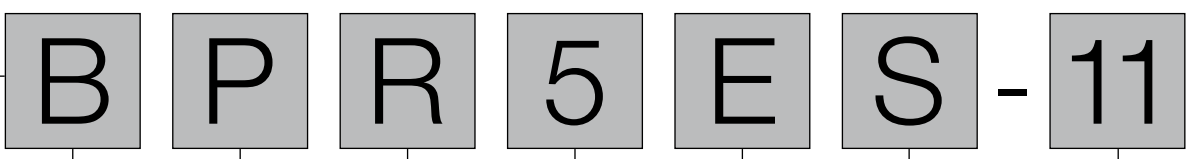
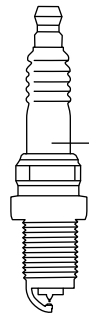
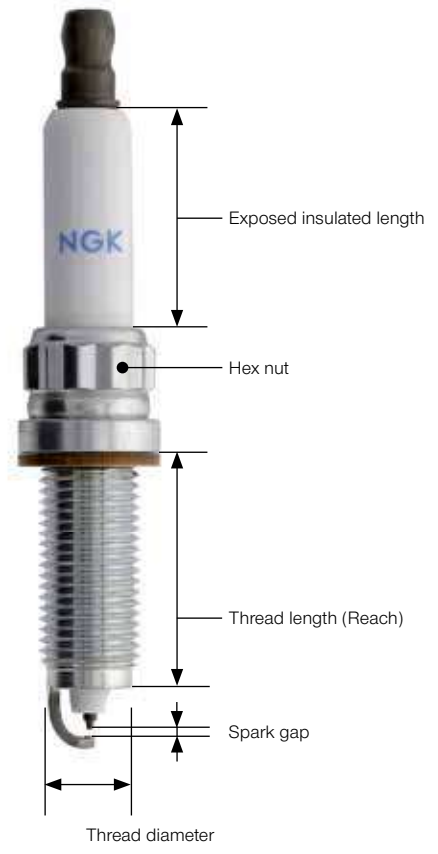


How to read our part number: Spark Plugs

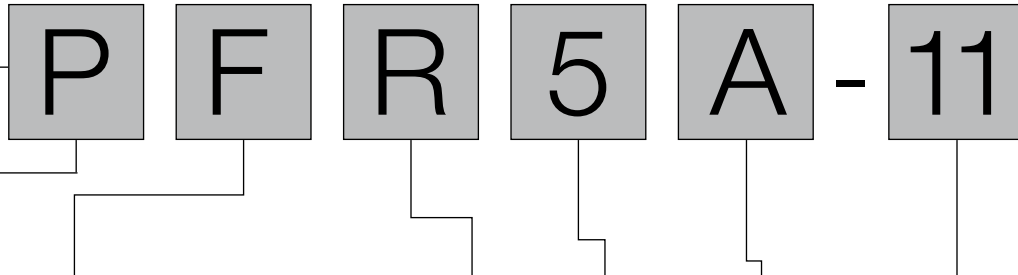
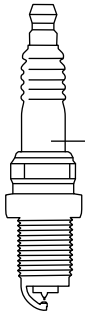


Unit : mm

B		P		R		5		E		S		-11							
Thread size	Hex size	Structure		Resistor		Heat rating		Thread length		Design features		Spark gap							
A	φ 18.0	Hex 25.4	P	Projected insulator type	R	Resistor	2	<p>Hot type</p> <p>Cold type</p>	E	19.0	B	Integral terminal (CR8EB)		None	Motorcycle : 0.7~0.8				
B	φ 14.0	Hex 20.8			Z	Inductive resistor type	4		EH	17.5		CM	Slant ground electrode Compact type (Exposed insulator length: 18.5)		Car : 0.8~0.9				
BC	φ 14.0	Hex 16.0	M	Small spark plug	5	H	12.7		CS	Slant ground electrode			-8	0.8					
BK	φ 14.0	Hex 16.0			6	L	11.2			G,GV	Racing spark plug		-9	0.9					
C	φ 10.0	Hex 16.0	U	Surface gap, Semi-surface discharge gap or Supplementary gap	7	None	Tapered seat type A(P)-F : 10.9 B(P)-F : 11.2 BM(P)-F : 7.8		IX		Iridium IX spark plug		-11	1.1					
D	φ 12.0	Hex 18.0			8		Small type plug B(P)M- : 9.5 B-LM : 9.5 CM-6 : 8.6 C-50 : 8.5			P	Platinum spark plug Single ground electrode : Double platinum		-10	1.0					
DC	φ 12.0	Hex 16.0			9		-LM				Compact type (Insulator length: 14.5)		N	Special ground electrode		-S	Special gasket		
E	φ 8.0	Hex 13.0			10						S	Standard type		P	Platinum spark plug Single ground electrode : Double platinum		-E	Special resistance	
*Exception B(P)M-A,Y : φ 14.0, Hex 19.0 P(P)-(E)F : φ 14.0, Hex 16.0 CM-6 : φ 10.0, Hex 14.0															Q	4-ground-electrodes		IX-P	Iridium MAX plug
BC : Old JIS standard size The length from gasket surface to terminal contact is 53.0mm.									S			Multi-ground electrode : Single platinum in central electrode				LPG 1-8	LaserLine spark plug range for gas engine use		
BK : ISO / JIS standard size The length from gasket surface to terminal contact is 50.5mm.								T		3-ground-electrodes									
										U		Semi-surface discharge gap							
											Y	V-grooved center electrode							
												Z	Special design						

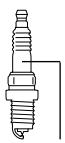


How to read our part number: Spark Plugs

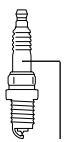


Unit : mm

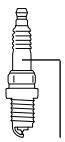
P		F				R		5		A		-11										
Plug type		Thread diameter	Thread length	Seat configuration	Hex size	Resistor		Heat rating		Design		Spark gap										
DI	High ignitability plug: Double fine electrodes	F	∅ 14.0	19.0	Gasket	Hex 16.0	R	Resistor	2		A,B,C... Suffix code	None	Motorcycle : 0.7-0.8									
		FE	∅ 14.0	19.0	Gasket	Hex 16.0			4				Car : 0.8-0.9									
I	Double iridium spark plug	G	∅ 14.0	19.0	Gasket	Hex 20.8			5			I	Iridium central electrode	-7	0.7							
L	Long thread reach plug	J	∅ 12.0	19.0	Gasket	Hex 18.0			6					-9	0.9							
P	Double platinum spark plug	K	∅ 12.0	19.0	Gasket	Hex 16.0			7					IX	Iridium IX spark plug	-10	1.0					
S	High ignitability plug : thin square tip type	KA	∅ 12.0	19.0	Gasket	Hex 14.0			8							P	Platinum central electrode	-11	1.1			
		KB	∅ 12.0	19.0	Gasket	Bi-Hex 14.0 (Bi-hexagonal *)			9									-13	1.3			
Z	Projected firing end					Hex 16.0			10									Cold type		-15	1.5	
Above alphabets are occasionally used in combination <Example>ILFR..., PLZFR..., When „L“ is included, priority is given to „L“ (long reach) in thread length. <Example> *Gasket type FR5AP : Thread length ↓ 19.0mm LFR5AP-11 : Thread length 26.5mm *Tapered seat type PTR5C-13 : Thread length ↓ 17.5mm PLTR6A-10G : Thread length 25.0mm		KE	∅ 12.0	19.0	Gasket	Hex 16.0															-A	Non gasket
		KF	∅ 12.0	19.0	Gasket	Hex 14.0															-D	Metal shell : nickel plating
		KG	∅ 12.0	19.0	Gasket	Bi-Hex 14.0 (Bi-hexagonal *)				-E	Special resistance											
		L	∅ 10.0	12.7	Gasket	Hex 16.0				-G	Copper cored ground electrode											
		M	∅ 10.0	19.0	Gasket	Hex 16.0				-H	Special thread shape											
		MA	∅ 10.0	19.0	Gasket	Hex 14.0				-J	2 ground-electrode											
		MF	∅ 10.0	19.0	Gasket	Hex 14.0				-K	Vibration-resistance ground electrode											
		NA	∅ 12.0	17.5	Tapered seat	Hex 14.0				-N	Special ground electrode											
		T	∅ 14.0	17.5	Tapered seat	Hex 16.0				-Q	4-ground-electrode											
		U	∅ 14.0	11.2	Tapered seat	Hex 16.0				-S	Special gasket											
W	∅ 18.0	10.9	Tapered seat	Hex 20.8				-T	3-ground-electrode													
X	∅ 14.0	9.5	Gasket	Hex 20.8				-U	Semi-surface discharge type													
Y	∅ 14.0	11.2	Tapered seat	Hex 16.0				IX-P	Iridium MAX plug													
		*Exception TR5A-10, TR5A-13, TR5B-13, TR6B-10, TR6B-13, PTR5A-10, PTR5A-13 : Thread length 25.0mm *Bi-hexagonal socket is necessary. *FE, KE, KF, KG, MF : Longer exposed insulator length type				 Bi-hexagonal Hexagonal			LPG 1-8	LaserLine spark plugs range for gas engines												



