

# **SPARKless**





#### IMPACT TEST

There are two tests carried out: The first test is performed at an ambient of ~25±3°C (the tools lay in a cold chamber for 2 hours), if with C marked test need to be done by  $-40\pm3$ °C and is carried out 120 seconds after the tools have been removed from the chamber. The second test is carried out at ambient temperature of 23±5°C. The hammer is allowed to fall freely on three different places of the insulated material. The test piece is acceptable if the handle is not cracked, broken or does not show signs of faking. This test can be compared to a fall of the tool from a height of 0.6m at a temperature of ~25°C and a fall from a height of 2 m at room temperature.



#### **ELECTRICAL TEST**

Before testing, the tools are immersed in a bath of water at room temperature of 24 hours(±0.5hours) The test pieces are acceptable if there is no electrical discharge, spark over or flashover, during the 3 minutes of testing at a voltage of 10 kV.





#### STAMP TEST

The indenter, loaded with a weight of 20N and a voltage of 5 KV, is applied to the centre of the handle. The test is successful if the test piece subsequently passes the electrical test.





#### **INSULATION TEST**

Before testing the test piece is heated to 70°C±3°C for 168 hours. The hanger is loaded with weights(500N), wrenches and sockets sets with weights(100N). The duration of test is 3 minutes after the test piece has been removed from heat. The test piece is acceptable if the handle remains firmly attached to the conducting part after 3 minutes of testing.





#### FLAME RETARDANCY TEST

The flame is applied to the test piece for 10 seconds. The test piece is acceptable if the height of the flame on the burning handle does not exceed 120mm in an observation period of 20 seconds after the burner has been removed.



TORQUE LIFE TEST

HARDNESS TEST



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#### What is VDE?



The VDE Testing and Certification Institute is a nationally and internationally accredited institution in the field of testing and certification of electrical engineering devices, components and systems. These electrical products are tested for safety, electromagnetic compatibility and other product properties.



#### VDE-GS Mark

Technical working equipment and consumable materials subject to the applicable device and product safety laws bear the VDE-GS mark, which stands for the safety of the product with regard to electrical, mechanical, thermal, toxicological, radiological and other dangers. In addition, tools with the VDE-GS mark conform to the VDE regulations or European or internationally harmonised standards, i.e. they confirm the compliance with the safety requirements of the respective guidelines.



#### Double triangle and voltage range

If insulated tools or aids are marked with the symbol of the double triangle and the assigned voltage or voltage range specification or the class, they are suitable for working on energised parts at the stated voltage.

IEC 60900

#### IEC 60900

An international standard which, among other things, describes the design of insulated tools in detail. For example, the thickness of the protective insulation is specified. In addition, the standard defines individual tests (piece tests) as well as series and random sample tests for checking the electrical safety of the protective insulation.



Looking for global distributors in all areas!



# **INSULATED PLIERS**



Soft wire



Medium hard wire



Cu+Al multi-conductor cable, strand and multi-stranded





Metal part made in CRV steel Pearl nickel plated surface Precision machined body with strictly heat treatment Manufactured acc ording to IEC60900 standard

GRIP

#### DIPPED INSULATED

CURVED NOSE CUTTING PLIERS



<del>K ™</del> ×	•	•
160	2	1.6
200	2.4	2

#### **DIPPED INSULATED**

DIAGONAL PLIERS

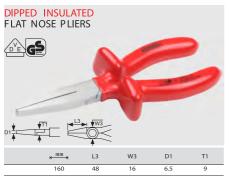


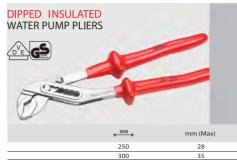
ĸ mm ×	•	•	•
160	2.6	2.4	2
180	4	2.7	2.2

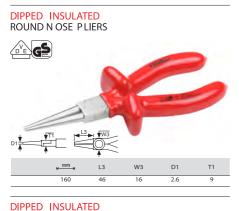
#### DIPPED INSULATED COMBINATION PLIERS

