USE AND MAINTENANCE MANUAL

CP EXTRUDER GUN

Model 11950/ 11951

Serial Number:

Construction year:

CE DECLARATION OF CONFORMITY

(Ref. Machinery Directive 42/2006/EC Ann. II.A)
the Company:
VM Rubber Srl
Viale Giovanni Caproni 17/A- 38068 Rovereto (TN) - Italia Tel.
+39 0464 1940003 | www.vmrubber.com
declare under their own responsibility that the machine
EXTRUDER

Model: 11950 and 11951

Serial Number:

Construction year:

The machine is connected to the Chicago Pneumatic 8941092860 pneumatic drill and VM Rubber Extruder conforms to the laws enforcing the following EU laws:

Directive 2066/42/EU (machine directive) including the implicit application of legislation 2014/35/EU (low voltage);
2014/30/EU (electromagnetic compatibility);
2014/68/EU (pneumatic system);

The following harmonized norms are applied:
EN ISO 12100: 2010 (risks evaluation)
EN 60204-1: 2018 (eletrical system)
EN ISO 13849-1: 2015 (safety circuit)
IEC 61000-6-2: 2016 (electromagnetic noise)

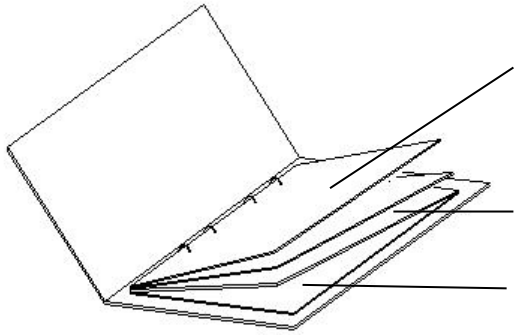
They further declare that:
this CE declaration was issued under the producer solely responsability;
the CE marking is affixed to the machine;
the technical documentation for the machine is available at the manufacturer's head office.
The producer is responsable for the documentation availability.

And inform that this declaration is valid on condition that:
the machine is installed and used in conformity with the indications in the use and maintenance manual;
No part of the machine has been modified;

The producer reminds that:
before using the machine and other machines, an evaluation is performed, in order to verify the absence of risks deriving from the assembly. If necessary, the safety measures are adopted in order to manage risks in confromity to norms 2006/42/CE.

Rovereto, date	Name and Last Name	Role	Signature
_____	Pablo Versini	*Legal representative*	_____

THIS MANUAL IS MADE UP OF A NUMBER OF DOCUMENTS THAT MUST STAY WITH THE MACHINE FOR ITS ENTIRE LIFE UNTIL DEMOLITION.



CONTENTS OF THE MANUAL

CE DECLARATION OF CONFORMITY
This is a declaration under which the machine can be freely used anywhere in the European Community market area;

USE AND MAINTENANCE ISTRUCTIONS
Contains the description of the machine and the instructions needed for its use;

Translation of original instructions

ANNEXES
Spare part drawings
Drill manual

1. PRELIMINARY INFORMATION

This use and maintenance manual, hereafter called “manual”, contains the information needed for use and maintenance of the machine to which the manual refers.

1.1. WARNING

This manual must be considered an integral part of the machine to which it refers.
The Manual must be stored carefully by the user and must remain with the machine for the entire life of the latter.

1.2. CONFIDENTIALITY

It is forbidden to disclose, even partially, any and all of the contents in this manual to third parties not involved in the use and/or maintenance of the captioned machine.

1.3. CONDITIONS FOR GUARANTEE VALIDITY

The Manufacturer cannot be held responsible for any action or damage deriving from:
- improper use of the machine;
- incorrect use of the machine not according to instructions
- faulty supply of any energy or fluid necessary;
- lack of maintenance;
- alterations or unauthorised action, including any for improving safety; any and all actions on the machine must be agreed with and authorised by the Manufacturer;
- use of non-original spare parts;
- failure to follow the instructions in this manual.

1.4. INFORMATION ON MAINTENANCE ASSISTANCE

For any problem concerning use or maintenance of the machine, you can get information and technical assistance by contacting the Manufacturer’s head office. When contacting the Manufacturer, please quote all the data shown on the machine identification plate.