RE		7		C				-L	
Plug type		Heat rating		Design				Spark gap	
RE	Plug for rotary engines	5		A,B,C--Suffix code				-L	Leading position
SD	Plug for rotary engines (Semi-surface discharge gap)	6							-T
		7							
		8							
		9							
		10							
11	Cold type								



HB		6		A				IX		-11		P	
Plug type		Heat rating		Thread diameter	Thread length	Seat configuration	Hex size			Spark gap			
HB	HYBD (3-ground-electrode hybrid type)	4		A	∅ 14.0	20.5	Gasket	Hex 16.0	IX		-8	0.8	
		5		B	∅ 14.0	19.0	Gasket	Hex 16.0			-9	0.9	
		6		-10	1.0								
		7		-11	1.1								
		8		-13	1.3								



DF		6		H				-11		A			
Plug type		Heat rating		Thread diameter	Thread length	Seat configuration	Hex size			Spark gap			
DF	High ignitability plug (Double fine electrodes)	4		A	∅ 14.0	19.0	Gasket	Hex 16.0			-8	0.8	A,B,C... Suffix code
		5		B	∅ 14.0	26.5	Gasket	Hex 16.0			-9	0.9	
DFH	High ignitability plug (DF + Hybrid type)	6		C	∅ 12.0	26.5	Gasket	Hex 14.0			-10	1.0	
		7		*DF6H-11A : Thread length 28.0mm		-11	1.1						
		8		-13	1.3								
		9	Cold type			-15	1.5						



IMPORTANT TIPS FOR THE INSTALLATION OF SPARK PLUGS

A torque wrench is required for the professional installation of a spark plug. Even for professionals the estimation of the tightening torque is nearly impossible. That is because a torque can be calculated from two sizes which are multiplied by one another: the force which is applied to the respective centre of rotation and the length of the

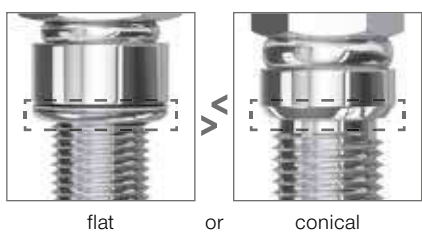
handle. Most spark plug failures can be traced back to an incorrect tightening torque. If it is set too low, there is a risk of compression losses and overheating. A break of the insulator or middle electrode as a result of vibrations is also feasible. If the tightening torque is set too high, the spark plug can snap off. The casing can also expand

or warp. Heat dissipation zones are disrupted, overheating and melting of the electrodes or even engine damage can occur.

Spark plug tightening torques

The required tightening torque depends on seat type, thread diameter and cylinder head material. Please take care of the tightening torques or angles, whenever these are printed on the packaging material!

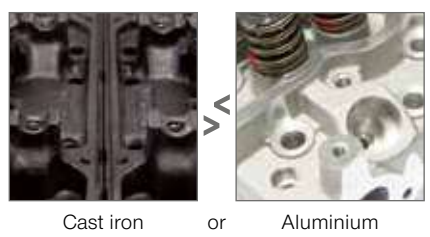
1 Seat type



2 Thread diameter



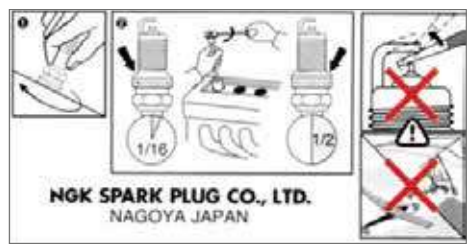
3 Cylinder head material



1	Seat type	Spark plug with a flat seat (with seal)				Spark plug with a conical seat	
	2 Thread Ø	10 mm	12 mm	14 mm	18 mm	12/14 mm	18 mm
3	Cast iron head	10-15 Nm	15-25 Nm	25-35 Nm	35-45 Nm	15-25 Nm	20-30 Nm
	Aluminium head	10-12 Nm	15-20 Nm	25-30 Nm	35-40 Nm	10-20 Nm	20-30 Nm

Alternative: Angle of rotation details

The respective angle of rotation can be found on the spark plug packaging. (Exception: racing plugs – only torque method)





IMPORTANT TIPS FOR THE REMOVAL AND INSTALLATION OF GLOW PLUGS

1 Removal / Breakaway torque



When changing glow plugs you must always use the correct torque, so that the breakaway torque is not exceeded, if not there is danger of tear-off.

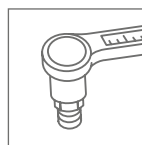
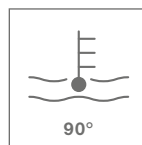
Glow plug breakaway torque

Ø Thread	M8	M9	M10	M12
Breakaway torque	20 Nm	30 Nm	40 Nm	50 Nm

Note: Other manufacturers often have, due to the varying thread materials, lower breakaway torque values. For this reason, you should reduce of a further 5 Nm the value, whenever the glow plug manufacturer is unknown.

2 Tips on removal issues

If an immediate removal is not urgent, we suggest proceeding as follows:



- > Sprinkle the glow plug seat on the transition to the cylinder head with synthetic motor oil.
- > Let absorb for a couple of days and move the vehicle.
- > Remove the glow plugs with the engine at operating temperature paying attention to the breakaway torques using a suitable torque wrench.

3 Cleaning




Before installing new glow plugs oil and soot residue should be removed from the glow plug hole with a greased reamer.

4 Glow plug installation / tightening torques

Metal rod glow plugs					Ceramic glow plugs		
Ø Thread	M8	M9	M10	M12	M14	M8	M10
Tightening torque	8,5Nm	11Nm	15Nm	23Nm	23Nm	10Nm	18Nm
Tolerance in %	+/- 10	+/- 10	+/- 10	+/- 10	+/- 10	+/- 10	+/- 10

Connecting nut		
Ø Thread	M4	M5
Tightening torque	0,8–1,5 Nm	3,0–4,0 Nm
Tolerance in %	+/- 10	+/- 10

 Please take care of the tightening torques, whenever these are printed on the packaging material! Glow plugs will function properly only when tightened with the correct tightening torque!

