

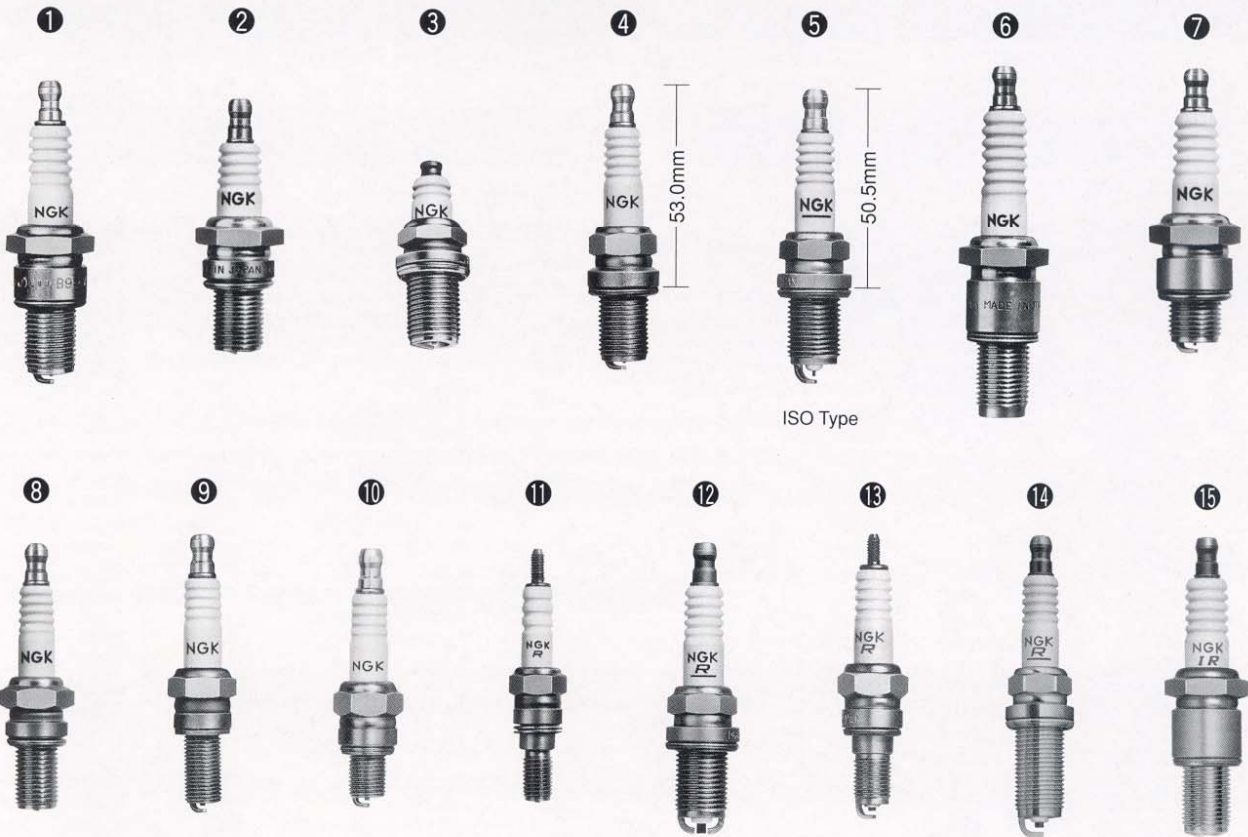
Series of **NGK** racing spark plugs

Blue colour indicates resistor plugs.