1.5. DEFINITIONS OF PERSONNEL QUALIFICATIONS

OPERATOR
This term indicates personnel who are able to operate the machine under normal conditions of use, excluding any and all maintenance activities.
MAINTENANCE MECHANIC
A qualified technician who can work on mechanical parts of the machine in order to carry out adjustments, maintenance work and repairs as needed to guarantee good machine operation.
MAINTENANCE ELECTRICIAN
A qualified Technician who can work on the machine electrical systems to carry out maintenance and repair work as needed to guarantee good machine operation.
MANUFACTURER’S TECHNICIAN
A qualified technician made available by the Manufacturer.

1.6. DESCRIPTION OF PICTOGRAMS

Here is a list of the communication symbols appearing on the machines and in this manual.

This symbol represents a particularly important warning which if unheeded can cause important damage or serious danger for persons.

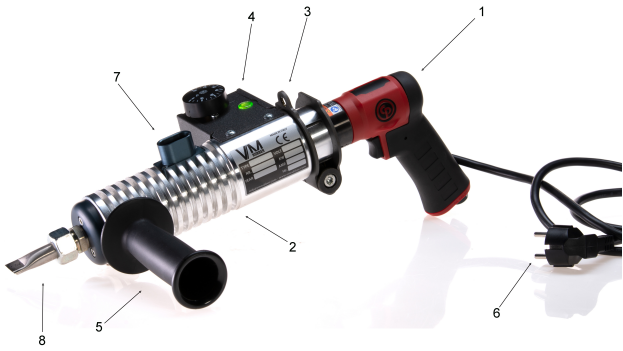
Warns of a very important note the contents of which must be absolutely taken account of.

 Shown when use of the machine requires a MAINTENANCE MECHANIC	 Shown when use of the machine requires a MAINTENANCE ELECTRICIAN	 Shown when use of the machine requires a MANUFACTURER’S TECHNICIAN
 Crushing and injury hazard to hands	 Noise hazard	 It is compulsory to use a hearing protection device
 Hazardous substances	 It is compulsory to use boots with non-slip soles and reinforced toe caps	 Work on the machine with more than one person is prohibited
 Crushing and injury hazards to feet	 It is compulsory to use hand-protection gloves	 Machine adjustment and lubrication is forbidden with the machine in operation
 Electric shock hazard due to presence of electric tension	 It is compulsory to disconnect the machine supplies (electric, air etc)	 Do not remove protections and safety devices
 Burn hazard due to the presence of hot surfaces	 It is compulsory to use suitable working clothes	 Work on electric parts is prohibited

2. MACHINE DESCRIPTION

TECHNICAL DATA

Rubber production:	15 kg/h
Drill power rating	400 W
Electric Power	350 W 230/110 V
Compressed air demand:	125 Nl/s
Compressed air working pressure:	6 bar
Weight:	3.85 kg
Heating temperature:	0 – 120°C



Operation characteristics

Designed and built for the infill of craters that form on tyres. Starting with a piece of a specific type of rubber, the machine heats this to a temperature set by the operator and extrudes the rubber, which the operator applies directly into the crater.

Components:
1 – Chicago Drill
2 – Extruder
3 – Hook for Extruder Balancer
4 – Heat Element, Gear Pilot Light;
5 – Handle;
6 – Cable;
7 – Rubber inlet;
8 – Nozzle

2.1. NOISE

The noise level depends on the type of drill used with the extruder; see the attached drill manual.

It is in any case the responsibility of the user to make sure that the environment where the machine is installed is not already such as to require a protection device or that it becomes such with the addition of this machine.

2.2. VIBRATION

The machine vibration depends on the type of drill used with the extruder; see the attached drill manual.

3. CONDITIONS OF USE AND GENERAL SAFETY WARNINGS

It is indispensable that the user be aware of the indications in this Manual for all the foreseen operations.

For no reason whatsoever may sealed machine organs or parts be tampered with. Any operation that might involve removal of fixed protection covers, or that require use of a specific tool, access to internal areas or adjustment of settings can lead to *DANGEROUS* situations and therefore such operations must be carried out only by manufacturer's personnel.

