

Washing machines

NEED TO KNOW

The latest trend in washing machines is for larger drums so you can do more laundry in one go – a dream if you've got a big family. New releases from Bosch (1) and Whirlpool (26) allow you to pack in 9kg of dirty laundry, but LG (27) beats even that with its 10kg capacity.

The amount of water and energy used per kilogram of washing is often lower for big machines – but only when you fill them up. The LG in particular is a very water-hungry machine. If you don't fill it to capacity, you'll be wasting an awful lot of water. So if you go for a big machine, make sure you'll have enough laundry to fill it up every time you use it.

RELIABILITY

Overall, washing machines are less reliable than other types of appliance, so choosing a reliable brand is important. That's why, no matter how well a machine does in our test, it can't be a Best Buy unless it's reliable.

The best bets for models that won't need repairing too often are Bosch, Miele and Tricity Bendix. Six of our Best Buys are in the top bracket for reliability in our annual survey: three Bosch, two Miele and one Tricity Bendix. Other Best Buys – two Siemens and one Candy – have average reliability. Some brands, such as LG, do well in our tests but we don't have sufficient reliability data to make them Best Buys.

BEST BUYS

Our Best Buys stand out from the others because they wash and spin well, are easy to use and don't cost the earth to run. They're also reliable. We give the cheapest widely available high-street price as we went to press.

The enormous **Bosch (1)**, £900 from Comet and John Lewis, offers quantity, with a 9kg capacity, and quality, with great wash results. But you'll need lots of space. It's good if you have young children, as the door requires a sharp tug to open it, thus preventing curious little ones from opening the door and climbing in. The huge drum, tilted upwards so you don't need to bend over too far, and a wide door-opening make it a breeze to load and unload. Running costs are below average, but you'll need to fill it to capacity to save money.

If you hate noise, the **Miele (3)**, £500 from Currys and Powerhouse, is the one for you: this was the quietest model on test during both rinsing and spinning. It is the best machine at removing dirt from your clothes, and a cotton wash takes less than two hours. For the money it feels a bit short on features, with no electronic display or delayed start. There are lots of programs, though, including reduced ironing, wool and hand washing. The fluff filter is easy to get to and grip, making it easy to clean out.

Although not as quiet as the Miele, the **Siemens (4)**, £500 from Comet, also clocks in at less than 70dB when spinning. It washes well, and is one of only a few machines good at spin drying. The reduced-ironing option gives fewer creases than many of the other Best Buys, though you'll still need to run an iron over your clothes. It's cheap to run, too, thanks to low energy and water use.

If you get annoyed by lots of options that you never use, the **Bosch (5)** is the machine for you. There's one dial for selecting the wash program, another to choose the spin speed, and just a handful of buttons for extra options, so programming it is simplicity itself. With very low running costs, it's difficult to fault this model on value for money. It gives a great wash across the board, including one of the most effective quick washes. The only drawback is that it's on the noisy side. It's £280 from Comet.

A pricier **Bosch (7)** with the same 6kg capacity is available for £450 from Comet, Currys, John Lewis and Powerhouse. You're paying for a higher spin speed, a fancy display, less noise, and the odd extra feature. The flashier programming system has an LCD

NOISE

This Miele is the quietest machine, when both washing and spin drying. Spinning is the noisiest part of the wash cycle, but there are things you can do to keep noise to a minimum.

Where and how you place the machine is important. It needs to be level in all directions – both front to back and left to right. A badly positioned machine can lead to imbalance, which may increase over time, meaning that the noise will increase too.

The amount of laundry in the drum is also important. The recommended load is the optimum load for the machine, so the machine will be quietest when you follow the manufacturer's suggestion. Small loads can be noisy because clothes have room to move and can unbalance the load, while large items, such as bathrobes, make a noise when they thump around in the drum.

display, which shows information about the wash cycle and time remaining before the wash is done. The machine can also detect if you've put in too much detergent – this can reduce the effectiveness of your wash, because the foam stops the clothes moving. If this happens, it runs an extra rinse cycle automatically.