Thread size (Hexagon size)	Spark plug type	Spark plug number	Heat rating	Firing end appearance	Electrode material			
					Center	Ground		
φ14×19mm(20.8mm)	BP-E	R4304A-⊙	7,8,9,10	(A) ①	Gold Palladium	Nickel Alloy		
		R6918B-⊙	7,8,9	(B) ①	Platinum	Nickel Alloy		
		R6918C-⊙	9	(B) ①	Platinum	Nickel Alloy		
		R6021E-⊙	8,9,10	(B) ①	Nickel Alloy	Nickel Alloy		
		R6061-⊙	7,8,9,10,11	(G) ①	Nickel Alloy	Nickel Alloy		
		R6252E-⊙	9,105 Gap0.6	(C) ①	Nickel Alloy	Nickel Alloy		
	B-E	R6252K-⊙	105 Gap0.8	(C) ①	Nickel Alloy	Nickel Alloy		
		R6254E-⊙	9,105 Gap0.6	(C) ①	Nickel Alloy	Nickel Alloy		
		R6254K-⊙	105 Gap0.8	(C) ①	Nickel Alloy	Nickel Alloy		
		R7376-⊙	7,8,9,10	(C) ①	Iridium	Platinum		
		Semi surface discharge	R5649-⊙	9,10,11	(E) ①	Nickel Alloy	—	
		Semi surface discharge	R6712-⊙	9,10	(E) ①	Nickel Alloy	—	
		Short	R6179A-⊙P	105,11	(C) ②	Platinum	Platinum	
		Short	R6179C-⊙PA	105	(C) ②	Platinum	Platinum	
		R7376B-⊙	9,10	(C) ①	Iridium	Platinum		
φ14×22mm(20.8mm)	Short	R7282A-⊙	10,105,11	(C) ③	Iridium	Platinum		
		R7282-⊙	7,8,9,10,105,11	(C) ③	Iridium	Platinum		
		R7282M-⊙	11,115	(C) ③	Iridium	Platinum		
φ14×22mm(16.0mm)	Short	R6888A-⊙	8,9,10	(F) ⑫	Nickel Alloy	Nickel Alloy		
		R7433-⊙	8,9,10	(A) ⑤	Iridium	Nickel Alloy		
		R7434-⊙	8,9,10	(C) ⑤	Iridium	Platinum		
φ14×19mm(16.0mm)	BK-E(ISO)※1	R7279-⊙	10	(D) ⑤	Iridium	Platinum		
		Semi surface discharge	R6601-⊙	8,9,10,11	(E) ⑤	Nickel Alloy	—	
	Semi surface discharge	R6711-⊙	9,10	(E) ⑤	Nickel Alloy	—		
	BCP-E(JIS)	R7435-⊙	8,9,10	(A) ④	Iridium	Nickel Alloy		
		R7436-⊙	8,9,10	(C) ④	Iridium	Platinum		
	BC-E(JIS)	Semi surface discharge	R5883-⊙	9,10,11	(E) ④	Nickel Alloy	—	
		Semi surface discharge	R6690-⊙	9,10,11	(E) ④	Nickel Alloy	—	
	φ14×26.5mm(16.0mm)	LFR	Extra long reach	R7437-⊙	8,9,10	(A) ⑭	Iridium	Nickel Alloy
			Extra long reach	R7438-⊙	8,9,10	(C) ⑭	Iridium	Platinum
	φ14×12.7mm(20.8mm)	B-H	R5525-⊙	7,8,9,10,11	(B) ⑦	Gold Palladium	Nickel Alloy	
R5530-⊙			8,9,10,11	(D) ⑦	Gold Palladium	Platinum		
φ14×21.5mm(20.8mm)	Rotary Engine RX-7	R6725-⊙	9,10,105,11,115	(D) ⑥	Platinum	Platinum		
		R7420-⊙	9,10,105,11	(D) ⑥	Iridium	Platinum		
φ14×21mm(20.8mm)	Rotary Engine RX-8 L	R7440A-⊙L	9,10	(C) ⑮	Iridium	Platinum		
φ14×19mm(20.8mm)	Rotary Engine RX-8 T	R7440B-⊙T	10,11	(C) ⑮	Iridium	Platinum		
φ12×19mm(16.0mm)	DC-E	Semi surface discharge	R2349-⊙	9,10,11	(E) ⑧	Nickel Alloy	—	
		R2525-⊙	9,10,11	(C) ⑧	Platinum	Nickel Alloy		
		R0373A-⊙	8,9,10	(C) ⑨	Iridium	Platinum		
φ10×19mm(16.0mm)	C-E	Semi surface discharge	R0045G-⊙	10,11 GAP1.4	(E) ⑨	Nickel Alloy	—	
		Semi surface discharge	R0045J-⊙	9,10,11,12 GAP1.1	(E) ⑨	Nickel Alloy	—	
		Semi surface discharge	R0045Q-⊙	10,11 GAP1.1	(E) ⑨	Nickel Alloy	—	
φ10×19mm Half thread (16.0mm)	C-EH	R0409B-⊙	8,9,10	(C) ⑮	Iridium	Nickel Alloy		
φ10×12.7mm(16.0mm)	C-H	R0161-⊙	9,10,11	(B) ⑩	Nickel Alloy	Nickel Alloy		
φ8×19mm Half thread (13.0mm)	E-EH	Semi surface discharge	R847-⊙	10,11	(E) ⑪	Nickel Alloy	—	

