

GET A GRIP

A fat 190 tyre, propelled with 200 hp but with a contact surface roughly the size of a melon. Could it work? In the fourth part of our tyre test, we see how six of the latest sports tyres handle the raw power of a 1000 cc superbike.

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MOTORRAD
TYRE TEST
2019



In MOTORRAD 12/2019
Six on/off-road tyres for large dual-sport motorcycles tested on a BMW 1250 GS for everyday riding, off-road performance and wear



In MOTORRAD 13/2019
Six enduro tyres for the GS class, tested for everyday riding, highway and wet performance and a 3,500-kilometre wear test



In MOTORRAD 14/2019
Off-road or on-road? We put ten tyres from five manufacturers to the test. Buying tips for all dual-sport riders



In this issue
Six 120/70 ZR 17 and 190/55 ZR 17 in a sporty wet and highway test

If there is anywhere where the wheel of evolution turns particularly fast, then it is in the field of sports tyres. No wonder, seeing as it is here that every little advantage counts most. It is here that manufacturers put their skill and expertise on show for all to see. Sports riders are also more willing to change brands than others. And that's not just at the start of the season either. Often, riders will take their superbikes, compact sports bikes or power nakers to their trusted workshop or dealer in the middle of the summer for a change of tyres.

Let's take a quick look back at the big sports tyre test we did in 2017. Of the six models we tested back then, three have been replaced by successors or upgrades. The three other "old" tyres have also had a "silent improvement" or two in that time. Judging by some of the test results at least, you would suspect that the odd thing had been tinkered here and there. Take Conti, for example, whose proven Sport Attack 3 now performs much better in the wet than two years ago, albeit on a different test vehicle in the BMW S 1000 RR.

All in all though, the general impression we gained this year with a Yamaha YZF-R1 is similar to that of 2017. This was confirmed again in our footnote in the box "The MOTORRAD test" on page 68: "The sections with asterisks can also apply to motorbikes with a similar geometry to the Yamaha YZF-R1." In other words, this sports tyres test is not just a recommendation for the Yamaha, but for many other similar superbikes. It may also be useful for owners of 600 cc supersports bikes, power nakers or even sport touring bikes, especially when it comes to the tyres' fundamental characteristics.

So without further ado, let's get straight into this exciting shoot-out and let the brand-new or updated tyres from Bridgestone, Dunlop and Michelin take on the established models from Conti, Metzeler and Pirelli. We put them through their paces in sporty highway driving and in a rain simulation. The test crew is ready with their tools in the pits, the data recording system is connected and ready and the bike is raring to go, so let's get those tyres on and get started. ■



HIGH AND DRY

We begin on our track under ideal conditions. What can the sports tyres do in everyday summer riding? Let's try a quick simulation on our handling course.



Our 2.5 kilometre test course is the ideal mix of perfect highway and devious race course. What happens when we let the tyres loose here, powered by 200 hp and with 112 Nm of torque? In the end, there was not much to report, at least not in a negative sense. Of course at this point, we have to say that the latest sport tyres from these six premium brands all handled this part of the test with ease. But were there any situations that set off alarm bells in the rider's head? Nope. So does that mean riders can just pick any of these tyres? Again, no. All of the tyres tested certainly passed the basic test by



12 points separate first and last place in the highway test. A close result

providing plenty of grip, so you can fit them on your wheels safe in the knowledge that you won't be making any serious mistakes. But some tyres may be better than others depending on whether you prefer on- or off-road riding. A glance at the points scores will help each rider find the tyre that is right for them. In terms of cold-start characteristics, i.e. how the tyre performs when

you ride out from the garage, there are virtually no significant differences. That changes when we focus on handling, stability, precision or feedback. Riders who take these factors into account may well decide that the winners of our

test may well not be what they are looking for. Those seeking no-holds-barred sportiness, for example, will gravitate towards the stable Michelins and Dunlops, which are specially designed with racing needs in mind. ■

