

Masters of spin

In the battle to be the best washing machine, can anyone catch Miele? And why are washing cycles getting shorter?

Over the past couple of years, in our washing machines test, Miele has proven itself to be the brand to beat. And once again, it has produced the spin kings, with four out of our nine Best Buys coming from its range.

However, our tests show that brands such as Zanussi-Electrolux, AEG-Electrolux and Bosch are closing in and challenging Miele's primacy.

We've tested 27 machines from 19 different brands, with prices ranging from a budget £230 to £820. We've awarded two Best Buys to built-in models, which hasn't happened for some time (see p55). We also take a look at the new wave of energy-saving, low-temperature 30°C programs and how they compare with popular 40°C programs (see 'Turning down the heat', p54).

We expect to see more machines with the shorter 40°C programs in shops soon

The latest Bosch machines are some of the first models to feature shorter main 40°C wash programs, saving both time and energy. But if your clothes require more than a just light wash, you may find yourself reverting to a more typical two-hour cycle. With many of the leading brands, including Indesit and Zanussi-Electrolux and , planning major launches, we expect to see more machines with faster programs hitting the shops before too long.

We've also tested machines from two newcomers to the market, ISE (9) and White Knight (21). Neither machine can match our Best Buys but both turn in creditable first efforts, with the ISE machine making it into the top ten in our table, p56.

What you should look for

DETERGENT DRAWER

The Ariston A1237 (22) has a pull-out program guide slotted over the top of the drawer



SYMBOLS

Some models use symbols to show programs rather than text. Check before buying online, as they can be hard to understand

TOUCH-SENSITIVE BUTTONS

Several machines, including the Bosch WAE 24465 Exxcel (7), have touch-sensitive buttons with lights above to show when a function is selected



ELECTRONIC DISPLAY

Most displays allow you to check the time a program has left to run. Some models are fitted with programmable LCD-touch screens but these can be complicated to use

Checklist

How to choose the right program for the right item. If in doubt, check the label

Temperature guide

- **30°C** Good for saving energy and can be used for cleaning most items but won't shift tough stains.
- **40°C** Good for everyday clothes, such as jeans – natural fabrics (cotton or linen) or synthetics (viscose, acrylics) and wool mixtures.
- **50°C** Nylon, cotton, viscose and polyester/cotton mixtures should be able to withstand the warmer wash.
- **60°C** Best for bed linen, towels and heavily soiled garments such as baby clothes.
- **90°C** The hottest wash program you'll find on most machines. Use this only for white cotton sheets and linens which show the dirt.



The times, they are a-changing

Shorter cycles are on the way. But you may need more time for really dirty clothes

For more than a decade the race for an A-grade energy label has seen 40°C wash times settle at about two hours – but this could soon change. Machine makers say clothes are usually lightly soiled and worn only once before being washed.

As a result, many new machines will have shorter main 40°C programs, suited

to removing lighter stains such as sweat. For washing larger loads, you'll need to select an intensive option, as described in the manual.

The Bosch washers we tested are among the first to use this. Their 40°C programs are up to 45 minutes shorter than on other models. Without the intensive option, the programs score badly on

a full load, so for a fair comparison we tested the standard 40°C wash using the intensive mode.

A Bosch spokesman said: 'Based on extensive market research of actual user behaviour, we found smaller quantities of less soiled items are washed more often. So we developed a program which used less energy and water.'

Which should you choose?

Best on a budget

AEG-ELECTROLUX L52810,

£299 The L52810 (13) is a good all-rounder and good value. It cleans and rinses well, and AEG-Electrolux has a solid reliability record. If you'd like a model under £250, opt for the Beko (8); however, we don't have enough information to judge the brand's reliability.



Best for a family

ZANUSSI-ELECTROLUX

ZWF1451, £379 This machine (5) has a large 7kg capacity, so you can do more washing in one go. A 1400rpm spin speed means that clothes will spend less time in the tumble dryer or on the washing line, and brand reliability is solid. Its only weakness is poor rinsing.



