

# CS2500

**GB** Instructions for use

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**ELPRESS**<sup>®</sup>





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# 1. Inspection Certificate

Product description      Crimp station

Product designation      CS2500

Serial No. (crimp unit) .....

Serial No. (pump unit) .....

Elpress AB hereby certify that the product specified above is inspected and approved in accordance with current routines within Elpress and in correspondence with the relevant requirements in ISO 9001-2000.

Inspection records are filed with Elpress and are available upon request.

Inspection date: .....      Inspector: .....

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# 2. Assistance

In case of questions regarding this product, please contact your Elpress supplier or Elpress directly through the customer support dept at the main office in Kramfors, Sweden.

Telephone      +46 612 71 71 99

Telefax      +46 612 71 71 51

E-mail      sales@elpress.se



## **IMPORTANT! Read this section before using CS2500**

### **3. Personal safety**



- This equipment may only be used by persons with sufficient knowledge about its application and function.
- The use of other hydraulic tools than from Elpress may bring about considerable risks for personal injury.

CS2500 is a crimp station with integrated hydraulic pump and foot pedal. This equipment is designed for crimping of Elpress terminals on to power cables. The crimp station shall not be operated with more than one person at a time. The mains unit may only be connected to a 100 - 240 VAC outlet with protective earth. This Instruction shall always be kept with the equipment.



- The CS2500 creates high hydraulic pressure (max 700 bar) and high press forces (up to 260 kN). To minimise risks, always use protective glasses when operating.

Always check equipment before use, with special regards to damage on the hose, control cable and mains cable. If damage is seen or suspected, the unit must not be used and immediate service actions must be taken.

Note that only authorised service units with access to technical documentation may service the CS2500. Always use spare parts supplied by Elpress.

Reduce the safety risks and prolong the service time for the CS2500 by handling it with care and by keeping it clean.

Do not try to use the crimp station for other purpose than crimping terminals.



At all work, observe the movements of crimp dies to avoid finger damages. CS2500 has a unique fast and with low force, locking/unlocking of terminals. That secure high personal safety. All movements are quickly stopped by releasing start switch on foot pedal. Stop switch on pedal retracts all movements.

At longer stops, switch off the unit and disconnect the mains cord plug.

## 4. General description

### **Elpress crimp station CS2500 is a product designed for harness production.**

A foot pedal operated crimp unit connected to a separate electro hydraulic pump give several opportunities to form individual working stations in most places.

The concept is to combine high productivity with high crimp quality, all the time with high personal safety and ergonomics.

With use of a fast locking and unlocking screw function the terminal can be fixed in the correct crimp position with a very low force. This avoids risk of accidents.

As the available crimping force is very high, only one crimp cycle. Crimp force is individual programmable and selfadjusting in two steps, high and low, for optimal durability and energy saving.

Elpress patented DUAL system is build in for use with Elpress terminals of type KRF/KSF.

All set parameters relevant to the function of the system as well as the pressure build up of each crimp cycle, are continuously monitored and logged into the electronic control module. Most of the information can be directly read on the display after each crimp cycle. More information can be seen using display menu and by pressing menu buttons on membrane keyboard on crimp unit. For further crimp analysis, crimp data can be transferred to a PC and then studied and saved as traceable protocols for manufacturing batches, calibration etc.

