

Allen keys, spanners

T-Handle socket wrenches 1000 V

chrome vanadium steel, full insulated, for hexagon nuts, DIN 7440, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	size	shank	handle	weight	PU
11 00 00	10	200	160	310	1
11 00 02	11	200	160	315	1
11 00 04	12	200	160	320	1
11 00 06	13	200	160	320	1
11 00 08	14	200	160	325	1
11 00 10	17	200	160	380	1
11 00 12	19	200	160	420	1
11 00 22	11	300	160	370	1
11 00 24	12	300	160	375	1
11 00 26	13	300	160	380	1
11 00 28	14	300	160	385	1
11 00 30	17	300	160	560	1
11 00 32	19	300	160	680	1
11 00 34	22	300	160	810	1
11 00 36	24	300	160	990	1

Cross type socket wrenches 1000 V

chrome vanadium steel, no contact with steel insert, full insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	size	size of key	length	weight	PU
11 00 70	1	10-11-14-17	200	225	1
11 00 74	3	11-12-13-17	200	225	1
11 00 76	4	10-13-14-17	200	225	1
11 00 78	5	11-13-14-17	200	225	1
11 00 80	6	13-17-19-22	200	360	1

Counter hold spanners 1000 V

chrome vanadium steel (31 CrV 3), 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	size	length	weight	PU
11 00 81	10	200	120	1
11 00 83	12	200	120	1
11 00 84	13	200	140	1
11 00 85	14	250	150	1
11 00 87	16	260	250	1
11 00 89	17	270	255	1
11 00 91	18	265	250	1
11 00 93	19	270	275	1
11 00 95	20	275	300	1
11 00 97	22	275	300	1
11 00 99	24	270	350	1

Right angle allen keys 1000 V

chrome vanadium steel, for hexagon socket screws, full insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	size of key	weight	PU
11 00 42	3	40	1
11 00 44	4	40	1
11 00 46	5	50	1
11 00 48	6	70	1
11 00 50	8	130	1
11 00 52	10	180	1
11 00 54	12	210	1

T-handle allen keys 1000 V

chrome vanadium steel, for screws with hexagon inserts, full insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	size of key	weight	PU
11 00 60	5	165	1
11 00 62	6	175	1
11 00 64	8	200	1

Single ended spanners 1000 V

chrome vanadium steel, full insulated, offset at 15°, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	size	length	th	weight	PU
11 02 60	6	75	3	10	1
11 02 62	7	80	3,5	20	1
11 02 64	8	85	3,5	20	1
11 02 66	9	100	4	20	1
11 02 68	10	120	5	30	1
11 02 70	11	130	5,5	40	1
11 02 72	12	140	5,5	50	1
11 02 74	13	155	6	60	1
11 02 76	14	170	6	70	1
11 02 78	17	185	6,5	100	1
11 02 80	19	210	7,5	160	1
11 02 82	22	230	8,5	230	1
11 02 84	24	250	9,5	250	1
11 02 86	27	290	11,5	260	1
11 02 88	30	345	13	380	1
11 02 90	32	350	15	400	1



Ring spanners 1000 V

chrome vanadium steel, full insulated, offset at 75°, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004



Art. No.	size	length	weight	PU
11 03 00	6	140	40	1
11 03 02	7	140	40	1
11 03 04	8	150	40	1
11 03 06	9	155	40	1
11 03 08	10	160	70	1
11 03 10	11	170	80	1
11 03 12	12	180	120	1
11 03 14	13	195	130	1
11 03 16	14	205	150	1
11 03 18	17	240	180	1
11 03 20	19	260	240	1
11 03 22	22	280	300	1
11 03 24	24	280	340	1

Ratchet ring spanners 1000 V

New

full insulated, 2-coloured coating-insulation - inside yellow/outside red

⚠ 1000 V IEC 60900:2004



Art. No.	Ø	weight	PU
11 08 70	8 mm	50	1
11 08 72	9 mm	52	1
11 08 74	10 mm	56	1
11 08 76	11 mm	56	1
11 08 78	12 mm	68	1
11 08 80	13 mm	80	1
11 08 82	14 mm	86	1
11 08 84	15 mm	120	1
11 08 86	16 mm	144	1
11 08 88	17 mm	174	1
11 08 90	18 mm	200	1
11 08 92	19 mm	208	1