MOTORRAD points score dry roads/sport use

	Maximum score	Bridgestone Battax S 22	Continental Sport Attack 3	Dunlop Sportsmart MK3	Metzeler Sportec M7 RR	Michelin Power RS+	Pirelli Diablo Rosso Corsa II
Driving behaviour							
Cold condition	10	9	9	8	9	8	8
Handling	20	19	18	16	17	16	17
Steering precision	20	19	18	16	17	17	18
Feedback	20	19	18	16	18	17	19
Corner stability	20	19	19	19	19	19	19
Corner stability sport	20	18	18	19	18	18	19
Grip during lean/acceleration	20	19	18	17	18	18	19
Threshold behaviour	10	9	9	8	9	9	9
Righting torque	10	9	9	9	9	9	9
Total	150	140	136	128	134	131	137
RANKING		1.	3.	6.	4.	5.	2.

With its well-balanced characteristics, it's the fully redesigned Bridgestone S 22 that is leading the pack after our sporty highway test. Most striking of all was its precision when hurtling through the curves.

Pirelli's DRC II was similarly balanced, with excellent stability. Conti's Sport Attack 3 has proven itself for many years in our tests thanks to its agile handling. We also like the M7 RR from Metzeler as a nice all-rounder.

RIDING IN THE RAIN

Every summer brings the odd downfall, but how scared of the water are these tyres really? Let's take our six contenders to the limit and surf the wave on our wet handling circuit.



Wet test circuit

Reference area

Speed in km/h

Track distance in m

Pirelli Diablo Rosso Corsa 2 in reference area:
av. 80.4 km/h with av. lean of \varnothing 30.4 degree

Reference area

Michelin Power RS+ in reference area:
av. 76.8 km/h with av. lean of 28.1 degree

The MOTORRAD wet test ended up just as you would expect from a contest between such prestigious contenders. Nevertheless, Pirelli comes out with a small but significant advantage over the Michelin.

Impressive wet performance has become one of the top priorities for designers of ultra-stable sports tyres. Just like in the highway test, all of the contenders had to display good grip in the rain. They say fortune favours the brave, so let's put that theory to the test and really push the limits. In real life, there would be far too many uncertainties involved for a rider to even dream of this. But our cutting-edge test track lets us do this with complete peace of mind.

This year, we're at the Bridgestone testing facility near Rome, but all manufacturers have similarly designed areas that combine permanently watered circuits with standard asphalt surfaces without major jumps in friction, or with nasty surprises like bitumen strips that seemingly come out of nowhere. Whatever the set-up, all of these facilities serve the same purpose. They allow manufacturers to

scientifically analyse grip characteristics and threshold, backed up with precise data recording that shows where each tyre literally slips up. The differences may not be big, but they are there. Interestingly, the results from the precision data recording match the subjective impression that the rider gets from the most reliable gauge of all: his backside. Which tyres feel smoother than others and which are more reliable when riding over slippery ground? The answer is usually the same for all tyres. Silica, a silicic acid compound in the rubber mixture, gives the tyres a degree of elasticity, even below the ideal temperature, that lets them better grip the asphalt. But it's not just about mixing in as much silica as

possible, especially not on sports tyres that must be reliable in high-performance driving. That's because the drawback of silica is exposed in dry conditions, where the rain tyres overheat quickly and risk melting off.

Our tyre test clearly shows just how far development in this segment has come, however. Even in the tough highway test on dry asphalt, the best rain tyres handle the conditions pretty effortlessly.



3.2 metres

That's how far the Michelin finished behind Bridgestone and Conti when braking from 100 km/h

MOTORRAD points score wet roads

	Maximum score	Bridgestone Battax S 22	Continental Sport Attack 3	Dunlop Sportsmart MK3	Maxxeler Sportrac M7 RR	Michelin Power RS+	Pirelli Diablo Rosso Corsa II
Driving behaviour							
Handling	10	9	8	7	8	8	8
Steering precision	20	19	18	17	18	17	18
Corner grip	20	18	19	17	18	16	19
Acceleration grip	20	18	18	16	18	17	19
Threshold	20	17	18	16	17	17	19
Braking deceleration	10	9	9	8	8	7	8
Braking distance (m) from 100 km/h		43.8	43.8	44.9	45.9	47.0	45.4
Circuit times (min)		1:08.4	1:08.6	1:08.9	1:08.6	1:09.2	1:07.7
Total	100	90	90	81	87	82	91
RANKING		2.	2.	6.	4.	5.	1.

