

Micro pleasures

Our biggest-ever microwave test shows you don't need to spend big to get great results

If you think increasing your budget is the easiest way to ensure buying the best microwave, you'll be sorely perplexed by our latest test results.

Our test of 22 new models covers 19 separate brands in the solo and grill categories – and it's clear that you don't need to pay a premium for fast cooking. This is because most models – except for the pricier built-in versions – sit comfortably under £100. Our top solo microwaves can be snapped up for less than £50, while grill versions, which offer greater versatility, include an excellent Best Buy for just over £100.

In fact, the price challenge is hotting up so that the biggest-selling microwaves – from supermarket and catalogue own-brands – now come in at less than £25. We've tested a selection of these with encouraging results (see 'Cheaper can be very cheerful', below).

If none of our Best Buy models appeals, don't ignore some of the solo models, which are just nudging at the barrier we set for our top accolade. The new models from Panasonic (3), Samsung (5) and LG (4 and 6) all fall just short of Best Buy status but are very good machines and worth considering.

WHICH TYPE?

There are three main types of microwave, plus built-in versions of each

SOLO

The most basic type – and great for heating soup or ready meals, or cooking vegetables and jacket potatoes. Also defrosts.

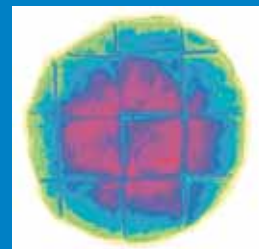
GRILL

Grill models have a heating element, useful for browning food. They come with metal racks to move food closer to the grill – these should be used only in grill mode.

COMBINATION

These models combine a microwave, grill and convection (fanned hot air) oven, so, if your kitchen space is limited, could replace a traditional oven. We've not tested any this time, but four Best Buys are currently shown on www.which.co.uk/microwaves.

How we test



Under the grill

Our grill test involves advanced technology. As with conventional grills in a traditional oven, we're looking mainly for even cooking. Poorer models tend to overbrown the food, usually in the centre, while leaving the outer edges pale. The timing needs to be right, too, to prevent food drying out.

To measure this, we load the machines' grill trays with crustless white bread, cut in the shape of the trays, and cook on the maximum grill setting. We then toast until any part

reaches a specific shade. Here's where our fancy technology comes in. Making subjective ratings based on visual assessment alone can introduce inconsistencies. We use a special machine, which photographs the toasted bread and converts the colour into a chart representing temperature. It then analyses objectively how much of the toast meets the desired specification along with the difference between the darkest and lightest areas.

Cheaper can be very cheerful

We look at three lower-spec models at the budget end of the market

The UK is the capital of ready-meal cuisine, so, if reheating a weekly diet of supermarket lasagne and curry is the height of your culinary ambition, why splash out on a flash machine?

For the cost of a few takeaways, it's hard to ignore the temptation of bargain microwaves available from supermarkets and catalogue stores.

We rounded up three models at £25 or less, including models from Tesco and Argos that are in the top five best-selling microwaves in the UK.

Compared with pricier contenders, the cheap

products seem positively spartan. Forget about shiny silver finishes and rows of buttons and program choices. Instead, you'll find white boxes offering just two dials for setting power and time. If you can't be bothered to decode complicated control panels before warming your baked beans or soup, these models already

have an advantage. What's more encouraging is that, in particular, the models from Woolworths (9) and Argos's Cookworks (10, pictured) gave some good results in our heating and defrosting tests.

The Tesco model (16) cooked evenly but dried the food out and was less good when heating several meals in succession. None of the models has automatic programs for defrosting or other functions, but their basic functionality is fine – so you could do worse than succumb to temptation next time you're in Woolworths or Argos.





1 SOLO

71% Swan SM2050 £48

This brushed stainless steel model is great value and a Best Buy for the second time. It heats evenly when you're cooking several dishes in succession and produces good-quality food without drying it out or burning it. The timer display is very clear and the door button is easy to use. But the start button could be better positioned. Cheapest from Littlewoods.