3.1. CONDITIONS OF USE

Type of environment	Industrial and/or handcraft environment conforming to general safety standards.
Environmental temperature	From -5 to +40 °C
Environmental relative humidity	20 - 60 %
Altitude	From -10 to + 1.000 m above sea level.
Lighting level in the area of use	Higher than 300 lux
Explosive atmosphere	Use of the machine in explosive atmospheres is prohibited.
Fire risk	The machine contains a heat source that can ignite fire in flammable materials.
Electromagnetic fields	The electrical system does not cause disturbances.
Environment ventilation	Ventilated environment conforming with general safety standards.
Minimum dimensions of the installation area	At least 2 m radius around the operating position.

Professional capabilities of the user	Aged 18 at least. Not disabled. See the various chapters.
Supply sources	Needs a compressed air supply at 6 bar. Needs electric power supply at 220/110V

Use of the machine under conditions differing from those stated above can be a cause of danger.

3.2. SAFETY MEASURES

Any repair or maintenance work on the machine must be done with the machine switched off and disconnected from all supplies.
Maintenance, repair and use of the machine must be entrusted to personnel trained for these jobs.
The user must not, on his own initiative, carry out any operation or action on the machine that is not contemplated in this manual.
Adjustment operations are allowed only under full respect for the indications in this manual.

Main warnings on use of the machine

- Use of the machine without the safety systems is absolutely forbidden;
- Inhibition of the safety systems on the machine is absolutely forbidden;
- Do not modify the machine or its parts for any reason at all;
- Ask the manufacturer directly for any modifications to the machine;
- Cleaning and maintenance operations must be done only with the machine disconnected from all energy supplies.

In order to reach the above conditions it is necessary that:

- This Manual be available near the machine;
- Only adequately trained persons be assigned to the machine.

In the case of malfunction due to a failure to respect the above, the Manufacturer does not answer for any consequences of such failure.

Warnings regarding safety systems

- Never tamper with the safety devices.
- Do not tamper with, modify or adapt the machine.
- Disconnect any energy supplies when the machine is not in use.

Precautions that can reduce residual hazards
The machine has been designed and built to allow safe use.
All precautions have been taken to avoid damage to persons and property that the machine could cause during operation.
Residual hazards (which cannot be removed using technical solutions) have been identified using conventional symbols.
These symbols are present both on the machine and in the Instruction Manual.
The manual also contains all the information needed for correct and safe use of the machine and for identification of the qualification needed by the operator as to the work to be done.
As it is impossible for the Manufacturer to prevent all the improper and incorrect uses of the machine, any damage to persons and property due to failure to observe instructions or to incapacity or lack of knowledge on the part of the operators, is to be considered as a residual hazard.

Risks deriving from incorrect use

The instructions in this Manual, if followed and respected scrupulously by the operators, allow correct use of the machine and optimisation of its functions.
Any operation differing from those described, carried out on the personal initiative of the operator, must be considered INCORRECT USE.

Incorrect use of the machine as also the failure to respect accident prevention and safety standards, can determine dangerous conditions for persons and compromise the integrity of the machine itself.
The extent of the risks deriving from incorrect use is to be considered a consequence of the type of incorrect use and is difficult to estimate *a priori*.

In order to avoid incorrect use of the machine it is necessary that:

- The documentation for use and maintenance of the machine be available near the work station;
- Said documentation has been read carefully and the prescriptions contained be carefully put into practice;
- Only adequately trained personnel be assigned to the machine.

Those responsible for users' safety must ensure that:

- There is no improper use or operation;
- There is no removal or tampering with the safety devices;
- Maintenance work is carried out regularly;
- No modification (fittings, holes and similar) is made to the machine parts for any reason, to adapt devices not foreseen by the Manufacturer;
- Exclusively original spare parts are used, particularly as concerns components with a safety function
- Cleaning operations be done using soft cloths, dry or with weak detergent solutions, after disconnecting ALL energy supplies.

Precautions that can prevent human error

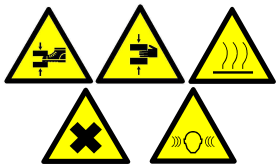
To prevent error it is recommended to follow some suggestions, that can be considered forms of prevention meant to limit possible human error deriving from lack of knowledge of the most suitable procedures for the above mentioned operations:

- Supply of correct information to operators as to safety problems;
- Manipulation of the machine under safe conditions, whether packaged or unpackaged;
- Correct use of the machine;
- Detailed knowledge of the machine operation and of its limits;
- Correct use of the machine under safe conditions.