Best for single people

BOSCH WAE 2416S Classixx,

£330 This machine (10) is ideal for items which have been worn once and have only light dirt such as sweat or deodorant. It's simple to use, cheap to run and provides great cleaning at 40°C if you use the intensive option for larger loads or clothes with stubborn stains. However, it's noisier than many other models.



Best for the environment

MIELE W1714, £700 and AEG-ELECTROLUX

L52810, £299 Of the small number of machines we've tested at 30°C, the Miele (2), pictured right, and AEG-Electrolux (13) are the most competent. Energy and water use are low and, importantly, rinsing isn't compromised.



1 FREESTANDING

66% Miele W1512 £499

The W1512 just about outperformed the other Miele. It's a good choice for people with sensitive skin because rinsing is strong, and cleaning is outstanding on cotton and quick programs. The filter height makes it easy to clean. Available at Comet.

WE LIKE The W1512 is about £100 cheaper than the W1514 and came higher in the table.

Cheapest store Comet **Capacity** 5kg **Spin speed** 1200rpm **Energy label** AAB **Cotton** 1hr 56min **Quick** 1hr 12min **Colours** White **Delay start** No

WHICH? BEST BUY

5 FREESTANDING

63% Zanussi-Electrolux ZW F1451 £379

Our cheapest Best Buy is packed full of useful features and provides a great cotton wash. We especially like the clever memory function and the user-friendly monitor. Available from Comet and John Lewis.

WORTH KNOWING We'll be testing the new Zanussi-Electrolux range later in the year.

Cheapest store Comet **Capacity** 7kg **Spin speed** 1400rpm **Energy label** AAB **Cotton** 2hr 16min **Quick** 1hr **Colours** White **Delay start** Yes

WHICH? BEST BUY

Turning down the heat

Can washing at a lower temperature save energy and get your clothes clean?

Most people in the UK regularly use wash cycles at 40°C. Research, supported by the Energy Saving Trust, suggests households can save enough energy to power 500,000 homes and 640 stadiums for a year by switching to cleaning clothes at 30°C. Low-temperature washing could also save £170 million in energy bills.

The selection of machines we tested at 30°C produced promising results. Cleaning ability is slightly worse than at 40°C because the detergent has to work harder, but rinsing improved and program times are often faster. Average energy savings per wash were 41 per cent,

which equates to around £6 a year. Water use was similar to the 40°C program. Some detergent makers suggest you use special detergents for washing at 30°C but in our latest detergent test we found you don't necessarily need to use these washing powders to get good results (see 'Powder to the people', p58).

We also tested the super-quick program on the Bosch WAS 24466 Logixx (11), which

washes around three pairs of jeans (2kg of clothes) in 15 minutes. We found it works well for freshening clothes and removing sweat.



Family ties

How to pick a similar model

When we test washing machines, we find out all sorts of information about models that vary in minor ways from those tested. The table, below, lists machines which are almost identical to those tested and should be of similar quality.

SIMILAR MODELS	PRICE (£)	TESTED MODELS	DIFFERENCES
AEG-ELECTROLUX 88810	582	L86810 (6)	1800rpm spin speed
BEKO WMA641	249	WMA620 (8)	1400rpm spin speed, logo ^a
BOSCH WAE 24162 Classixx	300	WAE 2416S Classixx (10)	No timer display
BOSCH WAE 28465 Exccel	465	WAE 24465 Exccel (7)	1400rpm spin speed
BOSCH WAS 28466 Logixx	450	WAS 24466 Logixx (11)	1400rpm spin speed
BOSCH WFL i2440	535	WFX i2840 (23)	1200rpm spin speed
HOOVER VHD814	340	VHD812 (18)	1400rpm spin speed, logo ^a
HOTPOINT WT965	380	WT960 (12)	Satin aluminium finish
SAMSUNG P1453	350	P1253 (14)	1400rpm spin speed
SERVIS M6804	320	M6802 (20)	1400rpm spin speed, no delay start
WHIRLPOOL AWO/D4305	220	AWO/D4705 (17)	1000rpm spin speed
WHIRLPOOL AWO/D4505	275	AWO/D4705 (17)	1200rpm spin speed
WHITE KNIGHT 1400	230	WK1200 (21)	1400rpm spin speed

^a Machine carries Energy Saving Recommended logo. Retailers often offer a discount for machines carrying this logo

2 FREESTANDING

65% Miele
W1714 £700

This includes a few additional features to aid convenience. For instance, there's an electronic door-release button, which replaces the handle, and a small tool is provided to help open the filter door. Wash results are good on 40°C, and the 30°C program also did well. Available from Comet.

