

# PVL611

**GB** Instruction for use

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**ELPRESS®**

# PVL611



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## Symbols



### Safety warnings

In order to avoid human injury and environmental damage, do not disregard these instructions. After this symbol there is often a symbol which explains the warning.



### Operational warnings

To avoid damaging the pump unit, do not disregard them.

## 1. Introduction and safety



### Read these instructions for use carefully before starting to use the tool.

This tool shall only be used for crimping of Elpress' terminals for electrical conductors with Elpress' matched tool accessories (die holders, dies, matrix holder, matrixes and punches).

Crimping with this tool must only be performed by operators trained in its use and who have good knowledge about crimping and the risks that are involved.

Gloves, protective goggles and other assigned protective equipment must be used by the operator.

Never point the crimp tool in the direction of a person during the crimping procedure, there is a risk of personal injury.

These instructions for use have to be observed during the entire life span of the tool.

The tool owner has to ensure the availability of the instructions for use for the operator and also make sure, that the operator has read and understood the instructions for use.

## 2. Labels

On one side of the tool there is a label showing the product name, the manufacturer and the company logo. On the other side of the tool there is a label showing symbols like the CE-mark.

## 3. Description of the crimp tool PVL611



PVL611 is supplied in a robust plastic box, PVL611L, including the crimp tool PVL611, the battery PVBP-Li-Ion 1.3 Ah, the charger PVBC-Li-Ion and the instructions for use.

### 3.1 Description of the tool parts and functions

The electrical-hydraulic crimping tool PVL611 (the crimp tool itself) consists of the following parts and functions:

Position	Description	Function	See page
1	Crimping head	Working unit for accommodate the dies.	2
2	Retract button	Bar to open the dies in case of an error or emergency.	2
3	LED (red)	Indicator for tool functions, battery charge control and faults	2, 6
4	Housing	Ergonomically formed plastic housing	2
5	Battery cartridge	Rechargeable 1,5Ah Li-Ion battery	2, 10
6	Trigger	Button to start the crimping cycle	2, 6
7	LED (white)	To illuminate the working area	2
8a 8b	Press dies Punch/Matrix	Interchangeable crimp-dies Interchangeable accessories for indent crimping	2, 7, 8
9	Carry case	Storage/Transportation of crimp tool, charger, extra battery and accessories	2
10	Latch	Mechanism to open/close the crimping head	2

### 3.2 Brief description of the important features of the tool








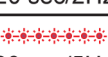
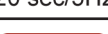






- The hydraulic unit incorporates an automatic retraction which returns the piston into its starting position when the maximum operating pressure is reached.
- A manual retraction allows the user to return the piston into the starting position.
- The unit is equipped with a special brake which stops the forward motion of the piston/dies when the trigger is released.
- The crimping head can be smoothly turned by 350° around the longitudinal axis in order to gain better access to tight corners and other difficult working areas.
- The tool is equipped with a microprocessor which shuts off the motor automatically after the crimp is completed, indicates service intervals and low battery charges and performs internal checks sending out acoustical and optical warning signals in case of a detected fault.
- The new tool feature an integrated pressure sensor which automatically identifies the achieved crimping force during every crimping operation. If a deviation from the set operation pressure is identified, an acoustic signal sounds and a red display flashes (see section 3.3).
- A white LED illuminates the working space after activating the trigger. It automatically switches off 10 sec. after releasing the trigger. This feature can be deactivated see section 3.3).
- Through an optional USB adapter a report can be generated for PC documenting during the service.
- The grip area of the tool is rubber coated and therefore slip resistant. The housing design is optimized in respect of the center of gravity which improves the handling and supports working.
- All tool functions can be controlled by one trigger. This result in an easy handling and a better grip compared to a two button operation.
- Li-Ion batteries do neither have a memory effect nor self discharge. Even after long periods of non operation the tool is always ready to operate. In addition there is a lower power weight ratio with 50% more capacity and shorter charging cycles compared to NiMH batteries.

### 3.3 Description of the light emitting diode (LED) functions

The PVL611 is equipped with a special circuit board incorporating several important features to inform the user about the current status of the unit.