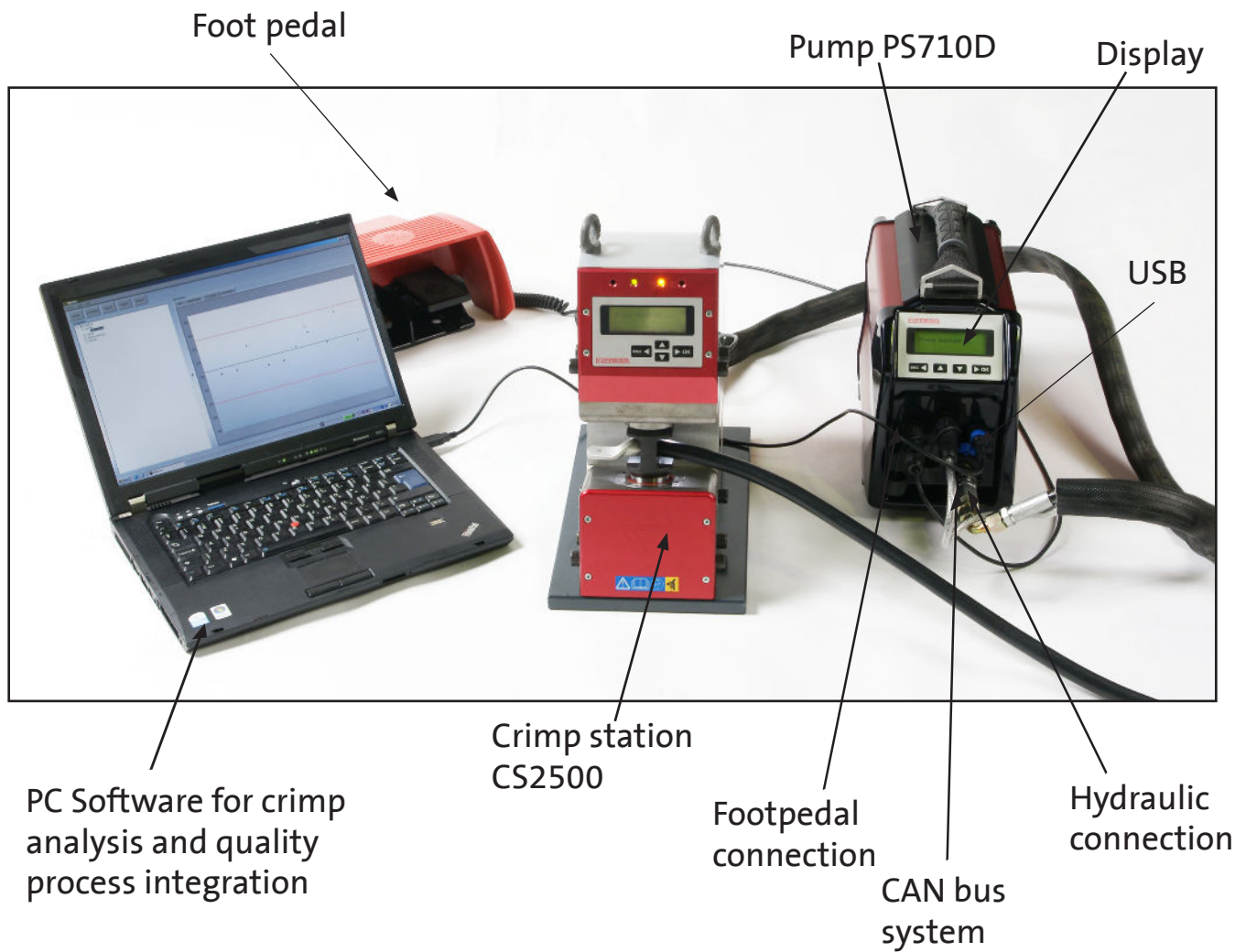
If the memory is full and crimps are not to be transferred to PC computer memory can be deleted by use of "clear logs" function in the main menu.

The special developed PC software is called ELPRESS ANALYZER and can be easy installed by using ELPRESS ANALYZER Manual. This software gives the user a tool for process control in realtime.

The control system also has a self-diagnostic functionality where fault messages makes the operator aware of eventual disturbances.

The operator controls the equipment with the foot pedal. Display on crimp unit shows actual status and relevant information. Both displays shows the same information.

## 5. CS2500 System components



## 6. Use of CS2500

When crimp unit is to be moved use the lifting hooks which are attached on CS2500. Make sure that crimp unit is placed on a stable place, preferable with a hard wood board. If a moveable working place is used make sure that wheels can be locked.

Set main switch to position "0" on top of pump unit.