WORTH KNOWING This has the largest drum of all the Miele's on test.

Cheapest store Comet **Capacity** 6kg **Spin speed** 1400rpm **Energy label** AAB **Cotton** 2hr **Quick** 1hr **Colours** White **Delay start** No

WHICH?
BEST BUY

3 FREESTANDING

65% Miele
Premier 520 £520

This model is subtly different from the other Miele models we've looked at. It lacks the slightly angled slimline control panel used on the W1512 (1) and W1514 (4), and the porthole opening is smaller. But cotton and quick programs are excellent and it's also cheap to run. Available from Comet.

WE LIKE This is the quietest model we tested.

Cheapest store Comet **Capacity** 5kg **Spin speed** 1200rpm **Energy label** AAB **Cotton** 1hr 56min **Quick** 1hr 26min **Colours** White **Delay start** No

WHICH?
BEST BUY

The selection of machines we've tested at 30°C produced promising results

4 FREESTANDING

64% Miele
W1514 £600

Good cleaning across the board is the strength of this Miele. It looks identical to the W1512 (1), but its higher spin speed will reduce time needed to dry clothes. It's a good choice if you have sensitive skin. Available from Comet. **WE FOUND** The Miele W1514 has the fastest easy-care program of all the Miele Best Buy models.

Cheapest store Comet **Capacity** 5kg **Spin speed** 1400rpm **Energy label** AAB **Cotton** 1hr 58min **Quick** 1hr 6min **Colours** White **Delay start** No

WHICH?
BEST BUY

6 FREESTANDING

62% AEG-Electrolux
L86810 £479

This has an excellent short and a good 40°C cotton program and the control panel is easy to use. The only drawback is disappointing rinsing, so use the extra rinse option if necessary. Available from Currys and John Lewis.

WORTH KNOWING The high 1600 spin speed is good for reducing drying times.

Cheapest store John Lewis **Capacity** 7kg **Spin speed** 1600rpm **Energy label** AAA **Cotton** 1hr 50min **Quick** 1hr 14min **Colours** White **Delay start** Yes

WHICH?
BEST BUY

7 FREESTANDING

61% Bosch
WAE 24465 Exxcel £400

This machine provides good cotton and quick washes. The programs are set up for lighter soiling, so to clean larger loads, select an intensive wash (see 'The times, they are a-changing', p53). Available from Currys and Comet.

WORTH KNOWING Use the extra rinse option if a good rinse is needed.

Cheapest store Comet or Currys **Capacity** 7kg **Spin speed** 1200rpm **Energy label** AAB **Cotton** 2hr 37min **Quick** 55min **Colours** White **Delay start** Yes

WHICH?
BEST BUY

23 BUILT IN

60% Bosch
WFX i2840 £820

This model fits behind a unit door, so it blends in with your cabinets. Its specification is quite high for a built-in machine – there's a useful LED display and extra options include a delay start. Available online.

WE FOUND This machine is set up for washing light stains. To wash larger loads, you should use the intensive option.

Available Online **Capacity** 6kg **Spin speed** 1400rpm **Energy label** AAB **Cotton** 2hr 11min **Quick** 1hr 9min **Colours** White **Delay start** Yes

WHICH?
BEST BUY

25 BUILT IN

58% AEG-Electrolux
L1250Vi £429

This 1200rpm spin speed machine has an excellent short wash program. The controls are simple to understand; design is good for wheelchair users and loading and unloading is easy. Available online.

WE FOUND Rinsing is below par, which may concern those with sensitive skin.