FORBIDDEN USES

- Use of the machine for functions differing from those for which it was designed and built is absolutely forbidden;
- Use of the machine with materials the characteristics of which differ from those mentioned in this Manual is forbidden.
- Use of the machine beyond the parameters of correct operation as defined during design and as described in this Manual is forbidden.
- Use of the machine by personnel whose knowledge, competence and responsibility are not adequate for the operator qualification requested, is absolutely forbidden.
- Entrusting machine control or maintenance to operators or maintenance personnel with insufficient specific training, even if provided with adequate general knowledge, competence and responsibility, is absolutely forbidden.
- Replacing worn, damaged or broken parts with spare parts other than the original ones is forbidden.
- Operating the machine with incomplete documentation is forbidden.

3.3. INDIVIDUAL PROTECTION DEVICES AND SAFETY PRESCRIPTIONS

Operation	Risk	Individual protection device (IPD)	Prescription
Machine handling	The machine may be dropped by the operator, leading to: - injuries to lower limbs; - injuries to upper limbs. Moreover, there may be damage to the machine and its use may no longer be safe. 	- working clothes suitable for use in the environment where the operations take place; - machine handling gloves that guarantee a firm and safe hold; - boots with reinforced toe caps to avoid crushing; 	- hold the machine firmly by the handles, using gloves that guarantee a safe hold on the device. - if the machine is dropped, check it for damage and safety before using it again.
Cleaning and maintenance on and in the machine	The machine has parts that if set in motion with missing components can cause: - injuries to lower limbs; - injuries to upper limbs; - ejection of compressed air; - burns; - electric shock; - hair and flutting objects caught in the extruder screw; - the drive transfers vibration to the hand-arm system; 	- working clothes suitable for use in the environment where the operations take place; - gloves for handling objects with sharp edges and cleaning and lubrication products; - boots with reinforced toe caps; - check also whether other IPDs are needed, according to the type of operation to be carried out (see the chapter on Maintenance); - working clothes without flutting parts; - headgear to tie the hair - beard folding; - wearing the right size gloves without cuts; 	- disconnect the compressed air supply; - employ specialised personnel (see the chapter on Maintenance); - make evaluation of risk exposure to noise and vibration according to effective norms (check the noise and vibration data in the manual); - don't place the hands near the extruder screw; - don't touch the extruder tip - don't touch the extruded rubber 
Use of the machine	Some parts of the machine can be at high temperatures that can cause slight burns. Careless handling of the machine can cause a loss of hold with a fall onto hands or feet. Overheating of the rubber leads to production of substances that represent a risk to health. The drill produces noise that can cause damage to hearing after prolonged exposure. Hair and flutting objects caught in the extruder screw. The drive transfers vibration to the hand-arm system. Machine weight and physical effort 	- clothing and protection devices as to the product and the working environment<, - gloves for handling sharp objects and lubrication and cleaning products; - boots with reinforced toe caps to avoid crushing; - mask to protect airways against substances emitted by overheated rubber; - hearing protection devices; - working clothes without flutting parts; - headgear to tie the hair - beard folding; - wearing the right size gloves without cuts; 	- follow the warnings and instructions in this manual and the safety procedures, see instructions for use, - do not remove protection systems nor safety devices; - make evaluation of risk exposure to noise and vibration according to effective norms (check the noise and vibration data in the manual); - don't place the hands near the extruder screw; - don't touch the extruder tip - don't touch the extruded rubber; - use balancing system (see the VMRubber catalog) - organize the working space to have a correct posture; - if physical problems arise, as tingling, persistent ailment, stiffening, to hands, arms and back contact the doctor and your superior - verify the drive is correctly power as decribed in the manual; - grab the equipment always and only by their handle - before using verify the screw lock on the extruder drive. 

4. INSTRUCTIONS FOR USE

Important notes

Personnel who are employed to use this machine must be:
- aged 18 at least;
- of healthy and robust constitution.

The machine is designed for use by expert professional tyre maintenance personnel.

4.1. USE OF THE MACHINE

Before use

Before using the machine always check all components. All components must be in perfect condition, there must be no oil leaks, dents, cracks and the extruder must be complete and undamaged.
Read the attached manuals, too.