SERIES



IGNITION
PARTS

SERIES OF NGK SPARK PLUGS


NGK ZÜNDKERZEN · SÉRIES DES BOUGIES NGK

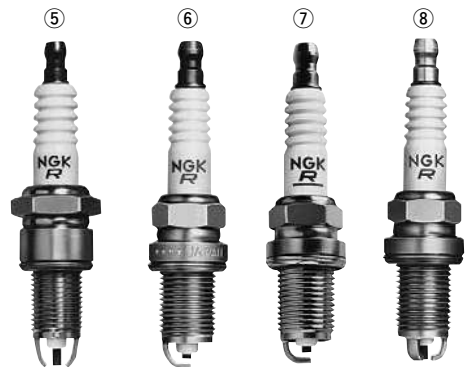
SERIES DE BUJÍAS DE ENCENDIDO NGK · TYPBETECKNINGAR FÖR NGK TÄNDSTIFT


STANDARD TYPES

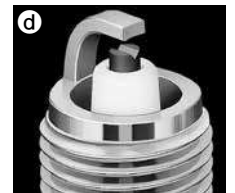
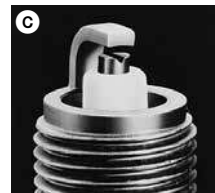
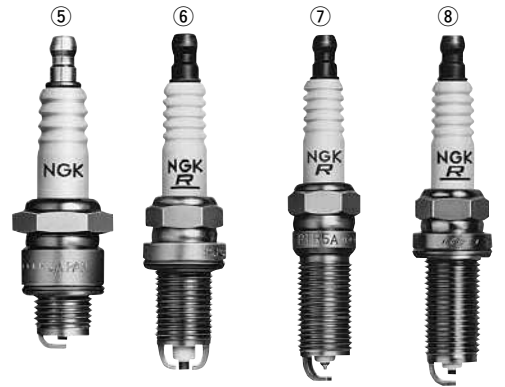
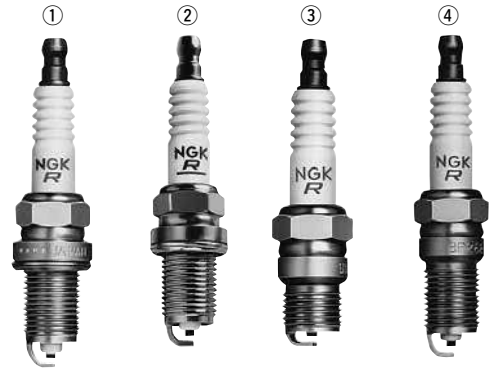
STANDARD AUSFÜHRUNGEN
TIPOS ESTANDARES


TYPES STANDARDS
STANDARDTYPER

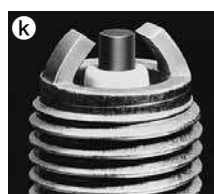
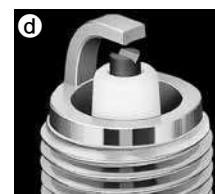
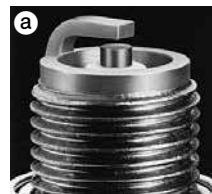
	NON-RESISTOR NON-RÉSISTANCE ICKERESISTOR	OHNE WIDERSTAND NO-RESISTOR	RESISTOR RÉSISTANCE RESISTOR	MIT WIDERSTAND RESISTOR	
ϕ 14mm × 9.5mm Hex 20.8mm Fig. ① ①	B-2 B-4 B6S B7S B8S		BR6S		
	Fig. ① ③ BP-4 BP5S BP6S				
ϕ 14mm × 19.0mm Hex 20.8mm Fig. ② ②	B4ES B5ES B6ES,-11 B7ES,-11 B8ES B9ES B10ES		BR4ES BR5ES BR6ES,-11 BR7ES BR8ES,-11 BR9ES BR10ES		
	Fig. ② ⑥		BR6EB-L-11		
	Fig. ② ⑧		BR8EYA BR9EYA BR10EYA		
	Fig. ② ③ BP2ES, BP-2E BP4ES,-11 BP5ES,-11,-13 BP6ES,-11 BP7ES,-11 BP8ES BP9ES	BP5ESZ BP6ESZ	BPR2ES, BPR-2E BPR4ES,-11,-13 BPR5ES,-11,-13 BPR6ES,-5,-11 BPR7ES,-11 BPR8ES,-6 BPR9ES		
	Fig. ③ ⑨		BPR6EKN BPR7EKN		
	Fig. ② ⑦	BP4EY,-11 BP5EY,-11 BP6EY,-11 BP7EY		BPR4EY,-11 BPR5EY,-11 BPR6EY,-11 BPR7EY-11	
	Fig. ② ④	BP5E BP6E		BPR4E,-11 BPR5E,-11 BPR6E,-11 BPR7E	
	Fig. ④ ⑨	BP5ET,-10 BP6ET BP7ET			
	Fig. ⑤ ⑩			BPR5EJ	
ϕ 14mm × 19.0mm Hex 16.0mm Fig. ⑥ ⑥	BCP4ES,-11 BCP5ES,-11 BCP6ES,-11 BCP7ES,-11		BCPR5ES,-11 BCPR6ES,-11 BCPR7ES,-11 BCPR9ES-11		
	Fig. ⑧ ⑨ BCP5ET BCP6ET BCP7ET		BCPR5ET BCPR6ET BCPR7ET		
	Fig. ⑥ ①	BC6ES	BCR8ES		
	Fig. ⑦ ③ BK5ES	BK5ESZ	BKR4ES-11 BKR5ES,-11 BKR6ES,-11 BKR7ES-11		




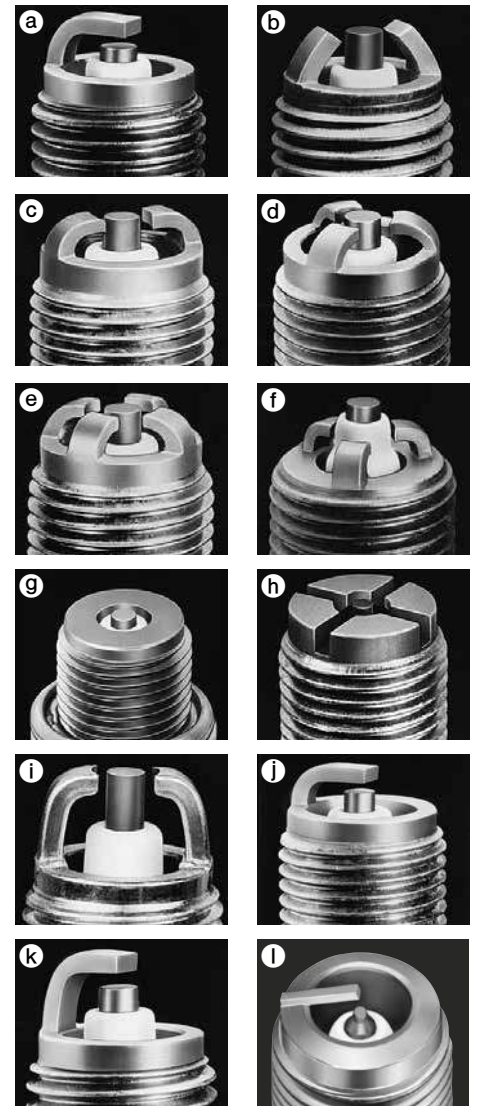
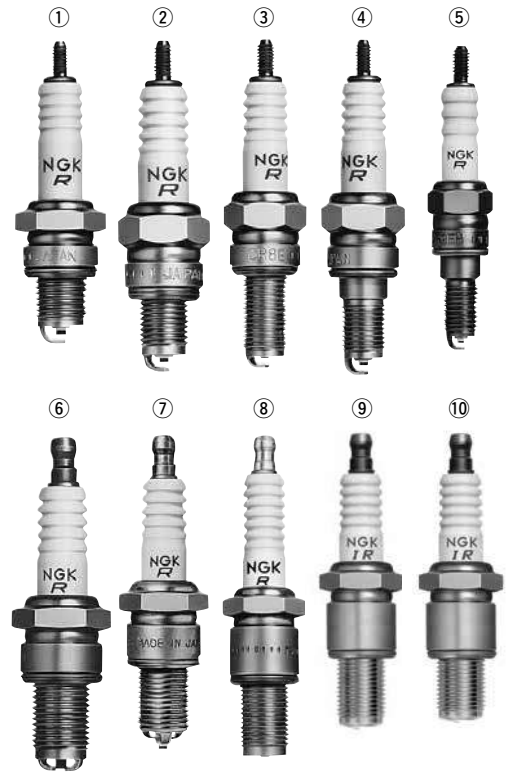
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ϕ 14mm \times 19.0mm Hex 16.0mm Fig. ①③			BCPR4EY,-11 BCPR5EY,-11 BCPR6EY,-11,-N-11 BCPR7EY,-11,-N-11	
	Fig. ②④ ISO		BKR4EY,-11 BKR5EY,-11 BKR5EYA,-11 BKR6EY,-11 BKR6EYA,-11 BKR7EY	
	Fig. ①⑤	BCP5E BCP6E,-11 BCP7E,-11	BCPR5E,-11 BCPR6E,-11 BCPR7E,-11	
	Fig. ②⑥ ISO	BK5E,-11 BK6E,-11	BKR4E,-11 BKR5E,-11,-N,-N-11 BKR5EZ BKR6E,-11-E,-N,-N-11 BKR6EZ BKR7E,-11,-N-11 BKR8E-11 FR6F-11DK FR6F-11K	
	Fig. ⑥⑦ ISO		BKR5EK BKR6EK	
ϕ 14mm \times 26.5mm Hex 16.0mm Fig. ⑧④			BKR5EKB-11 BKR6EKB-11	
	Fig. ⑥⑨ ISO		BKR5EKC BKR6EKC,-N-11 BKR6EKE BKR7EKC,-N,-N-11	
ϕ 14mm \times 11.2mm Conical seat Hex 16.0mm Fig. ③①		B7FS	LFR4A,-11 LFR4A-E LFR5A,-11 LFR6A,-11 LFR7A	
	Fig. ③②	BP4FS BP5FS BP6FS BP7FS	BR5FS BR6FS,-15	
	Fig. ③④	BP5F BP6F	BPR4FS,-11,-15 BPR5FS,-11,-15 BPR6FS	
ϕ 14mm \times 17.5mm Conical seat Hex 16.0mm Fig. ④①		B8EFS B9EFS	BR7EFS	
	Fig. ④⑤		BR6EF BR7EF	
	Fig. ④②	BP5EFS,-13 BP6EFS,-13 BP7EFS	BPR5EFS,-13 BPR6EFS,-13,-15 BPR7EFS-15	
	Fig. ④④	BP6EF	BPR6EF,-11,-13	
ϕ 14mm \times 25.0mm Conical seat Hex 16.0mm Fig. ⑦②			TR5A-13 TR5B-13 TR6B-10	
	Fig. ⑤①	B-4L B-6L B6LY (Fig. ⑤⑤)		