The **Miele (9)**, widely available online for £775, gives a great wash. It cleans cotton and easy-care fabrics well, though the quality of the quick wash is disappointingly average. Washing machines' filters are usually so close to the floor that it's hard to fit anything underneath to catch the water when you clean them. By contrast, this Miele leaves enough space to fit a container underneath, so it's easier to avoid messy spills. This and its sister Miele (3) are the only machines with metal rather than plastic doors, which gives them a really solid, well-built feel.

**BEST
ON
TEST**

1 Bosch

**BEST
BUY**



4 Siemens

**BEST
BUY**



5 Bosch

**BEST
BUY**



7 Bosch

**BEST
BUY**



3 Miele

If you have sensitive skin, even small amounts of detergent remaining on your wash can cause irritation. The **Siemens (11)** is one of the best at rinsing, and you can also add an additional rinse. Wash results are good, too, for all loads. A program-stage indicator lets you know where your wash is up to, and the option to delay the start for up to 19 hours may appeal even if you don't have sensitive skin. The Siemens costs £580 from Comet.

The **Tricity Bendix (12)** is a simple, basic machine – there are no extra rinse, easy-iron or hand-wash programs – but it cleans well and is one of just a few machines costing less than £300. However, the cheap Bosch (5) is more efficient and its quick wash is much better (the Tricity Bendix is almost an hour slower but still cleans less effectively). The Bosch rinses better, too. But the Tricity Bendix is quieter. You can pick it up online from £260.

The **Bosch (13)**, like its sister model (5), is easy to use and program. The dials and buttons are labelled with big clear text and symbols, and the large door handle is easy to grip and open. The fluff filter, at the bottom of the machine, is simple to clean out, too: you push a button to access the filter and just turn the cap to remove it. It washes well

Washing machines of the future

Compared with grandma, who used to scrub all her clothes by hand, we've got it easy, but will advances in technology abolish washday blues completely?

Looking ahead, manufacturers are trying to develop 'soft' washing techniques that will clean clothes by simply letting water flow through your laundry, rather than agitating it by moving the drum. This more delicate treatment will help your clothes last longer. Other research is looking at the possibility of washing without water, one idea being to use ultrasound.

Some prototypes have already been developed. Take the Electrolux Washman – a tall, bottle-like, bright yellow machine that not only does the washing, but also claims to gather, sort and dry your laundry. It's kind to the environment, too, using less water and high-speed spinning to reduce energy use.

Another idea from Whirlpool, called BioLogic, proposes cleaning your laundry in pods containing plants, which would purify the wash water. BioLogic would be powered by fuel cells, and produce just water and heat as by-products. It would be a truly environmental approach to laundry if the concept ever becomes a reality.

SHORT-TERM TRENDS

What can we expect to see in the short term? In recent years we've seen bigger drums that let you pack more of the week's washing in, and flashy LCD

displays that walk you through program selection.

The newest machines will soon think for you. You'll simply load the machine, which will weigh the load to make sure it uses the right amount of water and detergent, and sense the fabric type to choose the best program. It may even be possible for future machines to sense how soiled clothes are, and choose a light wash with less detergent or heavy-duty cleaning when necessary.

Keep an eye out for steps in this direction over the next couple of years.

Is the Electrolux Washman the shape of things to come?



WASHING MACHINES



on programs for cotton and quick loads, but not quite as well for easy-care fabrics. This Bosch costs £300 from Argos, Comet, Currys, John Lewis and Powerhouse.

The **Candy (14)**, widely available online from £320, washes well, and despite the price has an extra rinsing option and reduced-ironing, wool and hand-wash programs. But it won't suit you if time is tight, as it has one of the longest cotton wash cycles of all the machines we tested – nearly two and a half hours. It isn't the easiest machine to use, either: the door is trickier to close than on most other models we tested, and the small buttons could be fiddly for some.

WORTH CONSIDERING

These machines score well but aren't Best Buys because we don't have reliability data for them or because we know the brands are unreliable.

The LG (2) is cheap to run, washes well and is one of the best models at spinning. Another LG (6) gives average wash results and is OK at rinsing but is rather noisy. LG isn't a common make and we have only early results from our reliability survey. Results look good so far, but until we can be more certain about how often LG machines need repairing, we can't make these Best Buys.