160 2 1.0	
	6
180 2.4 2	:
200 2.5 2.3	2

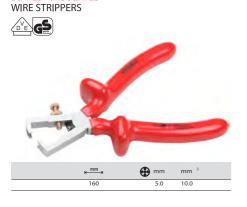














# **INSULATED SCREWDRIVERS**



#### VDE SLOTTED SCREWDRIVER

**		Α	В	CxD	L
0.4	2.5	2.5	75	95x25	170
0.5	3	3	100	95x25	195
0.6	3.5	3.5	100	95x25	195
0.8	4	4	100	105x30	205
1	5.5	5.5	125	115x35	240
1.2	6.5	6.5	150	115x35	265

Tip type shown by endcap



#### VDE PHILLIPS SCREWDRIVER

•	Α	В	CxD	L
PHO	3	60	95X25	155
PH1	5	80	105X30	185
PH2	6	100	115X35	215
PH3	8	150	118X41	268





# VDE NUT SCREWDRIVER A B E CXD L A 72 125 21 10530 220

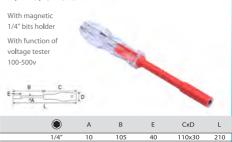
	Α	В	Е	CxD	L
4	7.2	125	31	105x30	230
5	7.2	125	31	105x30	230
5.5	7.2	125	31	105x30	230
6	7.2	125	31	105x30	230
7	7.2	125	31	105x30	230
8	7.2	125	31	105x30	230
9	7.2	125	31	105x30	230
10	7.2	125	31	105x30	230
11	8.1	125	31	118x41	240
12	8.1	125	31	118x41	243
13	8.1	125	31	118x41	243
14	8.1	125	31	118x41	243



**VDE HEX SCREWDRIVER** 

0	Α	В	CxD	L
2.5	2.5	75	95X25	170
3	3	75	95X25	170
4	4	75	105X30	180
5	5	75	105X30	180
6	6	100	115X35	215
 0	0	100	110V41	210

#### 2 IN 1 BITS HOLDER



#### INSULATED CHANGABLE SCREWDRIVER 12PCS SET



#### Content

Slotted: 0.4x2.0x100 0.4x2.5x100 0.5x3.0x100 0.6x3.5x100 0.8x4.0x100 1.0x5.5x100 1.2x6.5x100 Phillips: PH0x100 PH1x100 PH2x100

Voltage Tester: 3.0x70 Handle: 31x105



# INSULATED WRENCHES & SOCKETS



#### DIPPED INSULATED OPEN END WRENCH

S	Α	В	L
6	7.5	18	90
7	7.5	20	90
8	8	22	100
9	9	24	100
10	9	26	105
11	9.5	29	110
12	10	32	125
13	10	33	135
14	11	35	140
15	11	38	150
16	12	40	160
17	12	42	160
18	12	44	165
19	13	45	170
21	14	48	188
22	14	52	200
24	15	55	225
27	16	62	255
30	16	62	295
32	17	70	315













	S	Α	В	L
	6	8	17	140
	7	10.5	17	150
	8	12	19	155
	9	12	20.5	160
	10	12	20.5	165
	11	12	23	175
	12	12	24	185
	13	13	26	190
	14	13	27	200
	15	13	29	205
	16	14	30	205
	17	14.5	32	210
	18	14.5	33	220
	19	14.5	35	230
	21	16	38	240
	22	16	40	250
	24	16	42	270
·	27	16.5	46.5	285
	30	17	50	310
	32	18	52	310

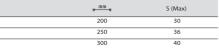
S	А	В	L
10	13.5	25	135
11	13.5	26.5	140
12	14	27.5	145
13	16	29.5	150
14	16	32	160
15	17	34.5	165
16	16.5	34.5	170
17	18	37.5	180
18	17	38	190
19	17	38.5	220

#### DIPPED INSULATED ADJUSTABLE WRENCH

PRECISION MACHINED BODY WITH STRICTLY HEAT TREATMENT





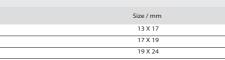








GEAR REVERSIBLE TWO SIZES IN ONE





#### DIPPED INSULATED SOCKET WRENCH





0.	L D	L	Н
8	15	200	145
10	19	200	145
12	22.5	200	145
13	23.5	200	145
14	24.5	200	145
16	26.5	200	145
17	28.5	200	145
18	30.5	200	145
19	31.5	200	145
10	19.5	300	145
12	22	300	145
13	23.5	300	145
14	24.5	300	145
16	27	300	145
17	28.5	300	145
18	29.5	300	145
19	31	300	145