Adjustable wrenches to DIN 3117 A 1000 V

steel forged, 2-coloured coating-insulation - inside yellow/outside red

⚠ 1000 V IEC 60900:2004



Art. No.	length	a-range	weight	PU
11 05 55	200	up to 26 mm	370	2
11 05 56	250	up to 31 mm	460	2
11 05 57	300	up to 36 mm	550	2

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New

Reversible ratchet 1000 V

1/4"

full insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	square	length	weight	PU
11 08 10	1/4"	135	128	1

Torque wrench 1000 V

1/4"

reversible ratchet system, fully insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	square	a-range	length	weight	PU
11 08 12	1/4"	(2 - 12 Nm)	200	250	1

Socket T-wrench 1000 V

1/4"

chrome vanadium steel, tempered, with locking device against accidental loosening of sockets or extensions, full insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	square	length	weight	PU
11 08 18	1/4"	115	115	1

Extensions

1/4"

with locking device against accidental loosening of sockets or extensions, full insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	length	weight	PU
11 08 14	75	45	1
11 08 16	150	68	1

Extension

1/4"

fully insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	bit adapter	square	length	weight	PU
11 08 60	1/4"	1/4"	40	24	1

Hexagon sockets 1000 V

1/4"

fully insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	wrench size	weight	PU
11 08 20	5 mm	12	1
11 08 22	6 mm	12	1
11 08 24	7 mm	15	1
11 08 26	8 mm	15	1
11 08 28	9 mm	16	1
11 08 30	10 mm	18	1
11 08 32	11 mm	18	1
11 08 34	12 mm	24	1
11 08 36	13 mm	26	1
11 08 38	14 mm	29	1

Inserts for hexagon socket screws 1000 V

1/4"

fully insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	wrench size	weight	PU
11 08 40	3 mm	13	1
11 08 42	4 mm	13	1
11 08 44	5 mm	14	1
11 08 46	6 mm	15	1
11 08 48	8 mm	19	1

Handles with bit adapter 1000 V

1/4"

fully insulated, 2-coloured coating-insulation - inside yellow/outside red



⚠ 1000 V IEC 60900:2004

Art. No.	for bits	length	weight	PU
11 08 64	1/4"	120	185	1
11 08 66	1/4"	160	248	1
11 08 68	1/4"	250	310	1

More bits starting at Page 148

3/8"

Reversible ratchet 1000 V

3/8"

full insulated, 2-coloured coating-insulation - inside yellow/outside red



1000 V IEC 60900:2004



Art. No.	square	length	weight	PU
11 03 31/EN	3/8"	190	130	1

Locked torque wrench 1000 V

3/8"

reversible ratchet system, **adjustable valve between 5-27 Nm**, full insulated, 2-coloured coating-insulation - inside yellow/outside red

1000 V IEC 60900:2004



Art. No.	square	length	weight	PU
30 03 10/EN	3/8"	280	900	1

Torque wrenches 1000 V

3/8"

reversible ratchet system, fully insulated, 2-coloured coating-insulation - inside yellow/outside red

1000 V IEC 60900:2004



Art. No.	square	a-range	length	weight	PU
11 00 56/EN	3/8"	5 - 27 Nm	280	920	1
11 00 65/EN	3/8"	5 - 50 Nm	370	1070	1
11 00 55/EN	3/8"	(5 - 25 Nm)	200	350	1

Socket T-wrench 1000 V

3/8"

chrome vanadium steel, tempered, with locking device against accidental loosening of sockets or extensions, full insulated, 2-coloured coating-insulation - inside yellow/outside red



1000 V IEC 60900:2004



Art. No.	screws M	shank	handle	weight	PU
11 00 39/EN	3/8"	200	160	500	1

Extensions

3/8"

with locking device against accidental loosening of sockets or extensions, full insulated, 2-coloured coating-insulation - inside yellow/outside red