This is the first time we've tested a John Lewis own-brand appliance (8) and we are impressed. It washes all clothes well, in a reasonable time, and is easy to use – all for £300. But lack of reliability data means it isn't a Best Buy.

Despite good wash results and decent spinning, Servis (10) and Hotpoint (15) are among the least reliable brands in our annual survey, so are not Best Buys.

ODD SOCKS

Everyone's done it: tossed their trousers in the wash with a stray tissue, £5 note or coins left in a pocket. And there's the age-old mystery of the missing socks: you put a pair in the wash but when you unload it, there's only one.

These losses are not just annoying. Such items can block pipes or damage the pump, and in the longer term could lead to your machine breaking down. At the very least your machine could be noisier.

We tested each machine by putting paperclips, coins and socks in with a load of laundry to see what happened to them. The LG (27) was the best when it came to not losing small items: everything save one paperclip was in the drum after a wash cycle.

The worst machines lost almost half of the small items we put in. We retrieved some coins, paperclips and socks from the door seal of the Hotpoint (15), but others were lost, never to be seen again.

Welcome to the land of odd socks



Washing machines

MODEL

1 Bosch WBB 24759 Logixx

2 LG WM-12225FD

3 Miele Premier 500

4 Siemens WXL 147A

5 Bosch WFO 2467

6 LG WM-14311FD

7 Bosch WFX 2868

8 John Lewis JLWM1201

9 Miele W2203

10 Servis M6312

11 Siemens WXL127AGB

12 Tricity Bendix AW1260

13 Bosch WFL 2067 Classixx

14 Candy CL2127 Smart

15 Hotpoint WF320 Aquarius

16 Indesit WIL123 S

17 Indesit WIE127

18 Whirlpool AWO 3561

19 Zanussi ZWF1221

20 Hotpoint FEW12 First Edition

21 Creda W200FW

22 Hoover HNL6126 Nextra

23 Hoover HNF6127 Nextra Megaload

24 Beko WMA10W

25 Gorenje WA62121

26 Whirlpool AWM 9000 6th Sense

27 LG WM-12270BD

22 more washing machines

The table shows all newly tested models as well as Best Buys from previous tests – but there are 22

other washing machines from those previous tests that can still be found in the shops. You can see the results for them on www.which.co.uk/washingmachines.

Reliability in question We exclude models from our Best Buys if the brand has below-average

Model	Price (£)	Capacity (kg)	Score (%)
Hotpoint Aquarius+ WF645	415	6	64
LG WM16220FD	500	7.5	63
Hotpoint Aquarius WF430	400	6	62

reliability or we don't have enough data to be able to judge. Above are results for three of the best machines that clean well but aren't Best Buys because we don't have reliability information or they fare poorly in our annual reliability survey. Online prices are in *italics*. Last report January 2005

The LG (2) lights up



USABILITY

This Bosch has a big handle that overhangs the door, so you can use the side or heel of your hand if you have poor grip. The door also opens wide so that someone in a wheelchair can load it. The text and symbols on the display are big and clear, helpful for people with poor sight. Even better, LG machines (2, 6 and 27) beep and light up as you pick programs.

The worst machine for someone with poor grip is the Servis (10). Its detergent dispenser has a small flap that catches your fingers. The door handle has a similar problem – if you aren't careful, it pinches your fingertips.

USING THE TABLE

We tested the latest machines from best-selling brands.

Specification

Price For Best Buys we give the cheapest widely available high-street price as we went to press. Prices for other models are a guide to what you should expect to pay. Online prices are in *italics*.

Size Including hoses and other protrusions.

Efficiency

Energy label The maker's rating for energy efficiency, cleaning and spin drying on 60°C wash.

Running cost Water and electricity costs, assuming machine's run full. Machines rated ★ have running costs of around half of those rated ○.

Washing quality

Cotton Standard 40°C wash.

Easy care Standard wash for materials such as polyester or synthetics. **Quick** Quick-wash option for cottons.