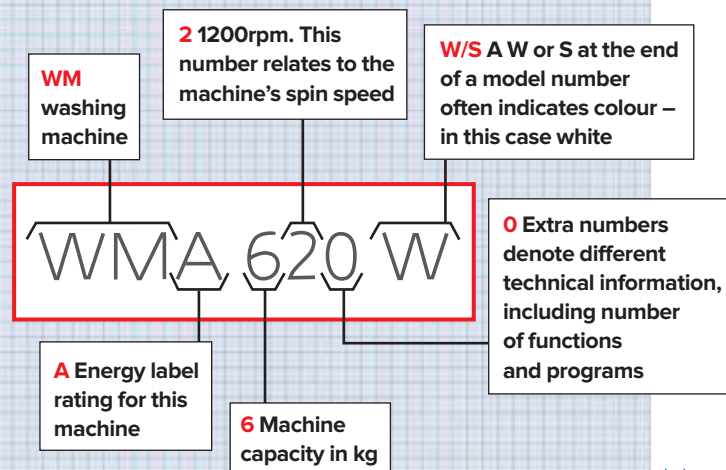
Available Online **Capacity** 5kg **Spin speed** 1200rpm **Energy label** AAB **Cotton** 1hr 56min **Quick** 1hr 2min **Colours** White **Delay start** Yes

WHICH?
BEST BUY

Know the number

Decoding the model number

Every washing machine has a manufacturer's model number so that it can be identified. With a little know-how, this is often a quick way of finding out useful information about the machine. Unfortunately, each manufacturer uses a different system for assigning model numbers, so you can't apply these rules across the board, but a few seconds' study may help you track down the machine you want. The example is for the Beko WMA620W (8).



ONLINE

FREE website access

For even more information on washing machines, including extra models and installation advice, visit www.which.co.uk/washingmachines

Contacts

AEG-Electrolux
0870 535 0350
www.aeg-electrolux.co.uk
Ariston
01494 755600
www.ariston.co.uk
Beko
01923 818121
www.beko.co.uk
Bosch
0870 240 0060
www.bosch-appliances.co.uk
Candy
01685 721222
www.candy-domestic.co.uk
Gorenje
020 8247 3980
www.gorenje.co.uk
Hoover
0870 950 2943
www.hoover.co.uk
Hotpoint
0870 150 6070
www.hotpoint.co.uk
Ignis
0870 600 8989
www.whirlpool.co.uk
ISE
0845 226 1268
www.iseappliances.co.uk
John Lewis
0845 604 9049
www.johnlewis.co.uk
Miele
01453 302660
www.miele.co.uk
Samsung
0870 726 7864
www.samsung.co.uk
Servis
0121 568 8333
www.servisuk.co.uk
Siemens
0870 240 0070
www.siemens.co.uk
Whirlpool
0870 600 8989
www.whirlpool.co.uk
White Knight
01422 200600
www.crosslee.co.uk
Zanussi/Zanussi-Electrolux
0870 572 7727
www.zanussi-electrolux.co.uk

Facts & scores

We give you the lowdown on some of the best machines for disabled users

Impaired vision

This AEG-Electrolux has a strong combination of clear, easily readable text, lights that highlight selected options and easy programming – all of which mean this Best Buy model is particularly well suited to those people with vision problems.

Wheelchair users

Brightly lit controls and a functional design make this Hotpoint simple to use from a seated position. Loading and unloading isn't a problem, either. However, according to our research, Hotpoint is an unreliable brand.

Manual dexterity

Using a machine can be hard if you have a poor grip but well-spaced controls, an easy-to-use door and easy access to the filter on this AEG can certainly make life easier.

Reduced mobility

You don't have to bend over too far to use this Siemens. The sympathetic lighting also means that it's simple to view different program options while standing up.

USING THE TABLE

We tested new models from leading brands. Electrolux and LG updated their models too late for this test. We've republished results for the highest scoring Best Buys we tested earlier in the year. For a complete list of Best Buys go to www.which.co.uk/

washingmachines

The more stars, the better.

Specification

Price For Best Buys we give the cheapest, widely available high-street prices, as we went to press. Prices for other models are a guide. If a model is available only online, prices are in *italics*.

Size Includes hoses and other attachments.