	NON-RESISTOR NON-RÉSISTANCE ICKERESISTOR	OHNE WIDERSTAND NO-RESISTOR	RESISTOR RÉSISTANCE RESISTOR	MIT WIDERSTAND RESISTOR
ϕ 14mm \times 12.7mm Hex 20.8mm Fig. ①(a)	B-2H B-4H,-10 B5HS B6HS,-10 B7HS,-10 B8HS,-10 B9HS B10HS		BR4HS BR5HS BR6HS,-10 BR7HS,-10 BZ7HS-10 BR8HS,-10 BR9HS,-10	
	Fig. ①(b)	BP2HS BP4HS,-10 BP5HS,-10 BP6HS,-10 BP6HSA BP7HS,-10 BP8HS,-10,-15	BP-2H BP-4H BP6H BP7H	BPR2HS BPR4HS,-10 BPR4HSA BPR-4H BPR5HS BPR6HS,-10 BPR6HSA BPR7HS,-10 BPZ8H-N-10 BPR8HS,-10 BPR8HSA BPZ8HS-10,-15
	Fig. ①(c)	BP4HA		
	Fig. ①(e)	B6HSA B8HSA		BR4HSA BR6HSA,-9 BR8HSA,-9
ϕ 18mm \times 12.0mm Hex 20.8mm Fig. ⑤(f)	AB-2 AB-6 AB-7 AB-8			
ϕ 18mm \times 16.0mm Hex 25.4mm			R8102B-10	
ϕ 12mm \times 19.0mm Hex 18.0mm Fig. ⑥(h)	D6EA D7EA D8EA D9EA D10EA		DR7EA DR7EB DR8EA DR8EB DR9EA	
	Fig. ⑥(i)	DP6EA-9 DP7EA-9 DP8EA-9 DP9EA-9	DPR5EA-9 DPR6EA-9 DPR6EB-9 DPR7EA-9 DPR8EA-9 DPR9EA-9	
	Fig. ⑥(h)	J9A	JR8B JR9B JR10B	
	Fig. ⑥(k)		JR8C JR9C	
ϕ 12mm \times 21.0mm Hex 18.0mm Fig. ⑦(i)	DP8Z		DPR7Z DPR8Z DPR9Z	
ϕ 12mm \times 19.0mm Hex 16.0mm Fig. ⑧(i)	DCP6E DCP7E		DCPR6E DCPR7E,-N DCPR8E,-N DCPR9E	KR6A-10 KR8C-G KR9C-G
	Fig. ⑧(m)			DCPR8EKC
ϕ 12mm \times 20.5mm Hex 16.0mm			KER7A-8DEG	
ϕ 12mm \times 26.5mm Hex 16.0mm Fig. (b)			LKR6C LKR6E LKR6F-10 LKR7E	
ϕ 12mm \times 25.0mm Hex 14.0mm			LNAR7A-9G	
ϕ 12mm \times 26.5mm Hex 14.0mm Fig. (b)			LZKAR6C-9 LZKAR7D-9,-9D LKAR8A-9,-9S	



	NON-RESISTOR NON-RÉSISTANCE ICKERESISTOR	OHNE WIDERSTAND NO-RESISTOR	RESISTOR RÉSISTANCE RESISTOR	MIT WIDERSTAND RESISTOR
ϕ 12mm \times 12.7mm Hex 18.0mm Fig. ①(a)	D6HA D8HA		DR4HS DR5HS DR6HS DR8HS	
ϕ 10mm \times 12.7mm Hex 16.0mm Fig. ②(a)	C2H C5HSA C6HSA C7HSA C8HSA	C4HSB C5HSB	CR4HSA CR4HSB LR4C-E CR5HSA CR5HSB CR6HSA LR6E CR7HSA LR7D CR8HSA CMR8H LR8A LR8B	
ϕ 10mm \times 19.0mm Hex 16.0mm Fig. ③(j)	C7E C8E C9E		CR6E CR6EB CR7EK CR7EB CR8EK CR8EB CR9EK CR9EB CR10E	
	Fig. ③(k)		D CPR6EA-9S CPR8E CPR7EA-9	
ϕ 10mm \times 19.0mm Hex 16.0mm Fig. ④(a)	C8EH-9 C9EH-9		CR5EH-9 MR7C-9N MR7E-9 MR7F CR8EH-9 MR8C-9N MR8D-9 MR8E-9 MR8F CR9EH-9 MR9C-9N	
ϕ 10mm \times 19.0mm Hex 16.0mm Fig. ③(b)			CR7EKB CR7EKB CR8EKB CR8EKB CR9EKB CR9EKB CR10EK	
	Fig. ③(i)		CR7EKC	
ϕ 10mm \times 19.0mm Hex 14.0mm Fig. ⑤(b)			MAR9A-J MAR8B-JDS MAR10A-J MAR9B-JDS	
ϕ 10mm \times 26.5mm Hex 14.0mm Fig. ⑥(k)			LMAR6A-9 LMAR6C-9 LMAR7A-9 LMAR7H-9DS LMAR8A-7,9,9S LMAR8F-9 LMAR8G	
	Fig. ⑥(b)		LMAR9D-J	
ϕ 8mm \times 19.0mm Hex 13.0mm Fig. ⑤(a)			ER8EH, -N ER9EH, -N, -6N ER10EH	