1) ISO: The length from gasket to terminal of ISO type spark plugs is 50.5mm which is 2.5mm shorter than BCP-E or BC-E type spark plugs.
 2) Resistor spark plugs are recommended for cars originally equipped with resistor spark plugs. When nonresistor spark plugs are installed in such cars, there is some possibility that the electric devices in the car, such as the audio system or the engine management system, would be affected by noise.
 3) Marked * part number will be discontinued when the current stock is over.

Appearance



Firing end



Discontinued plug types

Blue colour indicates resistor plugs.

Old part number		New part number
R016 - ○, R017 - ○	→	R0373A - ○
R216 - ○, R217 - ○	→	R2525 - ○
R2270 - ○, R2430 - ○	→	R2349 - ○
R4630A - ○, R6385 - ○ P	→	R7376 - ○
R6120 - ○	→	R7282 - ○
R6120A - ○	→	R7282A - ○
R6120C - ○	→	R7282C - ○
R6120M - ○	→	R7282M - ○
R6255 - ○, R6255F - ○, R6326 - ○	→	R7433 - ○
R6205 - ○, R6241 - ○	→	R7433 - ○
R6206 - ○, R6242 - ○	→	R7434 - ○

Old part number		New part number
R5400 - ○, R5400F - ○, R6337 - ○	→	R7435 - ○
R5686 - ○	→	R7435 - ○
R5830 - ○, R5687 - ○	→	R7436 - ○
R7112 - ○, R7113 - ○	→	R7433 - ○
R7114 - ○, R7115 - ○	→	R7433 - ○
R7116 - ○, R7117 - ○	→	R7434 - ○
R7118 - ○, R7119 - ○	→	R7434 - ○
R7232 - ○, R7233 - ○	→	R7435 - ○
R7234 - ○, R7235 - ○	→	R7435 - ○
R7236 - ○, R7237 - ○	→	R7436 - ○
R7238 - ○, R7239 - ○	→	R7436 - ○

Manufacturer	Model	Spark plug Number	Racing spark plug IX, VX spark plug
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● HONDA

Road race	CB1000SF/CB1300SF	DPR8EA-9	R2525-⊖	
	CB400 SuperFour	CR8EH-9	CR8EHIX-9, R0409B-⊖	
	CB400SS	DPR8EA	R2525-⊖	
	CBR1000RR	IMR9C-9HES	R0409B-⊖, R0045Q-⊖	
	CBR1100XX	IMR9C-9H	R0409B-⊖, R0045Q-⊖	
	CBR400RR	CR8EH-9	CR8EHIX-9, R0409B-⊖	
	CBR600F/FS/F4i/RR	IMR9C-9HES	R0409B-⊖, R0045Q-⊖	
	CBR900RR/CBR954RR	IMR9C-9H	R0409B-⊖, R0045Q-⊖	
	NS-1/NSR50	BR8ES	BR8EIX,R7376-⊖	
	NSR250R/SE/RSP	BR9ECM	BR10ECMIX	
	RVF/RC45	CR9EHIX-9	R0409B-⊖, R0045Q-⊖	
	VTR1000F	DPR8EVX-9	R2525-⊖	
	VTR1000SP/II	IFR9H11	R7279-10	
	RS125R	-	R7376-⊖, R7282A-⊖※1	
	RS250R	-	R7282-⊖, R7282A-⊖※1	
	Off road	XR250/Motard	CR8EH-9	CR8EHIX-9, R0409B-⊖
		XR400/Motard	DPR8Z	DPR8ZIX
	Motocross	CR125R	BR9EG	BR9EIX,R7376-9
		CR250R	BR8EG	BR8EIX,R7376-8
		CR80R/II	B10EG	BR10EIX,R7376-⊖
		CR85R/II	BR10EG	BR10EIX,R7376-⊖
		CRF100F	CR7HSA	CR7HIX
		CRF150R/II	R0409B-9	R0409B-9
CRF250R		R0409B-8	R0409B-8	
CRF450R		IFR8H11	R7433-8	
CRF50F/CRF70F		CR6HSA	CR6HIX	
QR50		BPR4HS	-	
XR250R		CR9EH-9	CR9EHIX-9, R0409B-9	
Trial		XR50R/XR70R	CR6HSA	CR6HIX-⊖
		RTL250R	BR6ES	R7376-⊖
		RTL250F	CR6EH-9	-
		TLM200R	B8ES	BR8EIX
		TLM220R	BR8ES	BR8EIX
		TLM260R	B6ES	B6EVX
	TLR250R	D8EA	DR8EIX	
TLR260	BR6ES	-		