With ten points difference between first and sixth place, there really can be no doubt that there is no such thing as a truly bad rain tyre in this premium segment. But in terms of which one offers the best combination of characteristics, the Pirelli Diablo Rosso Corsa II

comes out on top. That may come as a surprise to some who associate the Italian brand more with supersports in nice weather than safety in the wet. Just as impressive in the wet are the tyres in joint second: Bridgestone's S 22 and Conti's Sport Attack 3.



Bridgestone Battlax S22

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TESTSIEGER

Weight: Front 4.5 kg, rear 6.8 kg

Country of production: Japan

Info/approvals: Bridgestone Germany, Tel. 061 72/40 81 73, www.bridgestone.de

EVALUATION

Highway/sport: (140 points, **1st place**)

The Japanese usually provide the most stable tyres in our tests, and the same is true of this new model from Bridgestone. The S 22 takes the best from the previous generation (S 20/S 21) while setting new benchmarks with its incredible handling. Those who enjoy sporty riding (whether in their own local area or during race training) will love the razor-sharp precision that lets them corner the bike on the tightest lines. All this means that the S 22 has earned its position as king of the highway.

Wet test: (90 points, **2nd place**)

The old S 21 offered impressive grip in the wet coupled with predictable threshold behaviour. The S 22 picks up where its predecessor left off and completes our test with no real slip-ups. Its reserves of grip while leaning are slightly below those of its competitors, but this isn't much of a problem.

Summary: An excellent performance from the Japanese brand's latest sports tyres. The S 22 races to the front of the pack in this test thanks to its excellent driving performance on the highway. Even in the rain, it stays ahead.

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Rating: Very good



Continental Sport Attack 3

Weight: Front 4.4 kg, rear 6.5 kg

Country of production: Germany

Info/approvals: Continental, Tel. 05 11/9 38 01, www.conti-moto.de

EVALUATION

Highway/sport: (136 points, **3rd place**)

The Conti may be the veteran in this line-up, but that doesn't mean it's ready for the scrap heap. The sporty tyre has thrilled riders for years with its sheer speed, allowing the bike to accelerate quickly from virtually a standstill. Above all though, the Sport Attack 3 is for those who look for extreme handling. It is the perfect choice for those who ride somewhat obstinate bikes. In very sporty situations like race training however, riders will have to expect some slight chunkiness and a degree of nervousness.

Wet test: (90 points, **2nd place**)

The Sport Attack 3 performs astonishingly well on the Yamaha R1 used in our test, outperforming the 2017 test in which it took a beating from the BMW S 1000. The Conti offers plenty of grip on wet roads, where it combines handling with good transparency.

Summary: A solid everyday sports tyre. Those who enjoy riding around their local area will love the Conti for its excellent handling and outstanding dynamism, not to mention the fact that it won't let them down in the wet.

MOTORRAD

Rating: Very good



Dunlop Sportsmart MK3

Weight: Front 4.5 kg, rear 6.9 kg

Country of production: France

Info/approvals: Goodyear Dunlop Tyres, Tel. 061 81/68 01, www.dunlop.de

EVALUATION

Highway/sport: (128 points, **6th place**)

Dunlop's sports tyres usually call for a strong hand on the accelerator. This is true of both previous generations (like the Sportsmart 2 Max) and the latest model. This prevents the MK3 from truly showcasing what it can do in everyday riding on the highway, as the relatively hard construction leads to a lack of transparency and feedback. Things only improve in tougher conditions. In sporty riding like race training, the Dunlop impresses above all with its outstanding stability.