How to use the drill

See the attached manual

How to use the extruder

Connect the extruder to a power supply at 220V/110V as available.
Insert the compressed air hose into the pneumatic drill (1), turn the temperature control knob (2) setting it at 85° and wait until this temperature is reached (Pilot Light off).
Take a firm hold of the extruder, insert the raw rubber strip in the inlet (3), turn on the compressed air gun (1), and extrude the rubber, placing the nozzle (4) against the craters to be filled.
At the end of the working day use a strip of white rubber to clean the extruder.

Precautions

Operate only on tyres that are locked both in rotation and in steering, to avoid uncontrollable movement.
Take a firm hold on the extruder.
Wear strong gloves and boots with reinforced toe caps.
Do not touch the extruded rubber, as it may be hot.
Wear individual protection devices as foreseen in the safety measures.

4.2. ANOMALIES AND TROUBLE SHOOTING

Anomalies to mechanical parts of the machine such as cracks, fissures, elongation are a sign of excess loads and any parts that show such anomalies must be replaced and no longer used.

If there is any anomaly, call in the Manufacturer or authorised maintenance personnel. Acting on the extruder yourself can be dangerous.

5. MACHINE MAINTENANCE

All maintenance operations must be carried out only by qualified maintenance mechanics; we suggest you call in the Manufacturer.
During maintenance operations the machine must be disconnected from the compressed air supply.

Individual protection devices (IPD)

To carry out maintenance operations safely and effectively, the following IPD are needed according to the type of operation to be carried out:
- Gloves to protect against mechanical damage;
- Eye protection to be used when cleaning with compressed air or other means;
- Boots with non-slip sole and reinforced toe cap;
- Clothing with tight sleeves around wrists;
- Masks for use when cleaning by compressed air blowing.

During maintenance operations, use the IPDs that are necessary according to the type of operation, as foreseen by current legislation.

MAINTENANCE PROGRAMME

Period	Action	How
8 hours	Control of the machine general conditions.	Inspect the general condition of the machine; all components must be in good conditions and able to guarantee efficient operation.
Monthly; even if	Clean the machine and remove dust.	Vacuum the dust and/or remove with a dry rag; do not use solvents.

the machine is not operating	If the machine is not in use, start it for a few minutes and operate the controls.	Switch the machine on and operate the controls.
3000 hours	Replace all hoses.	Remove the old hoses and replace with new ones having the same characteristics.
	Overhaul of all mechanical parts.	Check for correct operation of all mechanical components; replace as necessary.

Maintenance Records

In order to keep the maintenance work done on the machine under control, we suggest you keep maintenance records in the form of maintenance cards. These shall be regularly updated and filed with this manual. Hereunder we suggest a table that shows the minimum necessary data for such records.

Fac-simile maintenance card to be compiled during the life of the machine

Date	*Machine hours*	*Maintenance action*	*Who*	*Notes*
	Total hours of machine operation	Description of the maintenance action taken (e.g.: oil replaced)	Signature of the maintenance operator	Any information useful at the time of the next maintenance job

6. HANDLING AND STORAGE

6.1. HANDLING

The machine and its components must be put in a case and carried using the handles on the case.