● YAMAHA

Road race	FZ400	D8EA	R2525-⊖
	RZ50 5FC	BR8ES	BR8EIX, R7376-⊖
	SR400/SR500	BPR6ES	BPR6EIX, R7376-⊖
	SRV250	CR7HSA	CR7HIX
	TDM850/TRX850	DPR8EA-9	R2525-⊖
	TZM50R/TZR50R/TZR250/SP	BR9ES	BR9EIX, R7376-⊖
	TZR250SPR/RS/R	BR9ECM	BR10ECMVX
	XJR1200R/XJR1300	DPR8EA-9	R2525-⊖
	XJR400R/RII	CR9E	R0373A-⊖, R0045Q-⊖
	YZF1000R/R1	DR8EA	R2525-⊖
	YZF750SP	CR9E	R0373A-⊖, R0045Q-⊖
	YZF-R1	CR9EK	R0373A-⊖, R0045Q-⊖
	YZF-R6	CR10EK	R0373A-⊖, R0045Q-⊖
	YZF-R7	-	R0373A-⊖, R0045Q-⊖
	TZ125	R6385-105P	R7376-10, R7376B-10※1
	TZ250	R6179A-105P	R6179A-105P,R6179C-105PA※1
	Off road	TT250R	CR9E
TY250Z/ZS		BP6EV	BPR6EIX
Motocross	XT225W/WE	DR8EA	DR8EIX
	PW50	BPR4HS	-
	WR250Z/F/WR400F/WR450F	CR8E	CR8EIX
	YZ125	BR9EVX	BR9EIX, R7376-9
	YZ250	BR8EG	BR8EIX, R7376-8
	YZ250F/YZ426F/YZ450F	CR8E	CR8EIX
	YZ80/LW/YZ85/LW	BR10EG	BR10EIX, R7376-⊖
Trial	TY250Z	BP6EV	BPR6EIX

※1:The thread length is longer than the normal type due to setting the detonation counter.

※2:You need terminal nut.

Manufacturer	Model	Spark plug Number	Racing spark plug IX, VX spark plug
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● KAWASAKI

Road race	D-TRACKER	CR8E	R0373A-⊖, R0045Q-⊖	
	GPZ1100/ABS	CR9EK	R0373A-⊖, R0045Q-⊖	
	GPZ900R	DR9EA	R2525-⊖	
	Z-1	B8ES	BR8EIX,R7376-⊖	
	ZEPHYR1100/RS	CR9E	R0373A-⊖, R0045Q-⊖	
	ZRX1100/II/ZRX1200R/S	CR9EK	R0373A-⊖, R0045Q-⊖	
	ZX-10R	CR9EIA-9	R0373A-⊖, R0045Q-⊖	
	ZX-12R	CR9EKPA	R0373A-⊖, R0045Q-⊖	
	ZX-6R/RR/ZX-7RR	CR9E	R0373A-⊖, R0045Q-⊖	
	ZX-9R/ZXR400/R	CR9EK	R0373A-⊖, R0045Q-⊖	
	ZZ-R1100	CR9E	R0373A-⊖, R0045Q-⊖	
	Off road	KLX250(1998.2~)	CR8E	CR8EIX,R0373A-⊖
		KX125(~2003)	BR9EIX	R7376-9
	Motocross	KX125(2004~2005)	R6918B-9	R6918B-9,R7376-9
		KX125(2006~)	BR9ECMVX	BR9ECMIX
		KX250(~2004)	BR8EIX	R7376-8
		KX250(2005~)	BR8ECMVX	BR8ECMIX
KX250F(2004~2005)		CR8EB	CR8EIX※2	
KX250F(2006~)		CR8E	CR8EIX	
KX450F		CPR8EB-9	-	
KX65		B10EG	BR10EIX,R7376-⊖	
KX85/II		-	BR9EIX,R7376-9	