WHICH?
BEST BUY

WE LIKE It's roomy inside, so is a good choice for hungry types.

Available Littlewoods Automatic programs Five
Childproofing Yes



2 SOLO

70% LG MS1942ES £70

Also a Best Buy for the second time, this LG cooks evenly at a steady temperature and churns out dish after dish without a drop in quality. It comes in a silver-grey finish, and the touch-controls are easy to clean. We think the controls could be labelled more clearly, though. The door's integrated handle doesn't allow much room for large fingers. Cheapest at Comet.

WHICH?
BEST BUY

WE LIKE It cooks excellent pasta on its pre-set program.

Available Widely Automatic programs Five
Childproofing Yes



17 GRILL

73% Panasonic NN-GD566M £130

This microwave heated and defrosted food very well, but its grill function proved disappointing, with uneven browning. However, it reheats beautifully, whether you're preparing just one dish or several in succession. It has many extra programs, including 'turbo reheat', which gives a short injection of higher power when tackling liquids. Cheapest at Comet.

WHICH?
BEST BUY

WE LIKE It comes with a very helpful instruction book, including recipes.

Available Comet Automatic programs Six
Childproofing Yes

Letting the food stand, and stirring it, will help you to avoid the risk of food poisoning



18 GRILL

70% Whirlpool Max 28 £109

If you want distinctiveness, this model may be for you. It's black, with rounded edges and top, and controls running along the top front edge above (rather than to the side of) the door. But, despite its quirky looks, it does a neat job of heating and defrosting and grills reasonably evenly too. Its interior is a fair bit smaller than other models on test, so it's probably best suited to single or small households. Cheapest at John Lewis.

WHICH?
BEST BUY

WORTH KNOWING The Max 28 also comes in a range of seven colours.

Available John Lewis (black or silver) Automatic programs 0 Childproofing Yes

Getting the best from your machine

Patience, please

The fact that microwaves can turn your cold ready meal into hot bliss very speedily is great, but the ping which signals that microwaving has ceased isn't the end of the story.

If you've read the manual – or the instructions on processed foods – you'll probably have seen suggestions to include standing time and to stir. If you ignore these steps, or are just curious, some extra testing we've done will persuade you to follow these instructions.

Microwaves work by zapping rays into the cooking area.

The rotating turntable helps to expose much of the food to the

rays, but they can't penetrate every part. Thus it's impossible to heat every molecule to the same temperature. So you need to turn food over, let it stand, and stir it. Our tests showed how a combination of standing time and stirring can improve quality. Just heating the food results in a large variation in temperature in different parts of the dish. When we stirred it, the overall temperature rose and became largely uniform.

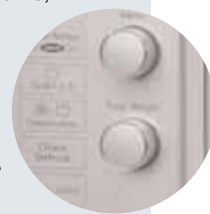
Letting the food stand, and stirring it, will help you to avoid the risk of food poisoning

from inadequate reheating, and prevent burning if parts of the meal are far hotter than others.

Defrosting to perfection

Most microwaves have two defrost options: manual or auto programs. If you choose automatic defrost, you simply need to specify the food's weight. With manual defrost, you need to set the power level and time, based on instructions in the product's manual.

Defrosting properly is a fine art and we've done extensive testing to compare which program is the best one. Our conclusion? It varies from model to model as to whether automatic is better than manual. Try both options, but, generally, we think that using the manual is slightly more reliable.



OUR RESEARCH

When selecting microwaves to test, we consult market intelligence reports, industry experts and manufacturers, then check availability on the high street and online. Tested models include top-sellers from the most popular brands, models from some lesser-known

brands and a selection of bargain brands, plus widely available Best Buys from previous tests.

MORE ONLINE

For more information on our rigorous testing methods and using microwaves, please see www.which.co.uk/microwaves.