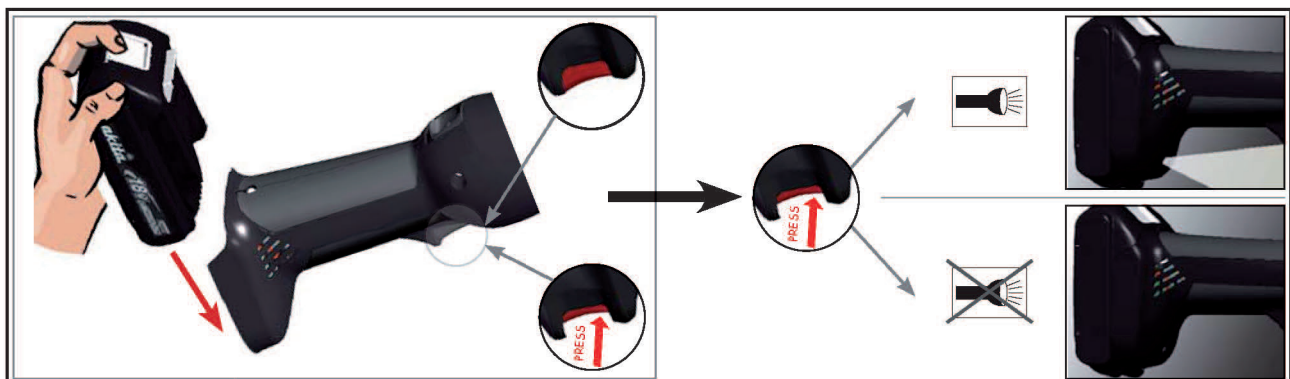
Prior to operating the unit the charging level of the battery should have been tested. A low charging level can be detected by the flashing of the red LED for 20 s at the end of a crimp cycle.

The red LED signal in the following cases:

			When	Why
 20 sec			After working cycle	
 2 x			After inserting the battery	Self check
 20 sec/2Hz			While exceeding the temp. limit	Send for service
 20 sec/5Hz			After working cycle	Unit is too hot
 20 sec  20 sec/2Hz			After working cycle	Send for service
 1 x			After working cycle	The required crimping pressure has not been reached or the operator has interrupted the crimping cycle manually while the motor has stopped.
 3 x	 3 x		After working cycle	Serious error: Crimping pressure has not been reached while the motor was running.

A white LED illuminates the working space after activating the trigger. It automatically switches off 10 sec. after releasing the trigger. The feature can be deactivated while taken away the battery and then press and hold the trigger one time at the same time as replacing the battery as described in picture below.

 **on / off**



## 4. Working with the tool

### 4.1 Use of tool

Pay attention to applicable instructions regarding work on electrical appliances before starting any work. The tool must not be used for work under tension or in explosive environments.

#### **i** Warning

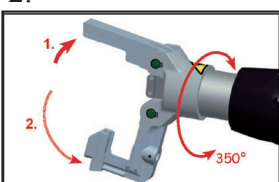
Don't operate the tool without dies or punch and matrix.

#### 4.1.1 Crimping of Elpress terminals

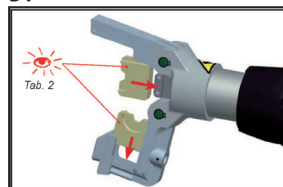
1.



2.



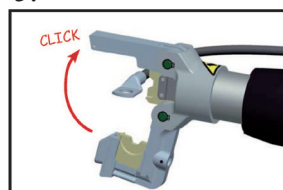
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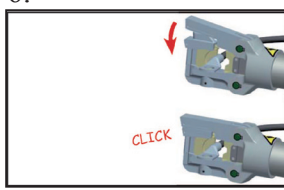
4.



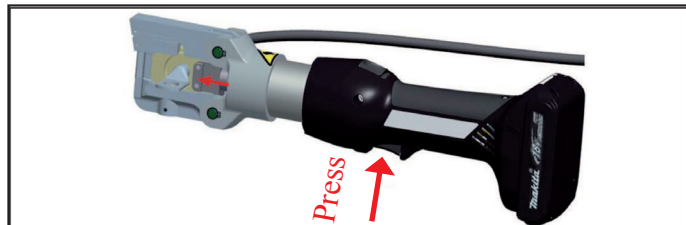
5.



6.



7.



1. Disconnect battery for charging  
2. Open the crimping head with the latch, 10

3. Insert dies/matrix  
Chosen according to table below  
4. Insert charged battery

5. Insert connector  
6. Close crimping head with the latch, 10

7. Crimp connector



**Attention**

Take a notice that the latch is locked correctly.



**Attention**

Do not touch the trigger while changing dies there is a risk of squeezing.