● SUZUKI

Road race	GS1200SS/GSF1200	JR8B	R2525-⊖	
	GSX1300R	CR9E	R0373A-⊖, R0045Q-⊖	
	GSX-R1100W/GSX-R1000	CR9E	R0373A-⊖, R0045Q-⊖	
	GSX-R600/GSX-R750/RF600	CR9E	R0373A-⊖, R0045Q-⊖	
	RG125F(1991.11~)	BR9ECM	BR10ECMVX	
	RGV-F250SP(1990.2~)	BR9ECM	BR10ECMVX	
	SGX1100J	DR8EA	R2525-⊖	
	TL1000R	CR8EK	R0373A-⊖, R0045Q-⊖	
	TL1000S	CR8E	R0373A-⊖, R0045Q-⊖	
	Motocross	RM125	R6918B-8	+
		RM250	R6918B-7	+
		RM80/RM85	BR10ES	BR10EIX,R7376-⊖
		RM-Z250(2005~2006)	CR8EB	CR8EIX※2
		RM-Z250(2007)	CR8EIA-10	CR8EIA-10,R0373A-⊖
		RM-Z450(2005~2006)	CR8EIB-10	+
		RM-Z450(2007)	DIMR8A10	+

● BIMOTA

Road race	SB6R	CR9E	R0373A-⊖, R0045Q-⊖
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● BMW

Road race	R1100S	BKR7EKC	R7434-⊖
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● DUCATI

Road race	748R/S	DCR9EIX	R2525-⊖
	749S	CR9EVX	R0373A-⊖, R0045Q-⊖
	916SP/SPS/996SPS	R2349-10	+

● GAS-GAS

Trial	TXT250	BPR5ES	BPR5EIX
	TXT280	BPR5ES	BPR5EIX

● KTM

Motocross	125SX/200SX	BR9EVX	BR9EIX, R7376-9
	250SX	BR8ECM	BR8ECMVX
	450SX-R	DCPR8E	R2525-⊖
	50SX	BR8ECM	BR8ECMVX
	525SX	DCPR8E	R2525-⊖
	65SX/85SX	-	R7435-10

● LAVERDA

Road race	750s Fomula	DCR8EIX	R2525-⊖
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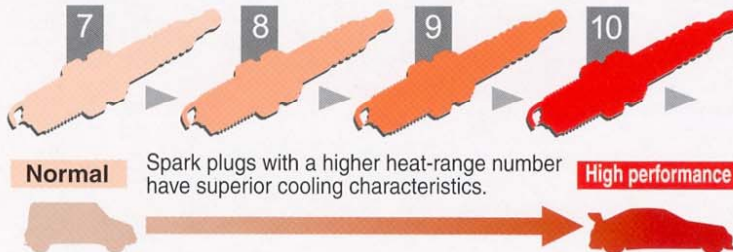
● MONTESA

Trial	COTA315	BR6ES	-
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Choosing a racing plug

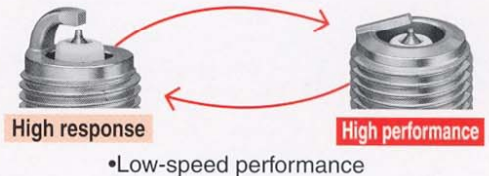
■ Choose the right spark plug for your engine based on heat range and electrode design, engine tuning, and racing conditions.