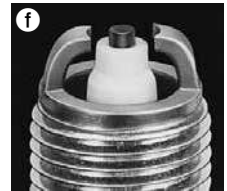
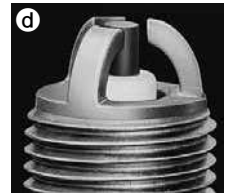
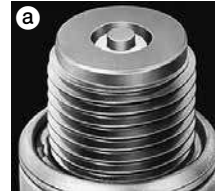
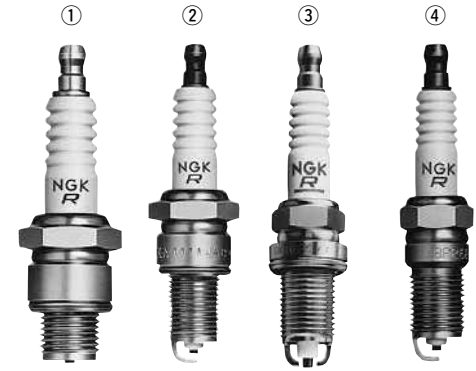
FOR ROTARY ENGINE
FÜR WANKELMOTOR **POUR MOTEUR ROTATIF**
PARA MOTOR ROTATIVO **TÄNDSTIFT FÜR WANKELMOTORER**

	NON-RESISTOR NON-RÉSISTANCE ICKERESISTOR	OHNE WIDERSTAND NO-RESISTOR	RESISTOR RÉSISTANCE RESISTOR	MIT WIDERSTAND RESISTOR
ϕ 14mm \times 19.5mm Hex 20.8mm Fig. ⑥(c)	B7EM		BR8EM	
Fig. ⑥(d)			BR7ET BR8ET BR9ET BR10ET	
	Fig. ⑥(e)		BR8EQ,-14 BR9EQ,-14	
ϕ 14mm \times 21.5mm Hex 20.8mm Fig. ⑧(g)			SD10A SD11A	
	Fig. ⑧(h)		BUR6EQ BUR7EQ BUR7EQ BUR7EQP BUR8EQ BUR8EQP BUR9EQ BUR9EQP	
ϕ 14mm \times 21.0mm Hex 20.8mm Fig. ⑨			RE6C-L RE7C-L RE8C-L	
ϕ 14mm \times 19.0mm Hex 20.8mm Fig. ⑩(1)			RE9B-T	

SEMI SURFACE DISCHARGE TYPES AND SUPPLEMENTARY GAP TYPE

HALBGLEITFUNKENTYPEN UND ZUSÄTZLICHER ABSTANDSTYP
 TYPE À DÉCHARGE SEMI-SURFACIQUE ET TYPE À ÉCARTEMENT SUPPLÉMENTAIRE
 TIPO DE DESCARGA DE MEDIA SUPERFICIE Y TIPO DE GALGA SUPLEMENTARIA
 STIFT MED SEMI-YTGNISTGAP OCH STIFT AV SUPPLEMENTÄR TYP

	NON-RESISTOR OHNE WIDERSTAND NON-RÉSISTANCE NO-RESISTOR ICKERESISTOR	RESISTOR MIT WIDERSTAND RÉSISTANCE RESISTOR RESISTOR
ϕ 14mm × 12.7mm Hex 20.8mm Fig. ① ②	BU8H	BUZ8H
ϕ 14mm × 19.0mm Hex 20.8mm Fig. ② ③		BUR5EA-11 BUR6EA-11 BUR7EA-11
ϕ 14mm × 19.0mm Hex 20.8mm Fig. ② ④		BUR4EB-11 BUR5EB-11 BUR6EB-11 BUR7EB-11
ϕ 14mm × 19.0mm Hex 20.8mm Fig. ③ ⑤		BUR5ET,-10 BUR6ET
ϕ 14mm × 19.0mm Hex 20.8mm Fig. ③ ⑥		BPR6EK-A
ϕ 14mm × 19.0mm Hex 20.8mm Fig. ③ ⑦		BPR5EKU
ϕ 14mm × 17.5mm Conical seat Hex 16.0mm Fig. ④ ⑧	BU6EFSZ	BUR6EFSZ
ϕ 14mm × 19.0mm Hex 16.0mm Fig. ⑥ ⑨ ISO		BKUR6EK,-9 BKUR7EK
Fig. ⑤ ⑩ ISO		BKUR5ET,-10 BKUR5ETZ-10 BKUR6ET,-10 BKUR6ETB BKUR7ET
Fig. ⑥ ⑪ ISO	BK7EKU	BKR5EKU BKR6EKU BKR7EKU
Fig. ⑥ ⑫ ISO		BKR6EKUE
ϕ 14mm × 22.0mm Hex 16.0mm Fig. ⑦ ⑬		BKR5EKUC BKR6EKUC
ϕ 14mm × 19.0mm Hex 16.0mm Fig. ⑥ ⑭		BKR6EQUA




PROJECTED GAP TYPES

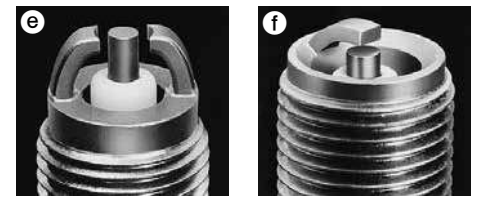
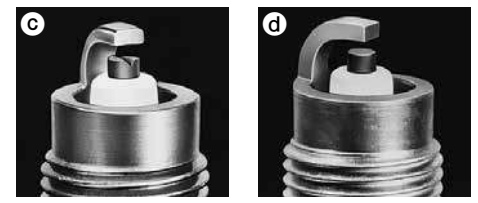
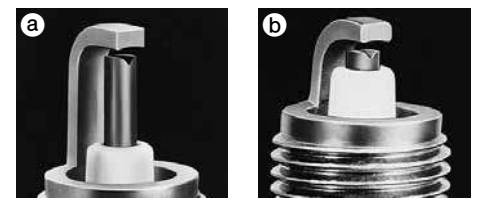
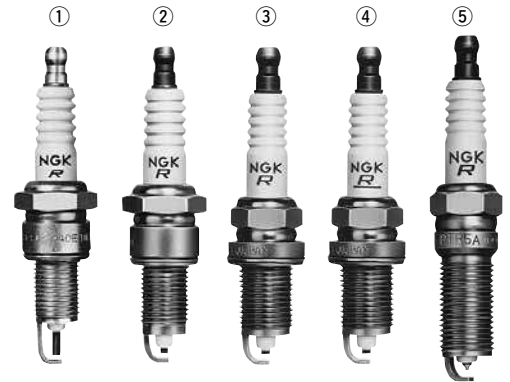
ZUNDKERZEN MIT VORSPRINGENDER FUNKENSTRECK

TYPE A ÉCARTEMENT EN SAILLIE

TIPOS DE ABERTURA DE CHISPA PROYECTADA

STIFT MED FÖRLÅNGDA ELEKTRODER

	NON-RESISTOR NON-RÉSISTANCE ICKERESISTOR	OHNE WIDERSTAND NO-RESISTOR	RESISTOR RÉSISTANCE RESISTOR	MIT WIDERSTAND RESISTOR
ϕ 14mm \times 19.0mm Hex 20.8mm Fig. ①②	BE529Y-11		BRE527Y-11	BRE529Y,-11
Fig. ②③			ZGR4A	ZGR5A
ϕ 14mm \times 20.5mm Hex 20.8mm Fig. ②③			ZGR5B,-11	ZGR6B-11
ϕ 14mm \times 22.0mm Hex 20.8mm Fig. ②③			ZGR5C	
ϕ 14mm \times 19.0mm Hex 16.0mm Fig. ③④	ZF6A-11		ZFR5A-11	ZFR6A-11
Fig. ④⑤ ISO			ZFR4F-11	ZFR5J-11
Fig. ③⑥			ZFR7F-11	ZFR7J-11
ϕ 14mm \times 20.5mm Hex 16.0mm Fig. ③⑦			ZFR6K-9E,-11S	
Fig. ③⑧			ZFR5G	ZFR6G
ϕ 14mm \times 22.5mm Hex 16.0mm Fig. ③⑨			ZFR4E-11	ZFR5E-11
Fig. ③⑩			ZFR6E-11	ZFR5D-11
ϕ 14mm \times 25.0mm Conical seat Hex 16.0mm Fig. ⑤⑪			LZTR4A-11	LZTR5A-13
ϕ 12mm \times 19.0mm Hex 16.0mm			ZKR7A-10	
ϕ 12mm \times 21.5mm Hex 16.0mm			ZKER6A-10DEG,-10EG	
ϕ 12mm \times 26.5mm Hex 16.0mm			LZKR6B-10E	
ϕ 12mm \times 26.5mm Hex 14.0mm			LZKAR6C-11	
ϕ 12mm \times 26.3mm Bi-Hex 14.0mm			ZKBR7A-HTU	