Contacts

Baumatic 0118 933 6933
www.baumatic.co.uk

Cookworks 0870 600 3030
www.argos.co.uk

De Longhi 0845 600 6845
www.delonghi.co.uk

Electrolux 0870 595 0950
www.electrolux.co.uk

Hinari 0161 652 1211; www.hinari.co.uk

Hotpoint 0870 150 6070
www.hotpoint.co.uk

Kenwood (at Currys) 0500 304304
www.currys.co.uk

LG 0870 873 5454; www.lge.com

Panasonic 0844 844 3852
www.panasonic.co.uk

Prestige (at Comet) 0870 542 5425
www.comet.co.uk

Russell Hobbs 0161 947 3000
www.russellhobbs.co.uk

Samsung 0870 726 7864
www.samsung.co.uk

Sanyo 01923 246363; www.sanyo.co.uk

Siemens 0870 240 0080
www.siemensappliances.co.uk

Stoves 0871 222 2502; www.stoves.co.uk

Swan 0870 599 1611; www.littlewoods.com

Tesco 0845 600 4411; www.tesco.com/direct

Whirlpool 0870 600 8989
www.whirlpool.co.uk

Woolworths 0844 811 7112
www.woolworths.co.uk

USING THE TABLE

The more stars the better.

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 can expect to pay. Online prices are in italics.

Which should you choose?

Most modern microwaves are easy to use but some designs are awkward if you have dexterity problems or poor vision

If you have reduced hand strength

Look for prominent, large handles or push-release openings. Avoid integrated handles. Look for controls that protrude well and can be pushed or gripped without force. One of the best solos is the **Siemens (8)**. Its door opens easily and its controls project well. The best grill is the **DeLonghi (21)**, below. Its turntable is difficult to remove, but it's great otherwise.



If you have a visual impairment

Here, clear text and buttons that bleep make a big difference. The **Samsung (5)** solo has controls that are easy to understand and its rotary control clicks responsively. The solo built-in **Siemens (8)**, below, was best overall. It doesn't bleep, but its controls are laid out superbly. We rated none of the grills highly, so we recommend you try for them yourself in the shop.



SAVE MONEY ON A NEW MICROWAVE

Exclusive member discounts with Hughes Direct

This month Hughes Direct is offering Which? members an exclusive discount on our Best Buy grill microwave – the Panasonic NN-GD566M – £108.00 including delivery. To find out more details about this offer and other member-only discounts from Hughes Direct, log

on to www.hughesdirect.co.uk/which, or call 01473 321883. The offer is valid until 29 February 2008 and is subject to availability. Each month, Which? members can take advantage of the great deals offered by Hughes Direct. All goods are guaranteed to be a minimum of 10 per cent



below high-street prices published in Which? product reports (even when delivery charges are included). If you find the same product cheaper elsewhere (including delivery) within seven days of purchase, Hughes Direct promises to refund 110 per cent of the difference.

| MODEL | SPECIFI | | |
|---|-----------|----------|-------------------|
| | PRICE (£) | BUILT IN | SIZE (cm) (hwxwd) |
| SOLO | | | |
| 1 SWAN SM2050 | 48 | | 28x47x38 |
| 2 LG MS1942ES | 70 | | 28x46x33 |
| 3 PANASONIC NN-ST477SBPQ | 150 | | 30x52x39 |
| 4 LG MS1987U | 50 | | 28x46x32 |
| 5 SAMSUNG 400/6653^a | 70 | | 28x49x37 |
| 6 LG MS2387ARS | 80 | | 29x51x41 |
| 7 BAUMATIC BTM23.1SS | 89 | | 31x51x37 |
| 8 SIEMENS HF17065GB | 325 | ✓ | 35x46x32 |
| 9 WOOLWORTHS Worth It 376A5140 | 25 | | 30x46x35 |
| 10 COOKWORKS 400/6402^a | 23 | | 26x44x32 |
| 11 PANASONIC NN-SD277S | 99 | | 28x48x35 |
| 12 HINARI EMX650 | 100 | ✓ | 32x46x34 |
| 13 KENWOOD KEN-SJ/SS25^b | 65 | | 31x52x40 |
| 14 SANYO EMSL50S | 77 | | 28x49x39 |
| 15 HOTPOINT MWH 211 | 150 | | 30x51x42 |
| 16 TESCO MM 07 | 23 | | 26x45x32 |
| GRILL MODELS | | | |
| 17 PANASONIC NN-GD566M | 130 | | 31x51x39 |
| 18 WHIRLPOOL MAX 28 | 109 | | 37x39x37 |
| 19 ELECTROLUX EMS26405 | 336 | ✓ | 46x59x43 |
| 20 SANYO EM G4777S | 68 | | 31x51x41 |
| 21 DE LONGHI 400/6244^a | 70 | | 29x46x34 |
| 22 RUSSELL HOBBS HOB-GTS23 | 120 | | 28x49x36 |
| 23 PRESTIGE GS 25 | 120 | | 31x51x40 |
| 24 STOVES 600MWC | 375 | ✓ | 32x53x49 |