■ Heat range



■ Electrode design

- Engine tuning
- Torturous racing conditions
- Avoid problems due to extremes of temperature



Racing plugs for both two- and four-wheel vehicles have been developed and designed for use in engines that have been fine-tuned to achieve maximum power under specific racing conditions. Racing plugs differ from standard plugs, both in appearance and performance, and often sacrifice plug life, and efficiency at low-speeds for optimum performance and durability under torturous racing conditions.

■ What to look for when choosing a racing plug

Point 1

Shell design – To determine what kind of shell design fits in your engine, check the serial number of regulation plugs or the plugs you are currently using to verify the thread diameter, pitch, thread length and shell seat.

Point 2

Firing End design – Refer to the section below on electrode design to determine which type is best for your needs.

Point 3

Heat range – It's important to choose a racing plug with a heat range that keeps the electrode at an optimum temperature under even the most torturous racing conditions. And remember: A higher heat-range number does not improve engine performance, it increases the plug's ability to dissipate heat.

Point 4

Resistors – Due to advances in ignition-system technology, there is little if any difference in performance between plugs with resistors and those without. However there are still some variations of some models that require plugs with resistors to avoid engine trouble.

■ Choosing a firing end design

Although a good rule of thumb is that the more an electrode projects into the cylinder, the better ignition it provides, it's also true that longer projections are more susceptible to the wear and tear of extreme temperatures. High-power, high-performance engines, of course, not only run hotter, they also vibrate more, which is why we recommend choosing a firing end design that reduces exposure of the electrode and insulator as much as possible.

Projected type



Quite similar to a standard spark plug electrode, these plugs give good overall performance in lightly tuned and naturally aspirated engines, as well as good performance in the low to medium torque range in turbo engines.

Angled ground strap type



These provide superior performance in turbocharged engines with power boosts of 50% or more. The short ground electrode is also highly durable against mechanical shock.

Semi-surface discharge



In a sense, this is the ultimate plug configuration. Nearly all insulator cracking and electrode melting can be prevented with this type. Nevertheless, service life and low-speed performance may suffer slightly.

Once you've found a plug that matches your needs, give it a try and feel the exhilaration of getting 120% performance from your engine.

INSTALLATION

To install spark plugs in the engine, first tighten them by fingers, then retighten with the right tightening torques as shown below, using a plug wrench.

Either excessive tightness or looseness will cause troubles. Looseness sometimes causes pre-ignition because heat cannot disperse. On the other hand, excessive tightness can damage the threads of both the cylinder head and the spark plug.

Tightening angles

Thread size	New gasket	Used gasket
φ14mm (except※)	$\frac{2}{3}$ of a turn(240°)	$\frac{1}{12}$ of a turn(30°)
φ12mm φ10mm	$\frac{1}{2}$ of a turn(180°)	$\frac{1}{12}$ of a turn(30°)
φ8mm	$\frac{1}{3}$ of a turn(120°)	$\frac{1}{12}$ of a turn(30°)
※ R6469-9 R6918C-9	$\frac{1}{3}$ of a turn(120°)	$\frac{1}{12}$ of a turn(30°)

Tightening torques

Spark plug type (thread diameter)	Aluminium cylinder head
Flat seat type (with gasket)	φ14mm 25~30N·m (2.5~3.0kg·m 18.0~21.6 lb·ft)
	φ12mm 15~20N·m (1.5~2.0kg·m 10.8~14.5 lb·ft)
	φ10mm 10~12N·m (1.0~1.2kg·m 7.2~8.7 lb·ft)
	φ 8mm 8~10N·m (0.8~1.0kg·m 5.8~7.2 lb·ft)

NGK Spark plug covers for racing spark plugs

Plug cover number (Colour)	Applicable plug type and cable
TRS1225 (Blue) *For Honda Racer only	R7282-  , R7282A-  , R7282C-  , R7282M-  φ8mm cable
TRS1233A (Red) TRS1233B (Yellow) TRS1233C (Green)	R7282-  , R7282A-  , R7282C-  , R7282M-  φ7mm cable
TRS1408F (Blue)	R5300A-  , R5300N-  φ8mm cable
TRS1409 (Red)	R5540F-  φ7mm cable



NGK SPARK PLUG CO., LTD.

NAGOYA, JAPAN

