Das WALTHER PILOT-Programm

- Hand-Spritzpistolen
- Automatik-Spritzpistolen
- Niederdruck-Spritzpistolen (System HVLP)
- Zweikomponenten-Spritzpistolen
- Pulverbeschichtungs-Systeme
- Materialdruckbehälter
- Drucklose Behälter
- Rührwerk-Systeme
- Airless-Geräte und Flüssigkeitspumpen
- Materialumlaufsysteme
- Kombinierte Spritz- und Trockenboxen
- Absaugsysteme mit Trockenabscheidung
- Absaugsysteme mit Naßabscheidung
- Pulversprühstände
- Trockner
- Zuluft-Systeme
- Atemschutzsysteme und Zubehör

Die Beschichtungs-Experten

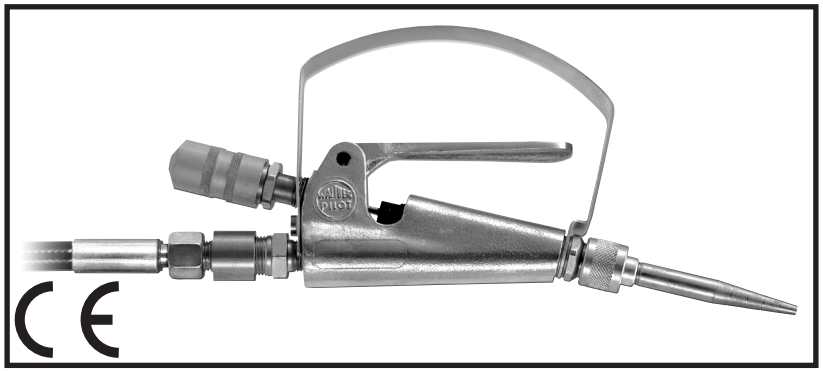
WALTHER Spritz- und Lackiersysteme
Kärntner Str. 18-30 • 42327 Wuppertal
Telefon: 0202 / 787-0 • Telefax: 0202 / 787-217
www.walther-pilotde • E-Mail: info@walther-pilot.de

TÜV CERT
EN ISO 9001
QA: 04 1006056

WALTHER PILOT

Operating Manual

PILOT Extrusionspistole



Die Beschichtungs-Experten

Spare Parts List

Part.-No. V 10 250 00 000 (350 bar)

Pos.Nr.	Part Number	Part Name
1	V 10 250 15 000	Step Nozzle
2	V 10 250 17 000	Cap Nut
3	V 10 250 16 000	Adapter
4	**V 10 250 11 000**	**Material Needle Complete**
5	**V 10 250 12 000**	**Valve**
6	**V 10 250 24 000**	**Gasket (2 pieces)**
7	V 10 250 01 000	Gun Body
8	V 10 250 23 000	Trigger
9	V 10 250 18 000	Bolt Screw
10	V 10 250 25 000	Safety Guard
11	**V 10 250 20 000**	**Packing support washer**
12	**V 10 250 26 000**	**V - Packing (6 Stück)**
13	**V 10 250 19 000**	**Packing Pressure Pin**
14	V 10 250 22 000	Packing Screw
15	**V 10 250 13 000**	**Washer**
16	V 10 250 21 000	Adjusting Nut
17	V 10 250 02 000	Cylinder Head Screw
18	V 10 250 10 000	Back Bushing
19	V 10 250 03 000	Screw
20	V 10 250 14 000	Double Nipple