Test performance

Running cost Energy costs for a full load. Machines rated ★★★★★ cost about half as much to run as ★★ models. **Cotton Standard** 40°C wash. **Easy care** Standard wash for synthetic and delicate clothes. **Quick**

MODEL	SPECIFICATION						
	PRICE (£)	CAPACITY (kg)	SIZE (cm) wxhxd	SPIN (rpm)	ENERGY LABEL	RUNNING COST	COTTON
FREESTANDING							
1 MIELE W1512	499	5	60x85x64	1200	AAB	★★★★★	★★★★★
2 MIELE W1714	700	6	60x85x64	1400	AAB	★★★★★	★★★★★
3 MIELE Premier 520	520	5	60x85x60	1200	AAB	★★★★★	★★★★★
4 MIELE W1514	600	5	60x85x65	1400	AAB	★★★★★	★★★★★
5 ZANUSSI-ELECTROLUX ZWF1451	379	7	60x85x66	1400	AAB	★★★★★	★★★★★
6 AEG-ELECTROLUX L86810	479	7	60x85x64	1600	AAA	★★★★★	★★★★★
7 BOSCH WAE 24465 Exxcel ^a	400	7	60x85x59	1200	AAB	★★★★★	★★★★★
8 BEKO WMA620	231	6	60x85x58	1200	AAB	★★★★★	★★★★★
9 ISE CI555WH	500	6	60x85x57	1500	AAA	★★★★★	★★★★★
10 BOSCH WAE 2416S Classixx ^a	330	6	60x85x59	1200	AAB	★★★★★	★★★★★
11 BOSCH WAS 24466 Logixx ^a	441	8	60x84x63	1200	AAB	★★★★★	★★★★★
12 HOTPOINT WT960 ^b	380	7	60x85x59	1600	AAA	★★★★★	★★★★
13 AEG-ELECTROLUX L52810	299	6	60x85x64	1200	AAB	★★★★★	★★★★
14 SAMSUNG P1253	200	6	60x85x63	1200	AAB	★★★★	★★★★
15 SIEMENS WM14S493 ^a	699	7	60x85x62	1400	AAB	★★★★★	★★★★★
16 CANDY G0126	250	6	60x85x58	1200	AAB	★★★★★	★★★★★
17 WHIRLPOOL AWO/D4705	250	5	60x85x58	1400	AAB	★★★★★	★★★★
18 HOOVER VHD812	350	8	60x84x63	1200	AAB	★★★★	★★★★
19 GORENJE WA63141	372	6	60x84x63	1200	AAB	★★★★★	★★★★
20 SERVIS M6802	280	8	60x85x61	1200	AAB	★★★★★	★★★★
21 WHITE KNIGHT WK1200	230	6	60x85x56	1200	AAB	★★★★★	★★★★
22 ARISTON A1237	250	7	60x85x60	1200	AAB	★★★★★	★★★★
BUILT IN							
23 BOSCH WFX i2840 ^a	820	6	60x82x56	1400	AAB	★★★★★	★★★★
24 IGNIS AWF591	372	5	60x82x57	1000	BBC	★★★★	★★★★
25 AEG-ELECTROLUX L1250Vi	429	5	60x82x58	1200	AAB	★★★★	★★★★
26 JOHN LEWIS JLBW1401	499	5	60x82x56	1400	AAB	★★★★	★★★★
27 ZANUSSI ZT1012	427	5	60x83x56	1000	BBC	★★★★	★★★★

^a These machines have been tested with the intensive option for the main cotton wash (see 'The times, they are a-changing', p53)

wash Short-wash option for clothes. **Low temperature (30°C)** An energy-saving, low-temperature wash. Only tested in the machines we've looked in the last few months. n/a means we haven't tested the 30°C option on this machine if there is one.

Cotton/Easy care/Quick The program time as measured by testers rather than as claimed

in the manual. **Rinse** How well a machine rinses on the cotton, easy-care and short loads. **Spin dry** How dry the load was after the final spin.

Ease of use How easy the machine is to load, unload, operate and clean. **Brand reliability** A blank in the table means there was insufficient data to judge reliability. Best Buys are expected to have

good or average reliability based on our survey. We don't make models Best Buys without reliability data.