1000 V IEC 60900:2004



Art. No.	square	length	weight	PU
11 03 37/EN	3/8"	125	170	1
11 03 35/EN	3/8"	250	280	1

Extensions with bit adapter 1000 V

New 3/8"

full insulated, 2-coloured coating-insulation - inside yellow/outside red



1000 V IEC 60900:2004



Art. No.	square	length	weight	PU
11 08 61	3/8"	125	165	1
11 08 62	3/8"	250	250	1

Hexagon sockets 1000 V

3/8"

3/8" square drive, 4 edge drive, full insulated, 2-coloured coating-insulation - inside yellow/outside red



1000 V IEC 60900:2004



Art. No.	size of key	length	weight	PU
11 03 63/EN	8 mm	40	70	1
11 03 64/EN	9 mm	40	70	1
11 03 65/EN	10 mm	40	70	1
11 03 66/EN	11 mm	40	70	1
11 07 00/EN	12 mm	40	70	1
11 03 67/EN	13 mm	40	70	1
11 03 71/EN	14 mm	40	70	1
11 03 68/EN	17 mm	40	70	1
11 03 69/EN	19 mm	40	70	1
11 07 02/EN	22 mm	40	70	1

Fittings for hexagon socket screws 1000 V

3/8"

3/8" square drive, 4 edge drive, made of chrome vanadium steel, forged, oil hardened, full insulated, 2-coloured coating-insulation - inside yellow/outside red



1000 V IEC 60900:2004



Art. No.	wrench size	length	weight	PU
30 03 02/EN	4 mm	65	45	1
30 02 96/EN	5 mm	65	50	1
30 02 98/EN	6 mm	65	50	1
30 02 99/EN	8 mm	65	65	1
30 03 05/EN	10 mm	65	65	1

Torque stoppers 1000 V

3/8"

with short extension, locable for all sockets with 3/8" drive, full insulated, 2-coloured coating-insulation - inside yellow/outside red

1000 V IEC 60900:2004



Art. No.	square	a-range	weight	PU
11 04 56/EN	3/8"	12 Nm	310	1
11 04 57/EN	3/8"	18 Nm	310	1
11 04 58/EN	3/8"	25 Nm	310	1

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1/2"

Reversible ratchet 1000 V

1/2"

full insulated, 2-coloured coating-insulation - inside yellow/outside red



1000 V IEC 60900:2004



Art. No.	square	length	weight	PU
11 03 32/EN	1/2"	255	500	1

Locked torque wrench 1000 V

1/2"

reversible ratchet system, adjustable valve between 5-27 Nm, full insulated, 2-coloured coating-insulation - inside yellow/outside red

1000 V IEC 60900:2004



Art. No.	square	length	weight	PU
30 03 12/EN	1/2"	280	1000	1

Torque wrenches 1000 V

1/2"

reversible ratchet system, fully insulated, 2-coloured coating-insulation - inside yellow/outside red

1000 V IEC 60900:2004



Art. No.	square	a-range	length	weight	PU
11 00 58/EN	1/2"	5 - 27 Nm	280	930	1
11 00 66/EN	1/2"	5 - 50 Nm	370	1100	1
11 00 67/EN	1/2"	20 - 100 Nm	460	1200	1
11 00 68/EN	1/2"	60 - 220 Nm	530	1300	1

Socket T-wrench 1000 V

1/2"

chrome vanadium steel, tempered, with locking device against accidental loosening of sockets or extensions, full insulated, 2-coloured coating-insulation - inside yellow/outside red

1000 V IEC 60900:2004



Art. No.	square	shank	handle	weight	PU
11 00 40/EN	1/2"	200	160	500	1

Extensions

1/2"

with locking device against accidental loosening of sockets or extensions, full insulated, 2-coloured coating-insulation - inside yellow/outside red



1000 V IEC 60900:2004



Art. No.	square	length	weight	PU
11 03 36/EN	1/2"	125	220	1
11 03 38/EN	1/2"	250	420	1

Hexagon sockets 1000 V

1/2"