Prior to operating the tool, the charging level of the battery should be tested.

Perform an empty crimp with the dies mounted - a low charging level is indicated by the flashing of the LED for 20 seconds at the end of a crimping cycle; see 3.3 Description of the light emitting diode (LED) functions.

KR-KRF/KS-KSF				C-SLEEVES				
mm <sup>2</sup>	dies for KRF/SKF	die nest	number of crimps	transverse feed, mm <sup>2</sup>	front-feed, mm <sup>2</sup>	dies	die nest	number of crimps
10	TB8-17	8	1	10-6	10-6	TBC5-C6	C5	1
16	TB9-13	9	1	50-16	50-16	TBC4**-C8-9	C8-9	2
25	TB11-14,5	11	1	16-10	16-6	TBC5-C6	C5	1
35	TB9-13	13	1	25-16	25-16	TBC5-C6	C6	1
50	TB11-14,5	14,5	1					
70	TB8-17	17	2					
95	TB7 <sup>1</sup> -20	20	2					
120	KB22		3					
150	KB25		3					

<sup>1</sup>TB7 for crimping of special connectors on Cu-conductors type Excel or similar.

\*\*Die nest marked A is used for 6 to 6 mm<sup>2</sup> crimps.

KRD-KSD (KR10/KS10)				KRT/KST		
mm <sup>2</sup>	dies for KRD/KSD	die nest	number of crimps	mm <sup>2</sup>	dies for KRT/KST	number of crimps
10 <sup>2</sup>	TB8-14	8	1	10	TB7-19	1
16	TB8-14	8	1	16	TB8,5-18	1
25	TB9-12	9	1	25	TB10-16	1
35	TB11-16	11	1	35	TB12-14	1
50	TB9-12	12	1	50	TB12-14	1
70	TB8-14	14	1	70	TB10-16	2
95	TB11-16	16	2	95	TB8,5-18	2
120	TB7 <sup>1</sup> -19	19	2	120	TB7 <sup>1</sup> -19	2
150	KB22		3	150	KB22	3
185	KB25		3	185	KB24	3
				240	KB26	3

<sup>1</sup>TB7 is also for crimping KRX-terminals and KSX-connectors.

<sup>2</sup>For terminals type KR10 and connectors type KS10.

### 4.1.2 Crimping technology

For crimping of terminal and sleeves

The crimping procedure is performed by pressing the trigger until the dies are closed together and the required crimp force is reached. The dies thereafter return automatically to starting position if the trigger is released.





### Warning

Don't touch the trigger (6) while changing dies. Risk of squeezing.



### Attention

In an emergency situation or to correct the placement of the crimp, the crimp dies can be returned to starting position with the reset button (2).



### Attention

The crimping can be interrupted at any moment by releasing the trigger (6). The crimping sequence continues when the trigger is pressed in again.

## 4.2 Fields of application and choice of tool accessories



For detailed information of exactly which tool accessories that shall be used for different terminations and regarding the number of compressions on each termination, see Elpress catalogue.



Do not operate the tool without dies.



**Check that the tooling accessories are marked with the same number as the terminal to be crimped.**

PVL611 is not meant to be used in a stationary application, for example held in a vise. PVL611 is not designed for continuous work either.



### Warning

Too prolonged use can cause heat damage to the tool. After approximately 20-30 crimp cycles, the tool must cool down for about 15 minutes.



### Warning

PVL611 must not be used on for work under tension or in explosive environments.



### Warning

Electric motors in use can create sparks that can ignite explosive fluids and materials.



## Warning

Electrohydraulic crimp tools must not be used in pouring rain or under water.

## 5. Service and maintenance instruction

The crimp tool is equipped with a LED indicating when need for service (see section 3.3 for more information). Service must be performed by Elpress Service department or an Elpress Authorized Service center.

The reliable performance of the tool is dependent on careful treatment and service. This represents an important condition to safeguard a lasting connection. To safeguard this the tool have to be maintained and serviced regularly.

1. After a days use the crimp tool should be cleaned and dried.
2. The battery as well as the charging unit has to be protected against humidity, foreign objects and dust.
3. In order to achieve a proper function the crimping tool should be returned to Elpress or one of our Authorized Service Centers when the light diode (LED) display indicates Service or after each year whatever comes first.



## Warning

An unmounted battery must be protected against shortcircuiting over the contacts. Shortcircuits can produce very high temperatures and even danger of fire.