- Connect hydraulic hose to pump. Do not bend the hose too much. Connect control cable to the pump and lock it. Than attach separate cable to foot pedal.
- If all internal connections are made, then attach the mains cord plug to 100-240 VAC power outlet with a protective earth, PE.
- Set the main switch on the pump unit in position "II". Than press the right switch in the foot pedal to activate self check of system, a green LED will light above the display to indicate ready for use state.

### **Running.**

- When the left switch in the foot pedal is pressed the crimp process starts with low force screw locking of terminal. If the foot pedal switch is kept down the pump starts and hydraulic pressure is built up. When pressure exceeds 15 bar, the green LED flashes at about 4 Hz and the display shows "press active". This is starting point for crimp data logging into pump computer memory. When preset max pressure is reached, the system is automatically released and both cylinder piston and locking screw are retracted. This procedure is referred to as one crimp cycle. Display gives information for each cycle. See Display Information in this manual.

A crimp cycle can be interrupted by releasing foot pedal switch, the left one.

A crimp cycle can be restarted by again pressing foot pedal switch, the left one.

A crimp cycle can be ended by pressing the foot pedal switch, the right one.

If the crimp cycle is interrupted before the pump starts, pressing right switch will retract screw and make new locking of terminal possible. Between locked terminal and start of pump there is a security time delay in the control system of 1 second.

The main switch, on pump unit, should be set in position "0" when equipment is out of use. During longer stops the mains power plug should be disconnected.



## 7. Display Menu

When the system is made ready for use, display will show “Date and time” and “Pump-No”  
The four switches on the keypad are used for navigation in the control system.

“Main menu” is reached by pushing the “OK” switch. Up and down switches moves the cursor to desired line, then the switch marked “OK” must be pressed. Return to main menu by pressing the “esc” switch. In the main menu it is easy to get information about pump status.

- **Log info**                      Show used part of computer memory
- **Reset counter**              Reset counter of crimps shown in display
- **Clear logs**                    Clear out memory from all crimplogs
- **Settings**                        Show set values
- **Active faults**                Show and clear out of error messages
- **Admin**                         Time set log in
- **Version info**                Information about software

After a complete crimp cycle, information about relevant parameters is shown in display. By using the down switch on the keypad this information is easy reached.

<p><b>Crimp complete</b></p> <p><b>Log ID</b></p> <p><b>Cycle counter</b></p> <p><b>Total counter</b></p>	<p>Crimp cycle has been fulfilled, max pressure reached Crimp identity saved with crimp characteristic Counts every crimp (p &gt; 15 bar), possible to reset A not resetable total press counter</p>
<p><b>Press time</b></p> <p><b>Max pressure</b></p> <p><b>Max current</b></p> <p><b>Min battery</b></p>	<p>Crimp time, when pressure p is over 15 bar Max hydraulic pressure reached during crimp cycle Max motor current reached during crimp cycle Min voltage, battery or net power, during crimp cycle</p>
<p><b>Oil temp</b></p> <p><b>Motor temp</b></p>	<p>Max hydraulic oil temperature during crimp cycle Max DC motor temperature during crimp cycle</p>

If any of the parameters above, press time, pressure, current, voltage, oil temp or motor temp is out of preset limits there will be an error message with information about the actual problem. When a crimp cycle has been started but not completed within 60 sec, a message “Time out” will be shown in the display. All faulty messages can be cleared in “Active faults” menu.

## 8. Maintenance

The life of the CS2500 is prolonged if the units are kept clean and dry. A daily check at hydraulic hose and cable is important.

Daily cleaning of dies and the crimp unit are recommended. Never use air blowing tools when cleaning crimp unit, especially close to the hydraulic piston.

The automatic driven screw for locking of cable lugs shall be carefully lubricated each 20 000 cycles. A few drops of mineral based hydraulic oil, Hydrex MV22, shall be used. Cleaning of screw shall never be made. Oil is delivered with the equipment.

Never try to repair this equipment without consulting Elpress. Personal safety may then be put out of functionality.