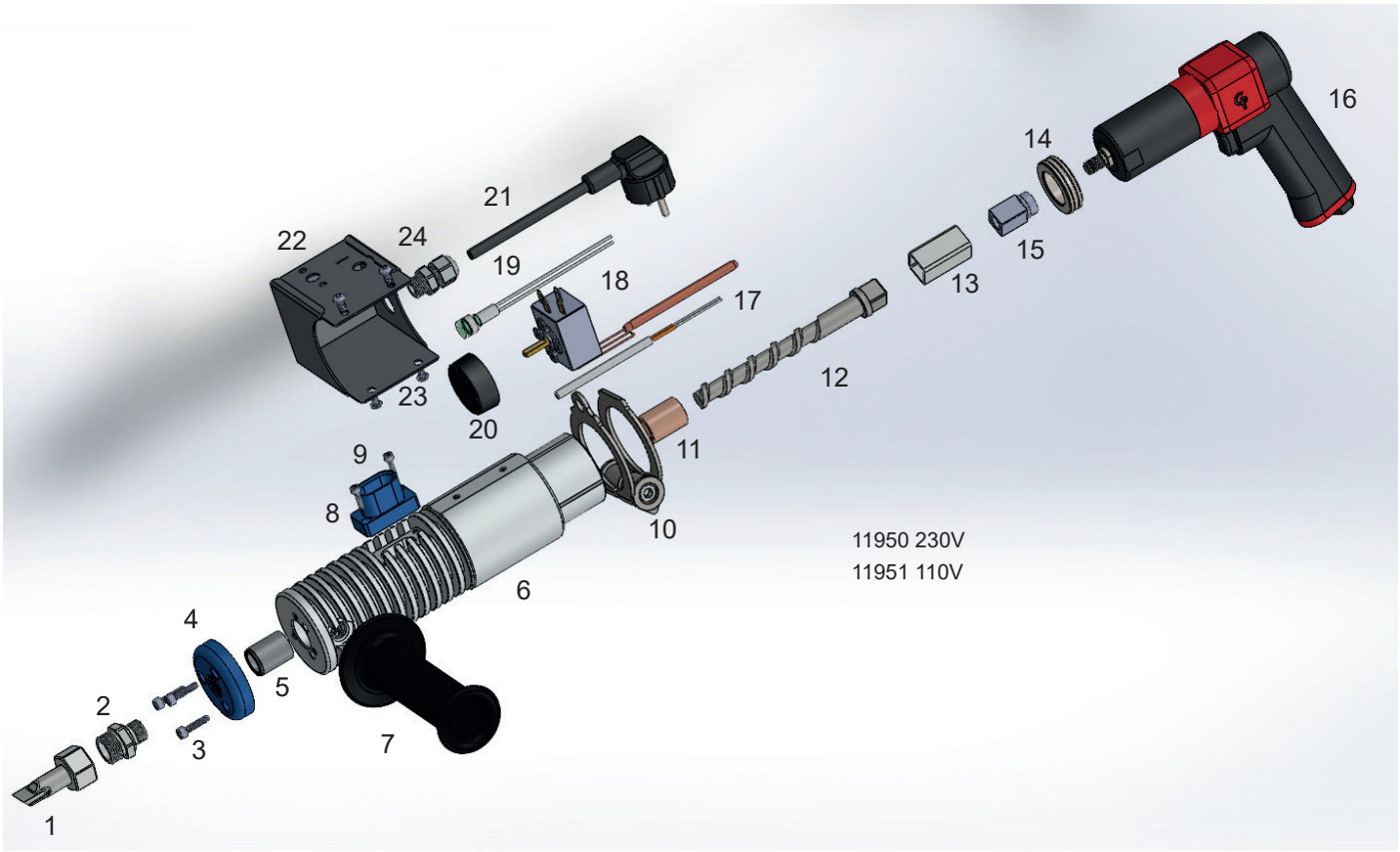
6.2. STORAGE

The machine must be stored in an area protected against weathering, at a temperature between +10 °C and +40 °C, and on the floor.

7. DEMOLITION

If the equipment is demolished, you must follow the procedures dictated by current legislation. In particular, remember to clean off the rubber.

PARTE FRONTALE / BARREL



N°	Item #	Descrizione	Description
1	11790	Ugello “N”	Nozzle “N”
2	11794	Raccordo	Nozzle adapter
3	11795	Viti flangia (3 pz)	Screw for head cap (3 pcs)
4	11860	Flangia	Head
5	11829	Boccola	Front bushing
6	11877	Corpo	Central body
7	11798	Maniglia	Handle
8	11862	Tramoggia	Inlet
9	11862-1	Viti tramoggia (2 pz)	Inlet screw (2 pcs)
10	11883	Collare	Clamp
11	11830	Bronzina	Back bushing
12	11804	Vite estrusore “N”	Extruder screw “N”
13	11805	Giunto	Square Joint
14	11768	Reggispinta	Bearing
15	11767	Codolo	Tang
16	11770	Pistola Chicago	Chicago Drill
17	11848	Resistenza 230V (“N”)	Heat Element 230V (“N”)
18	11816	Termostato 0-120° C	Thermostat 0-120° C
19	11822	Lampada verde 230V	Green Pilot light 230V
20	11819-1	Manopola termostato 0-120° C	Thermostat Knob 0-120° C
21	11825	Cavo	Plug
22	11871	Scatola impianto elettrico	Control box
23	11871-1	Viti scatola (4 pz)	Control box screw (4 pcs)
24	11827	Pressacavo	Strain relief