Wet test: (81 points, **6th place**)

No real slip-ups, but the reserved feedback and predictability are constant themes in the wet, making it difficult for riders to get a proper feel for how much grip is really there in the rain.

Summary: The new Sportsmart MK3 is a very sharply designed tyre. Superbike riders who want to hit the road at full throttle will love the Dunlop's stability. Others may be put off by its lack of predictability.

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Rating: Good



Metzeler Sportec M7 RR

Weight: Front 4.3 kg, rear 6.8 kg

Country of production: Germany

Specification: M (front)
Info/approvals: Pirelli Germany, Tel. 089/1490 83 02, www.metzelmoto.de

EVALUATION

Highway/sport: (134 points, **4th place**)

It may be a bit of an oldie compared to its competitors, but when it comes to sporty everyday riding, the Metzeler remains a reliable tyre on the highway. Those who like to have a good feel for the bike's behaviour will love flying through corners with the M7 RR. It does require some time to warm up, however, and can be pretty stubborn and obstinate at the start. Once it gets up to temperature though, the tyre delivers both good feedback and precise steering, making it perfect for riding around the local area. It also offers plenty of stability for when things get sporty.

Wet test: (87 points, **4th place**)

The stubbornness is a bit irritating at first in the wet, but once it hits the groove, the M7 RR is a solid tyre in the rain, with excellent grip reserves and easy handling.

Summary: The step-up in competition in recent years sees the M7 lose out in some regards. But that doesn't mean it has got worse. It remains our recommendation for an all-round tyre.

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Rating: Very good



Michelin Power RS+

Weight: Front 4.3 kg, rear 5.9 kg

Country of production: Spain

Info/approvals: Michelin Reifenwerke, Tel. 07 21/5 30 39 18, motorrad.michelin.de

EVALUATION

Highway/sport: (131 points, **5th place**)

The abbreviation RS shows that Michelin has clearly focused its Power family on racing sport. By supplying MotoGP, the company is aiming to showcase its prowess in this segment. That's why the French manufacturer's latest creation can only really unlock its talents when the rider hits the gas. Two years ago, we recommended it as our tip for the race track. It offers excellent feedback, stability and durability. The updated RS+ rear tyre means that supersports bikes need to accept some drawbacks on the race track. On the positive side, the plus version is a bit more harmonious on the highway.

Wet test: (82 points, **5th place**)

Tuned a bit on the hard side, the Michelin is not everyone's cup of tea in the rain. But the plus version is a bit grippier on the rear wheel, leading to noticeably better traction on wet surfaces.

Summary: Sports tyre designed almost exclusively for sportiness. The Michelin men have delivered an impressive product. The plus version now offers more all-round benefits.

MOTORRAD

Rating: Good



Pirelli Diablo Rosso Corsa II

Weight: Front 4.3 kg, rear 6.6 kg

Country of production: Germany

Info/approvals: Pirelli Germany, Tel. 089/1490 83 02, www.pirelli.de

EVALUATION

Highway/sport: (137 points, **2nd place**)

Although this tyre's sister model, the Rosso III, is more the everyday sports tyre, the DRC II is also rather impressive in more neighbourhood-focused riding. The complex combination of three compounds at the rear (two at the front) makes itself felt in all riding situations. The super-sporty Pirelli also offers wonderful handling and precise steering on the highway. The stability remains extremely reliable even when you up the speed. Compared to the Bridgestone however, the DRC II loses out a little in terms of agility.

Wet test: (91 points, **1st place**)

The perfectly tuned compound also does the business in the rain. The grip delivered by the DRC II on the wet track is simply incredible, with plenty left in the lean. Alongside this, the Pirelli's good feedback makes it predictable at all times.

Summary: Pirelli comes out just ahead to claim second place in our comparison. The DRC II is the tyre of choice for those looking for something sporty that's still suitable for everyday riding.