^a Exclusive to Argos ^b The controls for this model have changed since our test. It has

Built in These models are designed to be built into kitchen units.

Size Our measurements. These usually differ slightly from manufacturers' claimed dimensions.

Usable volume The amount of cooking space

inside the microwave.

Max plate size The largest diameter plate that fits the microwave's door without tilting.

Test performance

Speed How long it takes a microwave to heat a ready meal to a

minimum safe temperature of 70°C.

Quality The more the food shrinks during heating, the fewer stars.

Evenness Whether a ready meal is left with any hot or cold spots when it's been heated.

Continuous use How well a ready

meal cooks in an oven that has been used for 15 minutes.

Manual defrost How evenly the microwave defrosts 500g of mince when programmed manually.

Auto defrost As per manual defrost but using the auto programs

where available.

Grill How evenly the grill browns. Fewer stars indicate sections left unbrowned or overbrowned.

Jacket potato How well the oven cooks a jacket potato when manually programmed.

Ease of use How easy it is

to program and use the control panel, and how easy it is to see inside the oven when cooking.

Cleaning How easy it is to clean the inside and outside of the microwave, including removing the turntable.

Score Ignores price and is based on:

Solo microwaves

| | |
|-------------|------------|
| Reheating | 50% |
| Defrosting | 25% |
| Ease of use | 25% |

Grill microwaves

| | |
|-------------|------------|
| Reheating | 45% |
| Defrosting | 25% |
| Ease of use | 25% |
| Grill | 5% |