SLANT GROUND ELECTRODE TYPE

SCHRÄGER MASSENELEKTRODENTYP


TYPE À ÉLECTRODE DE MASSE À INCLINAISON

TIPO DE ELECTRODO DE MASA INCLINADO


STIFT MED VINKLAD SIDOELEKTROD

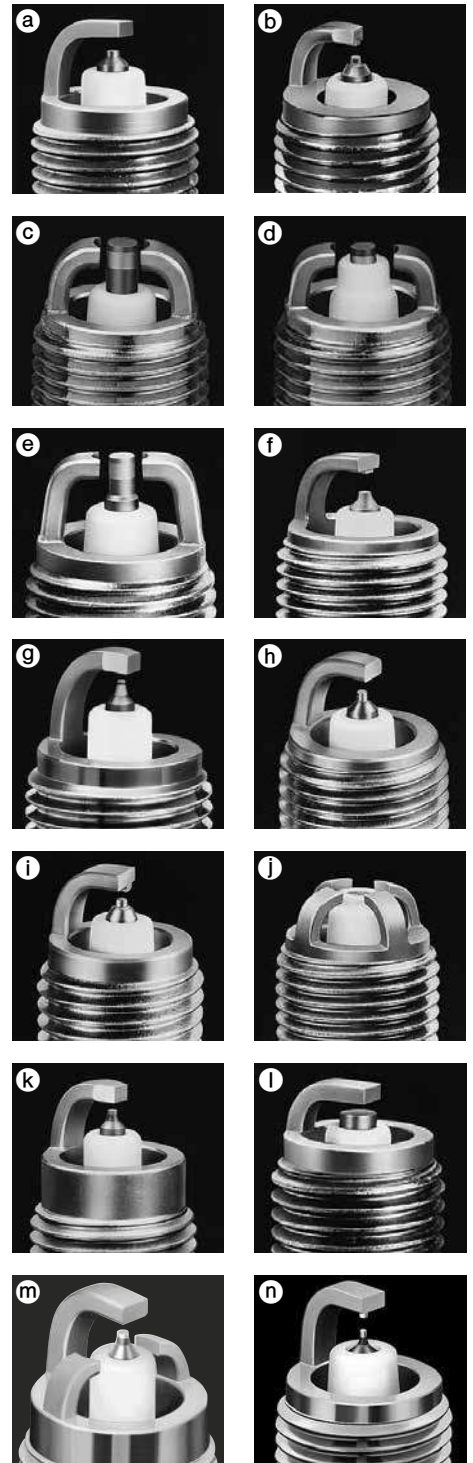
ϕ 14mm \times 12.7mm Hex 20.8mm Fig. ⑥⑦	B7HCS B8HCS B9HCS	BR8HCS-10
ϕ 14mm \times 19.0mm Hex 20.8mm Fig. ⑦⑧	B7ECS B8ECS B9ECS	BR8ECS BR9ECS BR10ECS
Fig. ⑧⑨		BR8ECM BR9ECM BR10ECM


PLATINUM, IRIIDIUM TIPPED TYPES
TYPEN MIT PLATINELEKTRODENSPITZE, IRIIDIUMSPITZE
TYPE[S] A EXTREMITÉ EN PLATINE, IRIIDIUM
TIPOS CON PUNTA DE PLATINO, IRIIDIO
STIFT MED MITTELEKTRODÄNDA AV PLATINA OCH IRIIDIUM

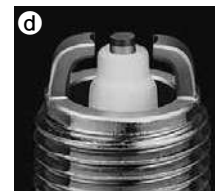
	RESISTOR MIT WIDERSTAND RÉSISTANCE RESISTOR RESISTOR
ϕ 14mm × 19.0mm Hex 20.8mm Fig.①①	PGR5A,-11 PGR5C-11 BPR5EP-11,-13 PGR6A,-11 PGR6C-11 BPR6EP-8 PGR7A 125CX 126CX IGR7A
ϕ 14mm × 19.0mm Hex 20.8mm Fig.①①h	IGR5C13 GR7CI-8
ϕ 14mm × 19.0mm Hex 16.0mm Fig.②②a	PFR5A-11 PFR5K-11 BCPR5EP-8,-11,-13 PFR6A-11 PFR6H-10 PFR6K-11 BCPR6EP-8,N-8,-11,-N-11,-13 PFR7A-11 PFR7H-10
Fig.③③h ISO	FR4AP-10,-11 FR4BP-11 FR5AP-10,-11 FR5BP-11 FR5AP-11E FR6AP-10,-11 FR6BP-11 FR7AP-11 115CX 116CX 136CX FR5EI-13 PFR5B-9,-11,-11B PFR5C-11 PFR6B,-9,-11,-11B,-11C PFR6E-10 PFR7B,-9,-11 PFR8B,-9 PFR4G-11 PFR5J-11 PFR5G-11,-13E PFR6H-10 PFR6J,-11 PFR6G,-9,-11,-13,-13E PFR7G,-9,-11 PFR7S11EG PFR5L-11 PFR5N-11,8DS PFR5P-11 PFR6L-11,-13 PFR6N-11 PFR6P-11 PFR6Q PFR7N-D PFR7Q PFR5R-11 BKR5EP-11 BKR6EP-8,-11,-13,-N-8
Fig.④④c ISO	BKR6EKPA
Fig.④④d ISO	BKR5EKUP
Fig.④④e ISO	BKR5EKP-11,-13 BKR6EKP-11
Fig.④④j ISO	BKR5EQUPA BKR6EQUP BKR6EQUPA
Fig.③③f ISO	PFR6M PFR6X-11 PFR7M PFR7S8EG
Fig.③③g ISO	PZFR5B PZFR5F,-11 IZFR5B IZFR5F11 IZFR5G IZFR5L11 PZFR6B PZFR6F,-11 IZFR6B IZFR6F11 SIFR6B7G T6728R T6728U-G035
Fig.③③h ISO	IFR5A11,-8N IFR5D10 IFR5E11 IFR6A11 IFR6C IFR6D10 IFR6E11 IFR6AD7DG IFR6AE11S IFR7F-D IFR7B4D IFR8AF4D IFR8AG8 IFR5G11 IFR5J11 IFR5N10 IFR5T-8N,11 IFR6J11 IFR6S IFR6T11 IFR7X7G
Fig.③③	PZFR6H IZFR6J IZFR6N-E IZFR6Q
Fig.③③m	PFR6W-TG
Fig.③③n	DIFR5E11 DF6A-13B DIFR6D11D DIFR6D13 ZFR5LP-13G IZFER7A4D 11G-55
ϕ 14mm × 21.5mm Hex 16.0mm	PZFR6R,8EG
ϕ 14mm × 22.0mm Hex 16.0mm Fig.⑩⑩k ISO	PZFR5C PZFR5D-11 IZFR5C IZFR7E-D
ϕ 14mm × 22.5mm Hex 16.0mm	135CX
ϕ 14mm × 25.0mm conical seat Hex 16.0mm Fig.⑥⑥h	PTR5A-13 ILTR5D