Spin and rinse

Spin dry How dry the load was after the final spin. **Rinse** How well the machine rinses away detergent.

Convenience

Use Includes size of door opening, using the dispenser, clarity of controls and program stage, and ease of cleaning the filter.

SCORE

Ignores price and is based on:

Cleaning	50%
Running cost	20%
Convenience	20%
Spin drying	10%

KEY

★ ☆ ○ ● ●
Best —————> Worst
■ Best Buy

Specification				Efficiency		Washing quality			Washing time (h:m)			Spin and rinse		Convenience		Score
Price (£)	Capacity (kg)	Size wxhxd (cm)	Spin (rpm)	Energy label	Running cost	Cotton	Easy care	Quick	Cotton	Easy care	Quick	Spin dry	Rinse	Use	Noise	(%)
900	9	69x95x78	1,200	AAB	★	★	★	○	1:53	1:19	1:07	★	○	★	○	70
550	7.5	60x85x65	1,200	AAB	★	★	○	★	2:24	1:28	2:01	★	●	★	○	66
500	5	60x85x60	1,200	AAB	★	★	★	★	1:56	1:16	1:26	○	●	★	★	65
500	6	60x86x59	1,400	AAB	★	★	★	○	2:09	1:20	0:54	★	○	★	○	65
280	6	60x86x59	1,200	AAB	★	★	★	★	2:10	1:19	0:51	○	○	★	●	64
600	8	60x85x68	1,400	AAA	★	○	○	○	2:22	1:39	1:37	★	●	★	●	64
450	6	60x86x59	1,400	AAB	★	○	★	○	2:10	1:19	0:52	○	○	★	○	63
300	6	60x85x64	1,200	AAB	○	★	★	★	2:00	1:21	1:07	○	●	★	○	63
775	5	59x85x59	1,200	AAB	★	★	★	○	1:56	1:16	1:01	○	○	★	○	63
350	7	59x84x59	1,300	AAB	★	★	○	★	1:46	1:11	1:15	○	●	○	○	63
580	6	60x85x59	1,200	AAB	★	★	○	★	2:09	1:19	0:51	○	○	★	○	63
260	6	60x85x60	1,200	AAB	★	★	★	○	1:58	1:17	1:43	○	●	★	○	62
300	6	60x86x59	1,000	AAC	○	★	○	★	2:07	1:20	0:52	○	●	★	○	61
320	7	60x85x63	1,200	AAB	★	★	★	○	2:28	1:30	1:04	○	●	○	○	61
330	6	60x85x59	1,200	AAB	○	★	○	★	1:40	1:00	1:10	○	●	★	●	61
260	5	60x84x55	1,200	AAB	○	★	★	★	1:41	1:07	1:14	○	●	○	●	59
270	5	60x84x54	1,200	AAB	○	★	○	★	1:43	1:12	1:11	○	●	★	○	57
350	6	60x84x60	1,250	AAB	○	★	★	★	2:17	1:26	1:05	○	○	★	●	54
270	6	60x85x61	1,200	AAB	●	★	★	●	2:26	1:19	0:33	○	●	★	○	50
270	5.5	60x85x59	1,200	AAB	★	○	●	★	1:35	1:01	1:22	○	●	★	●	49
250	5.5	60x85x60	1,000	ABC	○	★	●	★	1:50	1:08	1:43	○	●	★	○	48
280	6	60x85x57	1,200	AAB	★	★	●	○	2:26	0:49	1:02	●	●	★	●	48
320	7.5	60x85x63	1,200	AAB	○	★	●	○	2:27	0:56	1:07	●	●	★	●	48
170	5	60x84x57	1,000	ABC	★	○	○	●	2:02	1:33	1:02	○	○	○	○	45
330	6	60x85x62	1,200	AAB	★	○	○	●	1:41	1:35	0:53	○	●	★	○	45
675	9	69x97x79	1,100	BAB	★	○	●	○	1:23	0:51	0:37	★	○	★	●	43
1,000	10	69x99x77	1,200	AAA	★	○	●	○	1:53	1:08	1:19	★	●	★	○	41