stainless steel cylinder, electric hot water heating, and the total dominance of the reverse action tumbler principle. To appeal to the home market, most Italian machines stress a narrow front-to-back dimension and mobility is still of some importance. However, the products are rapidly becoming more sophisticated with higher spin speeds and programming control so that the tendency is to install the washer in a permanent location. There is also a heavy production of top-loading, tumble-action machines and there has even been one attempt at a combination washer-dryer. I

might add that automatic dryers are now coming into production from several different manufacturers as matchmates to the automatic washers. The Italian component industry has become both sophisticated and highly cost-conscious; in the field of electric motors, perhaps there is no one else in Europe with such good costs as the Italian. Their design philosophy is heavily influenced by both simplicity of manufacture and ease of operation, and yet, many Italian machines today offer degrees of programming comparable to the German. With their well known adaptability and merchandising acumen, Italian manufacturers are increasingly upgrading their basic product designs so as to appeal to a widening group of export customers while, at the same time, exercising a very close control on costs.

#### Other European Countries

While washing machines per se are manufactured in many of the other European countries, automatic washers as such are produced in limited quantities in only a few such as Sweden and Switzerland. In these particular cases, the product designs are heavily influenced by German techniques.

#### South America

We should now direct our attention to a country-by-country analysis:

#### Mexico

Until relatively recently, governmental regulations permitted the importation of considerable varieties of automatic washer parts and components up to and including rather complete kits. Therefore, it is easy to see why automatic washers in Mexico have been definitely of the American type and this tendency has, of course, been augmented by Mexico's proximity to the United States such that American advertising and merchandis-



# In Japan, a truly native approach tailored to their requirements

practices have been widely copied. Relatively new regulations require the automatic washer industry to assume a true manufacturing status such as already has occurred with television and other consumer durables. We can, therefore, safely predict that automatic washers in Mexico will be of the American type modified only to the extent necessary electrical requirements, since physical size at the moment is not too important. It is interesting to note that practically all machine washing in Mexico is done with hand water.

**Brazil**  
This giant country is, of course, passing through the pains of bringing their rampant inflation under control. A native laundry industry has been in existence for some time, mainly with licensing agreements with American firms. It is interesting to note that automatic washer sales have expanded to anywhere near the degree of refrigerator sales. Nevertheless, a vast potential market is available.

Brazil has also been heavily influenced in automatic washer design by the American approach. However, space is of some premium, particularly since the standard doors of Brazil present the limiting factor rather than the physical space available in the home itself. Cold water washing predominates and the problems with electrical power have stunted the use of heater machines. At this moment, agitators and tumblers compete with no specific preference yet indicated. While there is a good market for inexpensive semi-automatics, Brazil will probably go the automatic route fairly shortly.

## Argentina

This inherently wealthy country has also had a great deal of political and economic problems. Importation of washers has been effectively curtailed for a number of years. A strong washer market has not developed, but there is good demand for television and refrigeration. Certain native manufacturers exist but they are few in number and the types of automatic washers available have mainly been of native design with, quite frankly, a considerable number of problems. It is difficult at this time to look into the "crystal ball" and make any accurate predictions. Nevertheless, we can certainly hope that this basically rich country will straighten out its problems and at that time the automatic washer industry should begin to develop again.

## Chile

This country has a most peculiar geography, extending as it does for literally

thousands of miles along the West Coast of South America. The population is not great but it is concentrated in a handful of cities. A native manufacturing industry exists, mainly American licensed, and a small production of automatic washers takes place.

## Other Countries

While certain kinds of washers are manufactured in some of the other South American countries, there is no true production of automatics as such.

## Africa

With the sole exception of the Union of South Africa, there is really no laundry industry in the entire continent. Furthermore, traditional sources of supply—such as France to Algeria—have been disrupted by political events. Some very minor degree of importation occurs, mainly from Europe. In the Union of South Africa, a native industry is growing and a portion of this is American connected.



**JAPAN:** Mitsubishi Electric Co.'s unit uses a hand wringer to remove water from garments.

## Japan

As mentioned before, this highly populated and increasingly rich country has already attained a surprising saturation of washers in excess of 50% of the wired homes. However, space is the vital determinant and the washers produced and sold are without exception extremely simple spinner type semi-automatics. A high proportion of the population live in very small apartments so one can well understand the miniaturization, if you like, of all consumer durables. As an aside, certain American firms have sponsored coin-operated laundries and it is interesting to watch the Japanese housewife come in with her little bundle of washed laundry just to use the dryers. I believe that

we can predict that automatic washers will begin their upward march in the near future but the Japanese are certainly ingenious enough to develop designs tailored to their own rather specialized requirements.

## Australia

As most of us know, Australia approximates the size of the United States geographically but with a fraction of our population, only about 11½ million. Nevertheless, the consumer goods industry is highly competent, extremely competitive, and has succeeded in providing the population with products to an extent only exceeded by ourselves here in the United States. The automatic washer industry is vigorous and is extremely American in its design approach; the agitator type of product clearly dominates the market. Since Australia is known as a land of home owners, and since space has not become a limiting factor, physical dimensions are not so very important. However, electrically heated models are offered by all manufacturers and our old friend, the suds saver, is enjoying considerable popularity at the moment. Most of us in this room would have difficulty in differentiating between Australian automatic washers and our own, even at a distance of but a few feet: two-speeds, lights, bells, multi-cycles, and all the rest of the features popular in this land are just as popular in Australia. While I have mentioned earlier that American manufacturers were "off the mark" quite early in Australia, many prominent firms now produce machines totally of their own design.

## New Zealand

This extremely beautiful land supports a very small population, but most of them enjoy all the material benefits of a highly sophisticated industrial civilization. While competition is limited, native industry has been fostered by a practical prohibition of imports. To be absolutely frank, there are only two manufacturers of automatics and one has the tumbler of original American design while the other has an agitator, also of U.S. derivation.

In conclusion, one can safely predict that it will be but a short while before almost every home is equipped with an automatic washer.

The automatic washer is generally a thriving consumer product in many areas of the world and while we in the United States can be justly proud of our original invention and development of this relatively new consumer product, we certainly have no monopoly on ingenuity and advanced design.