| CATION | | | WHICH? TEST PERFORMANCE | | | | | | | | | | SCORE % |
|------------------------------|---------------------|-------|-------------------------|----------|----------------|----------------|--------------|-------|---------------|-------------|----------|----|---------|
| USABLE VOLUME (cubic litres) | MAX PLATE SIZE (cm) | SPEED | QUALITY | EVENNESS | CONTINUOUS USE | MANUAL DEFROST | AUTO DEFROST | GRILL | JACKET POTATO | EASE OF USE | CLEANING | | |
| | | | | | | | | | | | | | |
| 17 | 30 | ★★★★ | ★★★★★ | ★★★★★ | ★★★★★ | ★★★★★ | ★★★★ | n/a | ★★★★ | ★★★★ | ★★★★ | 71 | |
| 14 | 30 | ★★★★ | ★★★★ | ★★★★★ | ★★★★★ | ★★★★★ | ★★★★★★ | n/a | ★★★★ | ★★★★ | ★★★★ | 70 | |
| 18 | 34 | ★★★★★ | ★★★★★ | ★★★★★ | ★★ | ★★★★★ | ★★★★★★ | n/a | ★★ | ★★★★★ | ★★ | 69 | |
| 12 | 25 | ★★★★ | ★★★★ | ★★★★★★ | ★★★★ | ★★★★ | ★★★★★ | n/a | ★★★★★ | ★★★★★ | ★★★★ | 67 | |
| 13 | 29 | ★★★★ | ★★★★ | ★★★★★ | ★★★★★★ | ★★★★ | ★★★★★★ | n/a | ★★★★ | ★★★★★ | ★★★★ | 67 | |
| 15 | 32 | ★★★★★ | ★★★★★ | ★★★★★★ | ★★★★ | ★★ | ★★★★★ | n/a | ★★★★★ | ★★★★★ | ★★★★ | 65 | |
| 16 | 31 | ★★★★ | ★★★★ | ★★★★ | ★★★★ | ★★★★★ | ★★★★ | n/a | ★★★★ | ★★★★★ | ★★ | 63 | |
| 14 | 28 | ★★★★ | ★★★★ | ★★★★★ | ★★★★★ | ★★★★ | ★★ | n/a | ★★★★★ | ★★★★★ | ★★★★ | 62 | |
| 12 | 27 | ★ | ★★ | ★★★★★★ | ★★★★★ | ★★★★ | n/a | n/a | ★★★★ | ★★★★ | ★★★★ | 62 | |
| 8 | 24 | ★★ | ★★★★ | ★★★★ | ★★★★ | ★★★★★ | n/a | n/a | ★★★★ | ★★★★ | ★★★★ | 61 | |
| 14 | 24 | ★★★★★ | ★★★★★ | ★★★★★ | ★★★★ | ★★★★ | ★★★★★ | n/a | ★★★★★ | ★★★★ | ★★★★ | 60 | |
| 12 | 27 | ★★★★★ | ★★★★★ | ★★★★★ | ★★★★★★ | ★ | ★ | n/a | ★★★★★ | ★★★★★ | ★★★★ | 58 | |
| 17 | 31 | ★★★★★ | ★★★★ | ★★★★ | ★★★★ | ★★★★ | n/a | n/a | ★★★★ | ★★★★ | ★★ | 58 | |
| 14 | 27 | ★★★★ | ★★★★ | ★★★★★ | ★★★★ | ★★★★ | ★ | n/a | ★★★★★ | ★★★★★ | ★★ | 58 | |
| 16 | 31 | ★★ | ★ | ★★★★ | ★★★★★★ | ★★★★★ | n/a | n/a | ★★★★ | ★★★★ | ★★★★ | 56 | |
| 12 | 25 | ★ | ★ | ★★★★★ | ★★ | ★★★★ | n/a | n/a | ★★★★ | ★★★★ | ★★★★ | 47 | |
| | | | | | | | | | | | | | |
| 19 | 34 | ★★★★★ | ★★★★★★ | ★★★★★★ | ★★★★★ | ★★★★★ | ★★★★★ | ★★ | ★★★★★ | ★★★★★ | ★★★★ | 73 | |
| 10 | 28 | ★★★★ | ★★★★★★ | ★★★★★ | ★★★★ | ★★★★★ | ★★★★ | ★★★★ | ★★★★★ | ★★★★★ | ★★★★ | 70 | |
| 17 | 32 | ★★★★ | ★★★★ | ★★★★★★ | ★★★★ | ★★★★★ | ★★★★★ | ★★★★ | ★★★★★ | ★★★★ | ★★ | 61 | |
| 16 | 31 | ★★★★ | ★★★★ | ★★★★★ | ★★★★★ | ★★★★ | ★ | ★★★★★ | ★★★★★ | ★★★★ | ★★★★★ | 60 | |
| 11 | 24 | ★★★★ | ★★★★ | ★★★★ | ★★★★★★ | ★★★★ | ★★★★★ | ★★★★★ | ★★★★★ | ★★★★★ | ★★ | 58 | |
| 15 | 27 | ★★★★★ | ★★★★★ | ★★ | ★★★★ | ★★ | ★ | ★★ | ★★ | ★★★★ | ★★★★★ | 51 | |
| 16 | 31 | ★★ | ★ | ★★★★ | ★★★★★★ | ★★ | ★ | ★★★★ | ★★★★ | ★★★★ | ★★★★ | 50 | |
| 20 | 32 | ★★ | ★ | ★★★★ | ★★★★★★ | ★ | ★★★★★ | ★★★★ | ★★★★★ | ★★★★★ | ★★ | 40 | |

auto defrost, but lacks a setting for defrosting in 500g units. Exclusive to Curry