1/2" square drive, 4 edge drive, full insulated, 2-coloured coating-insulation - inside yellow/outside red

1000 V IEC 60900:2004



Art. No.	size of key	length	weight	PU
11 03 39/EN	8 mm	50	80	1
11 03 40/EN	10 mm	50	80	1
11 03 42/EN	11 mm	50	80	1
11 03 44/EN	12 mm	50	80	1
11 03 46/EN	13 mm	50	80	1
11 03 48/EN	14 mm	50	80	1
11 03 50/EN	17 mm	50	100	1
11 03 52/EN	19 mm	50	100	1
11 03 54/EN	22 mm	50	110	1
11 03 56/EN	24 mm	50	130	1
11 03 58/EN	27 mm	50	160	1
11 03 60/EN	30 mm	50	190	1
11 03 62/EN	32 mm	50	210	1

Hexagon sockets DIN 7448, extra long, 1000 V

1/2"

extra long, 1/2" square drive, 4 edge drive, full insulated, 2-coloured coating-insulation - inside yellow/outside red

1000 V IEC 60900:2004



Art. No.	size of key	length	weight	PU
11 03 73/EN	10 mm	80	110	1
11 03 74/EN	11 mm	80	110	1
11 03 75/EN	13 mm	80	110	1
11 03 76/EN	14 mm	80	110	1
11 03 77/EN	17 mm	80	110	1
11 03 78/EN	19 mm	80	110	1
11 03 79/EN	22 mm	80	110	1

Fittings for hexagon socket screws 1000 V

1/2"

1/2" square drive, 4 edge drive, made of chrome vanadium steel, forged, oil hardened, full insulated, 2-coloured coating-insulation - inside yellow/outside red



1000 V IEC 60900:2004



Art. No.	wrench size	length	weight	PU
30 02 94/EN	4 mm	70	80	1
30 02 97/EN	5 mm	70	80	1
30 02 95/EN	6 mm	70	85	1
30 03 03/EN	8 mm	70	95	1
30 03 06/EN	10 mm	70	95	1

1000 V set of socket wrenches see Page 128

Safety tools

Alignment tool, 3/8" 1000 V

3/8" drive, for the alignment of 3 or 4-wire sector conductors, made from impact-resistant plastic



Art. No.	size	weight	PU
11 07 04	95 - 150 mm ²	75 g	1
11 07 05	185 - 240 mm ²	88 g	1

Holding device 1000 V

For the easier handling of screwed connections when assembling coupling sleeves, variably adjustable

▲ 1000 V IEC 60900:2004



Art. No.	size	weight	PU
12 01 03	220	380	1

Plastic wedges

with bright slot for all common cable cutters, oval form without sharp edges

▲ 1000 V IEC 60900:2004



Art. No.	size	weight	PU
12 01 02	225 x 45	225	1

Plastic wedges

without slot, oval form without sharp edges, long version with large head

▲ 1000 V IEC 60900:2004



Art. No.	size	weight	PU
12 01 00	200 x 25	55	1

Wedges

wood or plastic



Art. No.	size	dimension	type	material	weight	PU
12 00 98	1	16.3 x 3.7	without groove	wood	50	1
12 00 99	2	16.3 x 3.7	with groove	wood	50	1
12 00 94	1	16.3 x 3.7	without groove	plastic	50	1
12 00 97	2	16.3 x 3.7	with groove	plastic	50	1

Cleaning brushes Safety Line

PVC-pattern

▲ 1000 V



Art. No.	length	width	weight	PU
15 00 36	420	25	50	1
15 00 37	420	38	50	1
15 00 38	420	50	100	1

PVC hammer 1000 V

Bounce-free, head of polyethylen, break-, wear- and splinter-proof, heads interchangeable



Art. No.	length	width	height	weight	PU
24 00 57	400	24	52	200	1
24 00 58	600	24	52	250	1

PVC hammer 1000 V

Bounce-free, head of polyethylen, break-, wear- and splinter-proof, heads interchangeable

▲ 1000 V IEC 60900:2004



Art. No.	∅	length	weight	PU
18 02 95	25	290	540	1
18 02 97	35	290	790	1

Combined dowel and contact spanners

may be used for screws 2 - 63 A by changing the insert, handle made from insulating material