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Rating: Very good

The MOTORRAD test

Real life is the best test there is, but pushing the limit safely in our tyre test required a specially prepared track. This year, we simulated everyday riding with a Yamaha YZF-R1 on the partially wetted handling circuit of the Bridgestone European Proving Ground in Nettuno near Rome. The MOTORRAD tyre evaluation focused on the following criteria:

Handling

The steering force required to lean the bike and maintain a line in S-shaped bends.

Threshold behaviour*

This refers to how manageable the tyre is at its limit. Tests on wet and dry track.

Steering precision*

Steering precision in sections of varying speed with complex

corner radii. This indicates whether the bike follows the desired line dictated by the steering forces or if the rider has to correct.

Cornering stability

Tests wobble in (S-shaped) curves and on uneven surfaces. This is tested in different ways (solo/with pillion) and with a large lean when accelerating.

Directional stability

This is tested at high speed. Does the bike stay on course or is the ride spoiled by wobbling?

Grip/acceleration*

Refers to the cornering grip and transfer of force in corners of different speeds (wet/dry).

Grip/lean*

The cornering grip at maximum lean (wet/dry). This kind of

balancing act is only possible in test conditions.

Righting torque

This term refers to how the bike rights itself when braking in a lean position. The rider has to counteract this reaction by pushing on the inside end of the steering.

Tyre pressure in test (as per manufacturer's recommendation)

2.5 bar front, 2.9 bar rear.

The bike in our tyre test: Yamaha YZF-R1

17-inch wheels (120/70 front and 180/55 rear) may be pretty widespread, especially on the once-popular 600 cc supersports bikes, the latest superbikes now ride on wider 190/55 tyres. Tyre developers are now responding to this specification in their new models. With the R1, we made a conscious decision to use this kind of bike so that the results were as representative as possible.

Yamaha R1 data

Water-cooled, four-cylinder straight engine, 998 cm³, 147.1 kW (200 hp) at 13,500 rpm, 112 Nm at 11,500 rpm, aluminium bridge frame, upside-down fork, ABS, traction control, seat height 835 mm, weight 201 kg, tank capacity 17 litres, top speed 299 km/h, 0-100 km/h in 3.3 sec; price 18,995 euros



* Sections with asterisks can also apply to motorbikes with a similar geometry to the Yamaha YZF-R1

POWER & POINTS

The dry and wet tests are over and the points have been totalled up. So which of the 2019 sports tyres has come out on top? Let's find out!



As the bike's engine cools down, one thing is clear: new doesn't automatically mean better. Although this extremely brief overview cannot detail every little nuance, we had to take everything into account for the final evaluation. Michelin and Dunlop both offer very sporty models. Those who enjoy riding at high speed will therefore naturally gravitate towards these and the benefits they offer. For racing, the Power RS+ and Sportsmart MK3 are also excellent, but only get a "good" rating from an all-round perspective. By contrast, the leading four are all excellent for all-round riding, above all the perfectly tuned S 22 from Bridgestone, which represents a major improvement on the previous S 20 and S 21 models. The tried-and-tested tyres from Conti, Pirelli and Metzeler also performed well. The Sportec M7 RR is a nice universal all-rounder, the Diablo Rosso Corsa II is a super-sporty tyre that's excellent in the rain, while the Sport Attack 3 offers wonderful handling for neighbourhood riding.

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Final evaluation

dry/sport

wet roads

Total

MOTORRAD rating*

	Maximum score	150	100	250	
Bridgestone Battlax S 22	140	90	230	Very good	
Pirelli Diablo Rosso Corsa II	137	91	228	Very good	
Continental Sport Attack 3	136	90	226	Very good	
Metzeler Sportec M7 RR	134	87	221	Very good	
Michelin Power RS+	131	82	213	Good	
Dunlop Sportsmart MK3	128	81	209	Good	

*250 to 221 points = very good; 220 to 191 points = good; 180 to 151 points = satisfactory; 150 to 131 points = adequate; 130 to 101 points = insufficient; 100 bis 0 = poor

MOTORRAD TYRETEST 2019

Need more tyre tips? Go to www.motorradonline.de/reifen for more tests and analysis, and download all the information you need in a comprehensive dossier.