#### DIPPED INSULATED HEXAGON KEY T-WRENCH



OI	D	L	Н
5	15	120	95
6	15	120	95
8	15	120	95
10	15	120	95
5	15	250	95
 6	15	250	95
8	15	250	95

#### DIPPED INSULATED HEXAGON KEY L-WRENCH







DT K	mm <sub>*</sub>
3	130
4	140
5	160
6	180
8	210
10	240
12	250



	Н	L
1/2"	155	205
3/8"	155	205



0	K-MM-N
4	120
5	120
6	120
8	120
10	120



OI	D	Н	
10	19.7	54	
11	21.0	54	
12	22.1	54	
13	23.3	54	
14	24.7	54	
16	27.4	54	
17	28.1	54	
18	29.7	54	
19	30.0	54	
21	32.0	54	
22	34.0	54	
24	36.3	54	
27	41.0	58	
30	44.1	59	
32	46.1	59	



0	I D	Н	
8	16.3	44	
10	18.9	44	
11	1 20.1	44	
1:	2 23.0	44	
1.	3 23.1	44	
14	1 23.9	44	
16	5 26.3	44	
1.	7 27.7	44	
18	3 29.0	46	
19	9 30.3	46	
21	32.0	46	
22	2 34.0	46	





	ĸ <del>mm</del> ×
1/2"	250
3/8"	200



	<del>k mm</del> →
1/2"	125
1/2"	250
3/8"	125
3/8"	250



	<del>k mm</del> →
1/2"	125
1/2"	250
3/8"	125
3/8"	250



OI	D	L1	L
13	24.3	94	230
14	27.3	94	230
17	29.4	94	230
19	31	94	230





# **SPARKless**









105 60 60



Metal part made in CRV steel, chrome plated surface Well heat treated to meet DIN standard

Bi-color injection grip and dipped grip manufactured according to IEC60900 standard



#### **☆1000V**

#### V81700

22"WATER PROOF CASE IP67 CLASS

#### V81852

A+B+C+D 52PCS INSULATED TOOLS SET WITH WATER PROOF CASE

#### V81945

A+R+D+F 45PCS INSULATED TOOLS SET WITH WATER PROOF CASE



V81946

6PCS INSULATED PLIERS

7" COMBINATION PLIERS 8" LONG NOSE PLIERS

6" DIAGONAL CUTTER 6" STRIPPING PLIERS 10" WATER PUMP PLIERS

6" CABLE CUTTER



V81947 R TRAY

11 PCS SCREWDRIVER, KNIFE AND TESTER PH0X60,PH1X80,PH2X100,PH3X150

2.5x75mm,3x100mm,4x100mm, 5.5x125mm,6.5x150mm STRAIGHT KNIFE

VOLTAGE TESTER



V81948 C TRAY

21PCS 1/2" SOCKETS AND ACCESSORY

22" WATER PROOF CASE IP67 CLASS

SOCKETS: 10/11/12/13/14/16/ 17/18/19/21/22/24/27 SOCKETS BITS: 4,5,6,8MM

EXTANSION BAR 5"&10"

RATCHET HANDLE



V81949 D TRAY

14PCS OPEN WRENCH ES AND ADJUSTABLE WRENCH ES

OPEN WRENCH 8/10/11/12/13/14/15 /16/17/18/19/22/24 8" ADJUSTABLE WRENCH



V81950 E TRAY

20PCS 3/8" SOCKETS AND ACCESSORY

SOCKETS: 8/10/11/12/13/14/ 16/17/18/19/21/22 SOCKETS BITS: 4,5,6,8MM

EXTANSION BAR 5"&10"

THANDLE RATCHET HANDLE



F TRAY 14PCS NUTS AND PRECISION

SCREWDRIVER S

PRECISION: 3/PH0/T6/T8/T10/T15/T20

V81951

**G TRAY** 14PCS RING WRENCH ES AND HEX KEY S

RING WRENCH: 10/11/12/13/14/15/17/19 HEX KEY:3/4/5/6/8/10

V81952

H TRAY 4PCS SPECIAL TOOL S

PLASTIC CLAMP\*2

V81953

240MM RATCHET CABLE CUTTER HACK SAW