### TROUBLESHOOTING

Display or switches do not function

Check mains outlet power fuse and than cable and connector.

### ERROR MESSAGES DISPLAY

Stop button stuck

Signal cable not connected or damaged

Motor temp high

Improve air ventilation around pump

Log memory full

Use "Clear logs" in main menu

High motor current

Contact Elpress

Time for service

Time for preventive maintenance

No CAN comm

Check cable and connector

## 9. Environmental aspects

Elpress are continuously working for a better environment and are certified according to ISO14001. This equipment is designed for low power consumption. When not in use, main switch should be turned off and mains power plug disconnected.

All material in the CS2500 crimp station equipment fulfil ROHS demands and are recyclable.

Electrical equipment shall not be disposed together with normal waste. In accordance with European Directive RoHS 2011/65/EU, 2012/19/EU waste of electric and electronic equipment that reached the lifetime must be collected separately and decommissioned and sent to appropriate environmentally responsible recycling facility, regional collection centre or nearest Elpress representative.


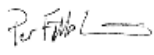
The pump contains one litre of mineral oil which never should be thrown into nature.

## 10. Technical specification

**CS2500 is an integrated electro hydraulic crimp station, foot pedal operated.**

Hydraulic pressure range	programmable within 0-700 bar
Crimp force	self-adjusting in two steps, low and high Max crimp force, 260 kN with 700 bar
Oil flow	1.2 l/min (at 20 bar)
Oil volume	1.0 l
Oil type	HYDREX MV 22 (hydraulic oil mineral type) or similar
Dimensions, pump unit	370 x 170 x 280 mm
Weight, pump unit	11.5 kg
Dimensions, crimp unit	200 x 350 x 340
Weight, crimp unit	59.5 kg
Mains unit pump	85-276 VAC 50/60Hz / 24-28 VDC 30A; over current and over voltage protected; mains cord 4.5 m
Control module	Elpress Advanced electronic, with display and key board, USB port for PC-connection
Environment temperatures	-15 to 40 °C
Protection	IP 54
Hydraulic hose	1.8 m with quick coupling
Controls	Foot pedal, double switch model
CE-requirements met	Machine safety 2006/42/EG, Electro magnetic compatibility 2014/30/EU Low voltage directive 2014/35/EU ROHS 2011/65/EU WEEE 2012/19/EU
Accessories	<b>Elpress ANALYZER</b> , software for PC incl. USB cable and manual.

# 11. Declaration of conformity

 ELPRESS	<b>ELPRESS</b>	Document No <b>0901-010700C</b>	Ändr.nr. Change No <b>19164</b>	Datum Date <b>15-11-18</b>	Sida Page <b>1 (2)</b>
	Produkt Product <b>Crimp station</b>			Godkänd av Approved by 	Upprättad av Made by <b>KS</b>

ÖVERENSSTÄMMELSEDEKLARATION  
 KONFORMITETSERKLÆRING  
 KONFORMITETSERKLÆRING  
 TODISTUS SLANDARDINMUKAISUUDESTA  
 DECLARATION OF CONFORMITY  
 KONFORMITÄT SERKLÄRUNG  
 KONFORMITEITSVERKLARING  
 DÉCLARATION DE CONFORMITÉ  
 DECLARACIÓN DE CONFORMIDAD  
 DECLARAÇÃO DE CONFIRMADADE  
 DICHIARAZIONE DI CONFORMITÀ

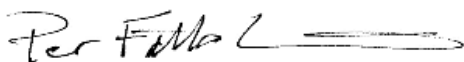
Tillverkare/Producent/Produsent/Valmistaja/Manufacturer/Hersteller/  
 Producent/Fabricant/Costruttore/Fabricante/Fabricante

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## 11. Declaration of conformity

 <b>ELPRESS</b>	<b>ELPRESS</b>	<b>Dokument.nr</b> <b>Document No</b> <b>0901-010700C</b>	<b>Ändr.nr.</b> <b>Change No</b> <b>19164</b>	<b>Datum</b> <b>Date</b> <b>15-11-18</b>	<b>Sida</b> <b>Page</b> <b>2 (2)</b>
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**ELPRESS AB**

Försäkrar att/Assure that: **Crimp station**

Typ/Type: **CS2500**

Vi förklarar på eget ansvar att denna produkt överensstämmer med följande normer eller normativa dokument:  
 EN ISO 12100:2010, EN 60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 och EN 61000-6-3  
 enligt bestämmelserna i direktiverna 2006/42/EG, 2014/30/EU, 2014/35/EU och 2011/65/EU.