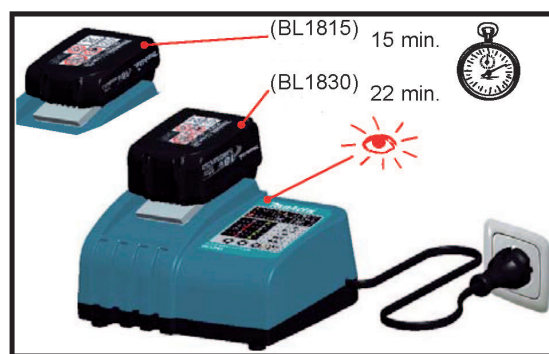
## Warning

Change of battery, crimpdies, die holders, matrix holders, matrixes and punches are the only operations the user can make himself. Other work on the tool must be done by an Authorized Service center.

### 5.1 Remarks on the use of batteries and charging unit



See Makita, separate instructions for use of the battery charger and batteries.



**Makita**  
#884676B996  
#884598C990

### **5.2 Storage and transportation of the crimp tool**

To avoid damages to the crimp tool, it has to be cleaned after use and thereafter stored and transported in the carry case. If other tool accessories or similar items are kept in the case, check that they do not short circuit the battery poles.

## **6. Trouble shooting**

1. Flashing LED; see section 3.3 for more information about the special functions of the tool.
2. The tool leaks oil; return the tool to Elpress Service. Do not open the tool - no action can be done without special equipment and competence.
3. The tool does not reach required working force return the tool to Elpress Service.

## **7. Putting the tool out of operation/Recycling the material**

This unit is subjected to the scope of the European WEEE (2012/19/EU) and RoHS (2011/65/EU) directives.

Information about this can be found at our homepage [www.elpress.net](http://www.elpress.net)

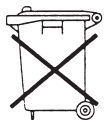
Battery cartridge must be specially disposed of according to the EEC Battery Guideline.

The disposal of the various components of the tool has to be treated separately. First you have to dispose of the hydraulic oil at special delivery points.



### **Attention**

Hydraulic oil represents a danger for the subsoil water. Uncontrolled draining of oil or improper disposal is under penalty.



For disposal of the remaining parts please observe applicable laws and recommendations. Because of possible environmental damages we recommend disposal of the tool through professional companies. Elpress also accepts returns of the tool and accessories free of charge.

## 8. Quality and Environmental aspects

Elpress are continuously working for a better environment and are certified according to ISO14001. Good quality also forms the basis for development with high productivity and competitiveness. Elpress are certified according to ISO9001.



Certificate ISO9001



Certificate ISO14001

## 9. Technical data

Weight of the completer tool  
Crimping forcet  
Driving motor  
Battery voltage  
Battery capacity  
Charging time  
Crimping time  
Stroke  
Crimps per battery  
Hydraulic oil  
Environmental temperature  
Sound level  
Vibrations  
Dimensions of tool  
Dimensions of case

Approx. 2,5 kg (incl.battery)  
55 kN  
Direct-current permanent field  
18 V DC  
1,3 Ah  
15 min  
Approx. 3 - 6 s (depending on the connector size)  
12 mm  
100-200 (depending on size and temperature)  
Rivolta S.B.H. 11  
-20°C to + 40°C  
70 dB (A) in 1 m distance  
<2,5 m/s<sup>2</sup>  
387 x 116 x 75 mm  
497 x 411 x 118 mm

## 10. Contact



If you need support in respect of this tool please contact your distributor or direct to Elpress Customer Support at the head office in Kramfors, Sweden.

Tel: +46 (0)612-71 71 99

Fax: +46 (0)612-71 71 51

E-mail: sales@elpress.se

## 11. Declaration of Conformity

	<b>ELPRESS</b>	Dokument.nr Document No <b>0901-012600A</b>	Ändr.nr. Change No <b>18997</b>	Datum Date <b>2014-11-24</b>	Sida Page <b>1 (2)</b>
	Produkt Product <b>Presspistol</b> <b>Crimp tool</b>			Godkänd av Approved by 	Upprättad av Made by <b>KS</b>
ELPRESS	<b>PVL611</b>	<b>5204-000800</b>			