	RESISTOR MIT WIDERSTAND RÉSISTANCE RESISTOR RESISTOR
ϕ 14mm \times 17.5mm conical seat Hex 16.0mm Fig. ⑨①	PTR4B-15 PTR5C-13 ITR4A15 ITR6F13
ϕ 14mm \times 17.5mm conical seat Hex 16.0mm Fig. ③④⑧ Fig. ⑨⑨	ITR5H13 PTR5D-10,-13 TR5AI-13 TR5AP-13 ITR6G9 PTR6D-13,-13G ITR7J9D PZTR5A-15
ϕ 14mm \times 20.5mm Hex 16.0mm Fig. ③⑫	IZFR6K11,11E,13 IZFR6K-11S,IZFR6K11NS PZFR7G-G
ϕ 14mm \times 21.5mm Hex 16.0mm Fig. ⑭	PZFR5N-11T
ϕ 14mm \times 22.0mm Hex 16.0mm Fig.	PZFR6J-11
ϕ 14mm \times 26.5mm Hex 16.0mm Fig. ⑩	PLFR4A-11 PLFR5A-9,-11 ILFR5T11 ILFR5B11 DILFR5A11 DILFR5C11 DILFR5E11 DF5B-8A DILFR5L11 ILZFR5E8D LZFR5CI-11 PLFR6A-9,-11 ILFR6T11 ILFR6K8 ILFR6G,-E SILFR6A11 DILFR6D11D DILFR6L11 PLFR7A-9 DILFR7K9G ILFER7A8EG SILZFR7A9G PLZFR6A-11S ILZFR6A11 DILFR7B10G 155CX 156CX
ϕ 14mm \times 28.0mm Hex 16.0mm Fig. ⑩	LZFR5BI-11 LZFR5DI-11 LZFR6AI
ϕ 14mm \times 29.5mm Hex 16.0mm Fig. ⑩①	LZFR5AQP
ϕ 14mm \times 25.0mm conical seat Hex 16.0mm	PLZTR4A-13 PLZTR5A-13 ILTR5A-13G ILTR5P11D LTR5BI-13 LTR6AP-11 ILTR6A-8G,-13G ILTR6J13 ILTR6M9G LTR6AI-8 LTR6BI-13 LTR6BI-9 LTR6DI-8 LTR6DP13 ILTR7E9D ILTR7J8 ILTR7N8 ILTR7Q9 LTR7CP13
ϕ 12mm \times 19.0mm Hex 18.0mm Fig. ⑤⑧	PJR6A PJR7A IJR7A9 PJR8A
ϕ 12mm \times 19.0mm Hex 16.0mm	IKR6G8 IKR7H8 IZKR8C10D SIKR8B7G IKR9H8 IKR9J8 147CX
ϕ 12mm \times 19.0mm Hex 16.0mm Fig. ⑦①	PKR7A PKR9B KR7AI KR8AI KR9CI IKR6G11 IKR9F8
ϕ 12mm \times 19.0mm Hex 16.0mm Fig. ⑦②	DCPR8EKP
ϕ 12mm \times 20.5mm Hex 16.0mm	IKER7A8EGS ZKR7BI-10 PKER7A8EGS PKER7A8DES
ϕ 12mm \times 21.5mm Hex 16.0mm	PZKER7B8EGS
ϕ 12mm \times 22.0mm Hex 16.0mm	IZKR7A
ϕ 12mm \times 26.5mm Hex 16.0mm	ILKR6F11 ILZKR6F11 SILKR6C10E SILKR6D10G ILKR7D8 ILKR7J8 ILKR7K8 ILKR7L8G ILZKR7D8 ILZKR7E10DG LKR7FI-8 SILKR7C8DE SILZKR7E11 SILZKR7E8EG SILZKR7E9 SILZKR7E9G SILZKR7G8DE ILKR8M5D ILKR8P8 SILZKR8E3D SILZKR8E8G ILKR9G8 ILKR9H8 HKS-G40XL
Fig. ⑩	DILKR7E11
Fig.	
ϕ 12mm \times 28.0mm Hex 16.0mm	DILZKR7B11G ILZKR7G7G
ϕ 12mm \times 29.0mm Hex 16.0mm	SILZKKER8A8E
ϕ 12mm \times 25.0mm Hex 14.0mm	SILZNAR6D9 SILNAR7B7 SILNAR7C7DG ILNAR8B7G ILZNAR8B7G SILNAR8A7
ϕ 12mm \times 26.5mm Hex 14.0mm	ILKAR7L11 ILKAR7L11D ILKAR7M10 ILZKAR7D11 LKAR7CI-8 ILKAR8H6 LKAR8CI-8 SILKAR8C6DG SILKAR8C6DS SILKAR8D6 SILKAR8E4DG SILKAR8F8 SILZKAR8D4D SILZKFR8B7S SILZNAR8C7H HKS-M50HL
Fig. ⑬④	LKAR8AP7JD LKAR8AP7JDS
Fig. ⑬⑤	DILKAR7B8 DILKAR7G11DS DILKAR7H11GS DILKAR7M8 DILZKAR7B11 DILKAR8J9G DILKAR8K8D DILKAR8L8D
Fig. ⑬	




	RESISTOR MIT WIDERSTAND RÉSISTANCE RESISTOR RESISTOR
ϕ 12mm \times 27.0mm Hex 14.0mm	SILZKFR8C7S SILZKFR8D7S
ϕ 12mm \times 27.5mm Hex 14.0mm	SILZKFR8E7S
ϕ 12mm \times 28.0mm Hex 14.0mm Fig. (K)	DILZKAR7C11S ILZKAR7E11S ILZKAR8F8S ILZKAR8G8 ILZKAR8H8S ILZKAR8J8SY ILZKAR8A7G SILZKAR8F7S
ϕ 12mm \times 28.5mm Hex 14.0mm Fig. (N)	DILKA7E9HS
ϕ 10mm \times 19.0mm Hex 16.0mm Fig. (8) (i)	CR9EBI-9
Fig. (8)	MR8CI-8 SIMR7B9DS
Fig. (8) (C)	MR8BI-8
ϕ 10mm \times 19.0mm Hex 16.0mm Fig. (12)	
ϕ 10mm \times 22.0mm Hex 16.0mm	MR8BP8HJS
ϕ 10mm \times 26.5mm Hex 14.0mm Fig. (14)	ILMAR7B8 LMAR7CI-8 SILMAR7D9DS ILMAR8C9D LMAR8AI-8E LMAR8BI-9 SILMAR8C9 SILMFR8A8G SILMAR9B9
ϕ 10mm \times 26.5mm Hex 14.0mm Fig. (d)	LMAR9AP8JS
ϕ 12mm \times 26.5mm Bi-Hex 14.0mm	ILZKBR7B8DG PLZKBR7B8DG SILZKBR8B8HG SILKGR9A7EG
ϕ 12mm \times 27.5mm Bi-Hex 14.0mm	SILZKBR8D8S SILZKBR8E8S SILZKGR8A8S SILZKGR8B8S
ϕ 12mm \times 28.0mm Bi-Hex 14.0mm	SILZKG8D7E
ϕ 12mm \times 28.5mm Bi-Hex 14.0mm	SILZKBR8F8S SILZKGR8C8S



COMPACT TYPES

KOMPAKT STIFT
TIPOS COMPACTOS

TYPES COMPACTES
KOMPACTE TYPEN

	NON-RESISTOR NON-RÉSISTANCE ICKERESISTOR	OHNE WIDERSTAND NO-RESISTOR	RESISTOR RÉSISTANCE RESISTOR	MIT WIDERSTAND RESISTOR
ϕ 18mm \times 16mm Hex 25.4mm	R8160B-10			
ϕ 14mm \times 9.5mm Hex 19.0mm Fig. ① a	BM4A	B2-LM * B4-LM *	BMR2A,-10 BMR4A BMR6A BMR7A	BR2-LM * BR4-LM * * Hex.20.8mm
	BM6A BM7A	BM6 * BM7 * * Hex.20.8mm	BPM4A BPM6A,-10 BPM7A	BPMR4A,-10 BPMR6A,-10 BPMR7A,-9
ϕ 14mm \times 12.7mm Hex 20.8mm Fig. ② a	BL-6H			
ϕ 14mm \times 7.8mm Conical seat Hex 16.0mm Fig. ③ a	BM6F BM7F	BM6FY	BMR6F	
	BPM6F BPM7F		BPMR6F	
ϕ 10mm \times 8.6mm Hex 14.0mm Fig. ④ a	CM-6			
ϕ 10mm \times 9.5mm Hex 16.0mm Fig. ⑧ a			CMR6A CMR7A	
ϕ 10mm \times 12.7mm Hex 16.0mm Fig. ⑧ e			CMR5H CMR6H CMR7H	
ϕ 14mm \times 9.5mm Hex 19.0mm Fig. ① c	BPM6Y BPM7Y BPM8Y		BPMR6Y BPMR7Y BPMR8Y	