Score

Ignores price and is based on:
 Cleaning 55%
 Running costs 20%
 Convenience 10%
 Spin dry 10%
 Noise 5%

EXCLUSIVE DISCOUNTS

Clean clothes for less cash

This month, there are great savings from Hughes Direct on selected washing machines from this report. See p79 for details.



WHICH? TEST PERFORMANCE											SCORE %
EASY CARE	QUICK WASH	LOW TEMPERATURE (30°C)	COTTON (hr:min)	EASY CARE (hr:min)	QUICK (hr:min)	RINSE	SPIN DRY	EASE OF USE	NOISE	BRAND RELIABILITY	
★★★★★	★★★★★	n/a	1:56	1:16	1:12	★★★★	★★★★	★★★★★	★★★★	good	66
★★★★★	★★★★★	★★★★	2:00	1:18	1:00	★★★★	★★★★★	★★★★★	★★★★	good	65
★★★★★	★★★★★	n/a	1:56	1:16	1:26	★★	★★★★	★★★★★	★★★★★	good	65
★★★★★	★★★★★	n/a	1:58	1:15	1:06	★★★★	★★★★★	★★★★★	★★★★	good	64
★★★★★	★★★★★	n/a	2:16	1:17	1:00	★	★★★★	★★★★★	★★★★	average	63
★★★★	★★★★★	★★★★	1:50	1:05	1:14	★	★★★★★	★★★★★	★★★★	average	62
★★★★	★★★★★	n/a	2:37	0:56	0:55	★★	★★★★★	★★★★★	★★★★	good	61
★★★★★	★★★★★	n/a	2:19	1:40	2:05	★★★★	★★★★	★★★★★	★★		60
★★★★★	★★★★★	n/a	2:27	1:42	1:18	★★★★	★★★★★	★★★★★	★★		60
★★★★	★★★★	n/a	2:16	0:56	0:48	★★	★★★★★	★★★★★	★★	good	59
★★	★★★★★	n/a	2:27	0:49	0:55	★★★★	★★★★★	★★★★★	★★★★	good	59
★★★★	★★★★★	★★★★	1:47	1:08	1:19	★★	★★★★	★★★★★	★★★★	poor	59
★★★★	★★★★★	★★★★	1:51	1:16	1:03	★★★★	★★★★	★★★★★	★★★★	average	58
★★★★	★★★★★	★★★★	1:41	1:13	0:42	★★★★	★★★★	★★★★★	★★		58
★★	★★★★★	★★	2:22	0:49	1:15	★★★★	★★★★★	★★★★★	★★★★	good	58
★★★★★	★★★★★	★★★★	2:25	1:26	1:01	★★	★★★★	★★★★★	★★	average	57
★★★★★	★★★★★	n/a	2:03	1:27	1:01	★★	★★★★	★★★★★	★	poor	56
★★★★	★★★★★	★★★★★	2:34	0:56	1:17	★★	★★	★★★★★	★★★★	poor	54
★★★★	★★★★	n/a	1:56	1:42	1:05	★★	★★★★	★★★★★	★★★★		53
★★★★	★★★★	★★★★	1:49	0:52	0:36	★	★★★★	★★★★★	★	poor	53
★★★★★	★★★★	★★	2:13	1:27	0:28	★★	★★★★	★★★★★	★★		51
★★★★	★★★★★	★★	1:22	1:06	1:08	★★★★	★★★★	★★★★★	★		48
★★★★	★★★★★	★	2:11	0:53	1:09	★★	★★★★★	★★★★★	★★★★	good	60
★★★★★	★★★★★	n/a	2:11	1:24	2:08	★★★★	★★★★	★★★★★	★★		59
★★★★★	★★★★★	n/a	1:56	1:15	1:02	★	★★★★	★★★★★	★★★★	average	58
★★★★★	★★★★★	★★★★	1:56	1:17	1:03	★★	★★★★	★★★★★	★★★★	average	57
★★★★	★★★★★	★★★★	2:12	1:08	1:29	★★★★	★★★★	★★★★★	★★★★	average	52

^b Tested with the intensive option for a full load