ÖVERENSSTÄMMELSEDEKLARATION

ERKLÆRING OM OVERENSSTEMMELSE

OVERENSSTEMMELSESERKLÆRING

VAATIMUSTENMUKAISUUSVAKUUTUS

DECLARATION OF CONFORMITY

KONFORMITÄTSEKTLÄRUNG

VERKLARING VAN OVEREENSTEMMING

DÉCLARATION DE CONFORMITÉ

DICHIARAZIONE DI CONFORMITÀ

DECLARACIÓN DE CONFORMIDAD

DECLARAÇÃO DE CONFIRMAÇÃO


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 Producent/Fabricant/Costruttore/Fabricante/Fabricante

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Kramfors 2014-11-24

  
 .....  
 Per Fällström

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**ELPRESS AB**

Försäkrar att: **ACKUMULATORDRIVEN PRESSPISTOL MED TILLBEHÖR**

Assure that: **BATTERY POWERED CRIMP TOOL WITH ACCESSORIES**

Typ/Type: **PVL611**

Är tillverkad enligt bestämmelserna i direktiv 2006/42/EG, 2004/108/EG, 2011/65/EU och normer EN 60745-1, EN 12100 Teil 1+2, EN ISO 13857:2008, EN 349, EN 60204-1, EN 28662-1, EN 61000-6-3, EN 61000-6-2, EN 60529, EN 982, EN 1037.

Er produsert i henhold till direktiverne 2006/42/EØF, 2004/108/EØF, 2011/65/EU og normer EN 60745-1, EN 12100 Teil 1+2, EN ISO 13857:2008, EN 349, EN 60204-1, EN 28662-1, EN 61000-6-3, EN 61000-6-2, EN 60529, EN 982, EN 1037.

Er produceret ifølge bestemmelserne i direktive ne 2006/42/EØF, 2004/108/EØF, 2011/65/EU og standarder EN 60745-1, EN 12100 Teil 1+2, EN ISO 13857:2008, EN 349, EN 60204-1, EN 28662-1, EN 61000-6-3, EN 61000-6-2, EN 60529, EN 982, EN 1037.

On valmistettu 2006/42/EU, 2004/108/EU, 2011/65/EU, EN 60745-1, EN 12100 Teil 1+2, EN ISO 13857:2008, EN 349, EN 60204-1, EN 28662-1, EN 61000-6-3, EN 61000-6-2, EN 60529, EN 982, EN 1037 direktivin pykälien mukaan, lisäyksineen.

Is produced in accordance with the regulations of directives 2006/42/EEC, 2004/108/EEC, 2011/65/EU and standards EN 60745-1, EN 12100 Teil 1+2, EN ISO 13857:2008, EN 349, EN 60204-1, EN 28662-1, EN 61000-6-3, EN 61000-6-2, EN 60529, EN 982, EN 1037.

Nach den Bestimmungen der Vorschrift 2006/42/EWG, 2004/108/EWG, 2011/65/EU und Normen EN 60745-1, EN 12100 Teil 1+2, EN ISO 13857:2008, EN 349, EN 60204-1, EN 28662-1, EN 61000-6-3, EN 61000-6-2, EN 60529, EN 982, EN 1037 wurde hergestellt.

Is geproduceerd naar van de richtlijnen 2006/42/EEG, 2004/108/EEG, 2011/65/EU normen EN 60745-1, EN 12100 Teil 1+2, EN ISO 13857:2008, EN 349, EN 60204-1, EN 28662-1, EN 61000-6-3, EN 61000-6-2, EN 60529, EN 982, EN 1037.

Est produit conformément aux stipulations de la Directive 2006/42/EEC, 2004/108/EEC, 2011/65/EU avec additif, EN 60745-1, EN 12100 Teil 1+2, EN ISO 13857:2008, EN 349, EN 60204-1, EN 28662-1, EN 61000-6-3, EN 61000-6-2, EN 60529, EN 982, EN 1037.

E'costruita in conformità alla Direttiva 2006/42/EEC, 2004/108/EEC, 2011/65/EU e relative appendici, EN 60745-1, EN 12100 Teil 1+2, EN ISO 13857:2008, EN 349, EN 60204-1, EN 28662-1, EN 61000-6-3, EN 61000-6-2, EN 60529, EN 982, EN 1037.

Fabricada de acuerdo con la Directiva 2006/42/EEC, 2004/108/EEC, 2011/65/EU incluido en el apéndice, EN 60745-1, EN 12100 Teil 1+2, EN ISO 13857:2008, EN 349, EN 60204-1, EN 28662-1, EN 61000-6-3, EN 61000-6-2, EN 60529, EN 982, EN 1037.

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