FARM EQUIPMENT TYPES

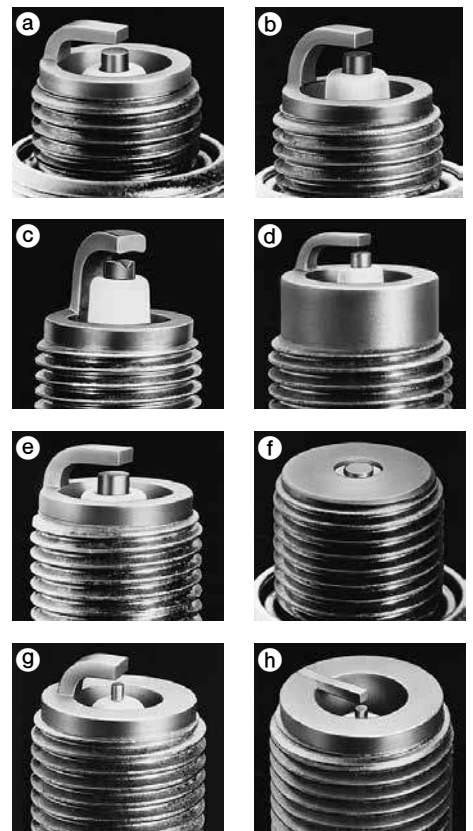
LANDMASCHINEN TYPEN TYPES MACHINES AGRICOLES
TIPOS MÁQUINAS AGRÍCOLAS FOR JORDBRUKS-MASKINER

PF1/2" \times 22.5mm Hex 23.8mm Fig. ⑤ d	G-27 G-2Z
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SURFACE DISCHARGE TYPES


GLEITFUNKENTYPEN TYPE À DÉCHARGE SUPERFICIELLE
TIPO DESCARGA EN SUPERFICIE TÅNDSTIFT MED YTGNIISTGAP

ϕ 14mm \times 12.7mm Hex 20.8mm Fig. ⑥ f	BUHX(Series gap) BUHXW-1(Series gap)	
	BUH	
	BUHW BUHW-2	BUZH BUZH-2
ϕ 14mm \times 19.0mm Hex 20.8mm Fig. ⑦ f	BUE	




RACING TYPES

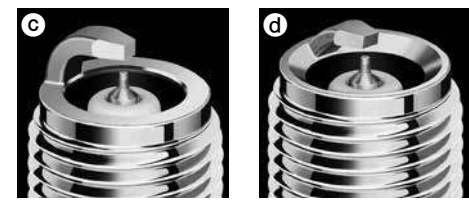
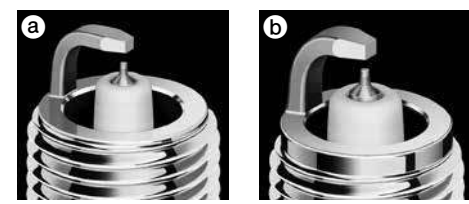
RENN-TYPEN TYPES COURS
TIPOS DE CARRERAS RACERSTIFT

	Nickel electrode Nickel Elektrode Electrodo de nickel Electrodo de níquel Nickel elektrod	Precious metal electrode Elektrode mit sonde-redel metall Electrode en metal precieux Electrodo de metal precioso Ädelmetall elektrod	Platinum electrode Platinel Ektrode Electrodo de platino Electrodo de platino Platina elektrod
ϕ 14mm \times 19.0mm Hex 20.8mm	(Fig. ⑨ g) B8EGV BR8EG* B9EGV BR9EG* B10EGP BR10EG* B11EG	(Fig. ⑨ g) B8EGV B85EGV B9EGV B95EGV B10EGV B105EGV B11EGV	(Fig. ⑨ h) B10EGP
*Resistor Type			

IX TYPES


IX TYPEN TYPES IX
TIPOS IX IX-STIFT

	RESISTOR RÉSISTANCE RESISTOR	MIT WIDERSTAND RESISTOR	
ϕ 18mm × 10.9mm Hex 20.8mm Fig. ① a	WR5IX		
ϕ 14mm × 19.0mm Hex 20.8mm Fig. ② b	GR4IX GR5IX		
	Fig. ② c	BR7EIX BR8EIX BR9EIX BR10EIX	
	Fig. ② d	BR8ECSIX BR9ECSIX,-5	
	Fig. ③ d	BR8ECMIX BR9ECMIX BR10ECMIX	
ϕ 14mm × 12.7mm Hex 20.8mm Fig. ④ b	BPR6HIX BPR7HIX BPR8HIX		
	Fig. ④ c	BR6HIX BR7HIX BR8HIX BR9HIX BR10HIX	
ϕ 14mm × 9.5mm Hex 20.8mm Fig. ⑤ a	XR4IX XR5IX XR45IX		
ϕ 14mm × 19.0mm Hex 16.0mm Fig. ⑥ b	BCPR7EDIX		
	Fig. ⑦ b	BCPR5EIX,-11 BCPR6EIX,-11 BCPR7EIX,-11	
	Fig. ⑧ b	BKR4EIX BKR5EIX,-11 BKR6EIX,-11 BKR7EIX,-11 BKR8EIX BKR9EIX	
Fig. ⑧ e	ZFR5FIX-11 ZFR6FIX-11		
ϕ 14mm × 26.5mm Hex 16.0mm Fig. ⑨ b	LFR5AIX-11 LFR6AIX-11 LFR7AIX	LKR6AIX LKR7AIX	LKR6AIX-P LKR6CIX
ϕ 14mm × 17.5mm Conical seat Hex 16.0mm Fig. ⑩ b	BPR6EFIX-10,-15		
	Fig. ⑩ a	TR4IX TR5IX TR6IX TR7IX TR8IX	TR55IX TR65IX TR75IX TR85IX
ϕ 14mm × 20.5mm Conical seat Hex 16.0mm Fig. ⑪ e	TR5-1IX	TR45-1IX TR55-1IX	
ϕ 14mm × 11.2mm Conical seat Hex 16.0mm Fig. ⑫ c	YR5IX YR55IX		
	Fig. ⑫ a	BR6FIX	
Fig. ⑫ b	UR4IX UR5IX UR6IX	UR45IX UR55IX	
	Fig. ⑬ b	LZR4AIX-11 LZR5AIX-13 LZR6AIX-13 LZR7AIX-13	



IX TYPES

IX TYPEN TYPES IX
TIPOS IX IX-STIFT

	RESISTOR MIT WIDERSTAND RÉSISTANCE RESISTOR RESISTOR
ϕ 12mm × 19.0mm Hex 16.0mm Fig. ① a	DCPR6EIX DCPR7EIX DCPR8EIX DCPR9EIX
Fig. ① b	DCR7EIX DCR8EIX DCR9EIX
ϕ 12mm × 19.0mm Hex 18.0mm Fig. ② a	DPR7EIX-9 DPR8EIX-9 DPR9EIX-9
Fig. ② b	DR7EIX DR8EIX DR9EIX
ϕ 12mm × 21.0mm Hex 18.0mm Fig. ③ a	DPR8ZIX
ϕ 12mm × 26.5mm Conical seat Hex 14.0mm Fig. ④ d	ZNAR7AIX ZNAR6AIX-11
ϕ 12mm × 26.5mm Hex 14.0mm	LZKR6AIX
ϕ 10mm × 19.0mm Hex 16.0mm Fig. ⑤ a	CPR6EAIX-9S CPR7EAIX-9 CPR9EAIX-9
Fig. ⑤ c	CR7EIX CR8EIX CR9EIX CR10EIX
Fig. ⑥ b	CR8EHIX-9 CR9EHIX-9
ϕ 10mm × 12.7mm Hex 16.0mm Fig. ⑦ b	CR5HIX CR6HIX CR7HIX CR8HIX CR9HIX
ϕ 8mm × 19.0mm Hex 13.0mm Fig. ⑧ e	ER8EHIX ER9EHIX