Art. No.	length	weight	PU
12 00 02	105	40	6

Insulated tweezers VDE 1000 V

austenitic steel, **pointed**, PVC-insulated



▲ 1000 V IEC 60900:2004



Art. No.	length	weight	PU
21 10 60	130	26	1

Insulated tweezers VDE 1000 V

austenitic steel, **pointed round, bent**, PVC-insulated



▲ 1000 V IEC 60900:2004



Art. No.	length	weight	PU
21 10 62	145	32	1

Insulated tweezers VDE 1000 V

austenitic steel, **wide round, flat**, PVC-insulated



▲ 1000 V IEC 60900:2004



Art. No.	length	weight	PU
21 10 64	145	42	1

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Safety advice for working with live voltage

The basic requirements for working with live voltage are safety-insulated tools. Legal regulations and the following safety advice should always be observed:

1. Transport your safety tools such that damage to the insulation is avoided.
2. Before use, make sure that the insulation is not damaged. Damaged tools must not be used.
3. Keep your safety tools clean and dry.
4. When working overhead or when using cutting pliers, protective glasses must be worn.
5. For your own safety, keep your work space clean and tidy when working with live voltage.
6. In enclosed, cramped spaces, protective clothing and equipment must be worn (e.g. safety gloves, covering drapes, protective hoods)
7. Only use suitable and tested tools. Make sure that loose and cut off parts do not fall onto live components.

Routine tests in accordance with VDE Norm 1000 V IEC 60900:2004



Cold-heading test

In this test, the toughness of the PVC material is checked by dropping a weight onto the tools which have been cooled down to -25°C . The tools must not show any cracking or other damage after the test.



Testing the adhesive strength of the PVC coating

After pliers have been stored for 168 hours at $+70^{\circ}\text{C}$, the adhesive power of the PVC coating is tested using a pulling force of 500 Nm. The insulation material must stay firmly attached to the basic tool.



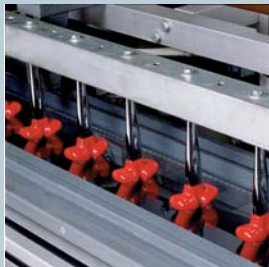
Flame resistance test

To exclude any fire risks, only flame-proof PVC material is used.



Pressure test

No puncture must occur, while testing the tool with a voltage of 5,000 V AC when also applying a pressure of 20 Nm at a temperature of $+70^{\circ}\text{C}$ to the tool.



Testing the insulating properties










After storing the tools under water for 24 hours, the tools are tested using 10,000 V AC for three minutes, while simultaneously measuring the discharge current. During this time, no puncture or sparkover must occur.



Voltage test

Each safety tool is individually voltage tested. This means that all tools which bear the relevant mark have been tested at 10,000 V AC and are approved for a voltage of 1,000 V, ensuring 10-fold safety.

Screw profiles

-  Slot
-  Cross slot Phillips
-  Cross slot Pozidriv
-  Pozidriv/flat slot
-  Tx
-  Tx with safety pin
-  Allen screw
-  Hexagon head
-  Ball point

Patent ratchet wrench



The HAUPA ratchet wrench has a number of patented advantages. It is characterised particularly by ergonomic handling and high functional safety.

The excellent interlocking of the wrench insert, which must be able to withstand pull-out forces of up to 500 N is the main feature.

The ratchet can be operated with one hand due to a cross slide made from non-conducting material (polyamide). It is ergonomically designed such that it is accessible with the thumb of the hand holding it. This cross slide, which is deep in the inside of the ratchet, also ensures that the testing voltage of 10 kV gema DIN 60900 can easily be achieved.



Safety of HAUPA products

All HAUPA products under the product area of "working with live voltage" have a 2-colour multi-layer insulation (wherever technically possible). This multi-layer insulation supports the current VBG4 regulations. This regulation requires that before use all tools are tested for any damage that can be seen externally. The 2-colour coating – the second insulating layer contrast in yellow – ensures that any damages are visible immediately.