Vi erklærer på eget ansvarighet at detta produkt er i overenstemmelse med følgende standarder eller standard dokumenter: EN ISO 12100:2010, EN60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 og EN 61000-6-3 i henhold til bestemmelsene i direktive ne 2006/42/EØF, 2014/30/EØF, 2014/35/EØF og 2011/65/EØF.

Vi erklærer på eget ansvar at dette produkt er i overensstemmelse med følgende normer eller normative dokumenter: EN ISO 12100:2010, EN 60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 og EN 61000-6-3 i henhold til bestemmelserne i direktiverne 2006/42/EØF, 2014/30/EØF, 2014/35/EØF og 2011/65/EØF.

Asiasta vastaavana todistamme täten, että tämä tuote on seuraavien standardien ja standardoimisasiakirjojen vaatimusten mukainen: EN ISO 12100:2010, EN 60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 ja EN 61000-6-3 ja vastaa säädöksiä 2006/42/EU, 2014/30/EU, 2014/35/EU ja 2011/65/EU.

We declare under our sole responsibility that this product is in conformity with the following standards or normative documents: EN ISO 12100:2010, EN 60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 and EN 61000-6-3 in accordance with the regulations of directives 2006/42/EEC, 2014/30/EEC, 2014/35/EEC and 2011/65/EEC.

Wir erklären in alleiniger Verantwortlichkeit, daß dieses Produkt mit den folgenden Normen oder normativen Dokumenten übereinstimmt: EN ISO 12100:2010, EN 60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 und EN 61000-6-3 gemäß den Bestimmungen Richtlinien 2006/42/EWG, 2014/30/EWG, 2014/35/EWG und 2011/65/EWG.

Wij verklaren en wij stellen ons er alleen voor verantwoordelijk dat dit produkt voldoet aan de volgende normen of normatieve documenten: EN ISO 12100:2010, EN 60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 en EN 61000-6-3 overeenkomstig de bepalingen van de richtlijnen 2006/42/EEG, 2014/30/EEG, 2014/35/EEG en 2011/65/EEG.

Nous déclarons sous notre seule responsabilité que ce produit est en conformité avec les normes ou documents normatifs suivants: EN ISO 12100:2010, EN 60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 et EN 61000-6-3 conformément aux réglementations des directives 2006/42/CEE, 2014/30/CEE, 2014/35/CEE et 2011/65/CEE.

Declaramos bajo nuestra sola responsabilidad que este producto está en conformidad con las normas o documentos normativos siguientes: EN ISO 12100:2010, EN 60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 ed EN 61000-6-3 de acuerdo con las regulaciones de las directivas 2006/42/CEE, 2014/30/CEE, 2014/35/CEE ed 2011/65/CEE.

Declaramos sob nossa exclusiva responsabilidade que este producto cumple as seguintes normas ou documentos normativos: EN ISO 12100:2010, EN 60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 y EN 61000-6-3 conforme as disposições das directivas 2006/42/CEE, 2014/30/CEE, 2014/35/CEE y 2011/65/CEE.

Dichiariamo sotto la nostra esclusiva responsabilità che questo prodotto è conforme alle seguenti norme e documenti normativi: EN ISO 12100:2010, EN 60204-1, EN 693+A1:2009, EN ISO 4413:2010, EN 61000-6-2 e EN 61000-6-3 conformemente alle disposizioni delle direttive 2006/42/CEE, 2014/30/CEE, 2014/35/CEE e 2011/65/CEE.





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