Additional Nozzle Option

21	V 10 250 15 0SP	Special Nozzle

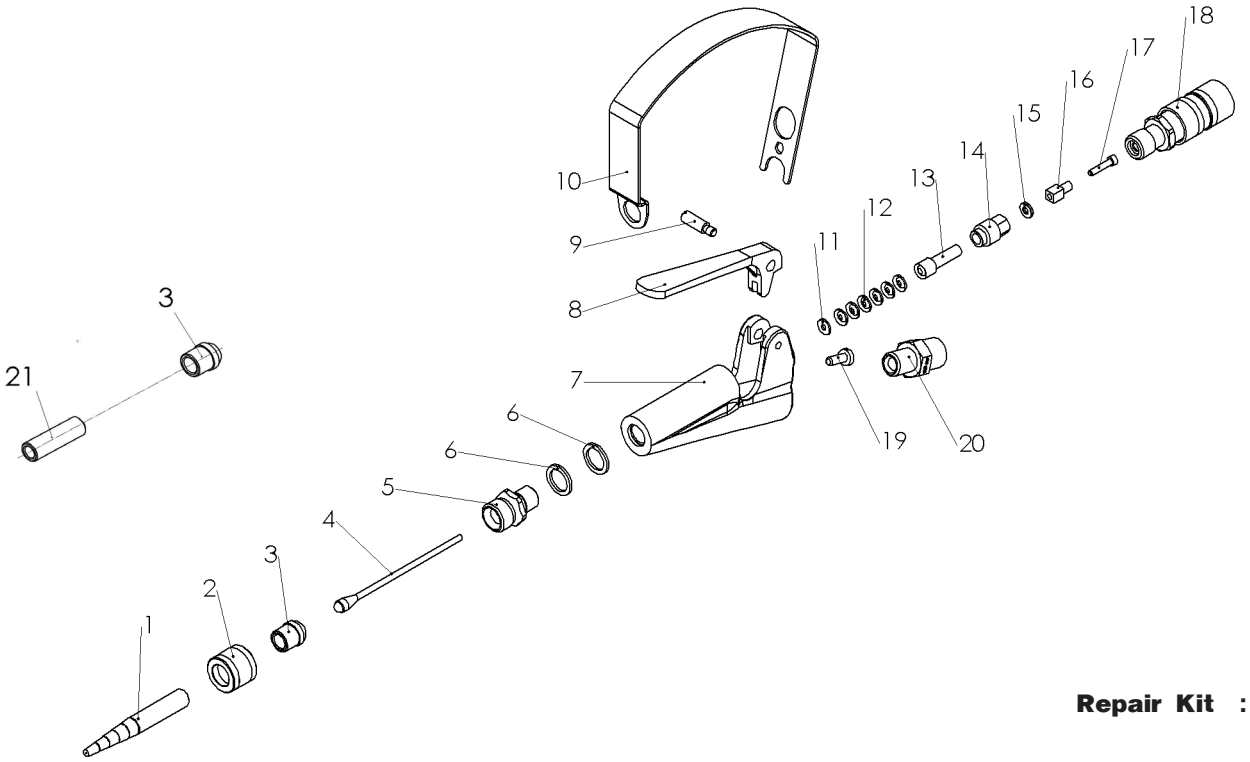
PILOT Extrusionspistole (Teflon®-coated)

Art.-Nr. V 10 250 40 000

Differing Part:

7	V 10 250 01 Tef	Gun Body

We recommend that you keep all the bold parts (wearing parts) in stock.



Repair Kit : V 16 250 00 000

EC Declaration of Conformity

We, the equipment manufacturer, declare under our sole responsibility that the product in the description below corresponds to the relevant basic safety and health requirements. Any unauthorized modifications are made to the equipment or improper use of this declaration loses its validity.

Hersteller	WALTHER Spritz-und Lackiersysteme GmbH Kärntner Str. 18-30 D-42327 Wuppertal Tel.: 0202 / 787-0 Fax: 0202 / 787-217 www.walther-pilot.de • Email: info@walther-pilot.de			
Typenbezeichnung	PILOT Extrusionspistole V 10 250 00 000 V 10 250 40 000 (Teflon®-beschichtet)			
Verwendungszweck	Verarbeitung spritzbarer Materialien			
Angewandte Normen und Richtlinien				
EG-Maschinenrichtlinien 98 / 37 EG 94 / 9 EG (ATEX Richtlinien) DIN EN 292 Teil 1 DIN EN 292 Teil 2 DIN EN 1953				
Spezifikation im Sinne der Richtlinie 94 / 9 / EG				
Kategorie 2	**Gerätebezeichnung**	⟨Ex⟩	II 2 G c T 6	Tech.File,Ref.: 2409
Besondere Hinweise : Das Produkt ist zum Einbau in ein anderes Gerät bestimmt. Die Inbetriebnahme ist so lange untersagt, bis die Konformität des Endproduktes mit der Richtlinie 98 / 37 / EG festgestellt ist.				

Wuppertal, den 7. Juli 2003

i.V.

Name: Torsten Bröker
Stellung im Betrieb: Leiter der Konstruktion und Entwicklung

Diese Erklärung ist keine Zusicherung von Eigenschaften im Sinne der Produkthaftung. Die Sicherheitshinweise der Produktdokumentation sind zu beachten.

Contents

1 General

1.1 Model Identification

Models: PILOT Extrusion Gun (350 bar)

Type: Part.-Nr. V 10 250 00 000
V 10 250 40 000 (Teflon®- coated)

Manufacturer: WALTHER Spritz-und Lackiersysteme GmbH
Kärntner Str. 18-30
D-42327 Wuppertal
Tel.: 0202 / 787-0 • Fax: 0202 / 787-217
www.walther-pilot.de • Email:info@walther-pilot.de

1.2 Intended Use

The PILOT Extrusion guns are for the processing of sprayable media, such as:

- Pasty Materials
- Greases, oils, and corrosion inhibitors
- Adhesives and glues
- Waxes, Bitumen, Silicones, and Kit

Using the device in potentially explosive atmospheres. The device complies with the ATEX requirements of the directive 94/9 EC (ATEX 100a) for explosion group, category and temperature class marked on the rating plate. When operating the device, the specifications of this manual must be followed.

The prescribed inspection and maintenance intervals are required.
The information on the equipment rating plates or the information in the chapter technical data must be maintained and must not be exceeded. An overloading of equipment must be ruled.
The device may be used in potentially explosive atmospheres only with the competent supervisory authority.

The competent authority or the operator is responsible for determining the explosion hazard (zone classification).

It is operator must check and ensure that all technical data and the marking according to ATEX conform to the required standards. Applications in which the failure of the device could be a danger to persons intro-duced are operator must provide appropriate security measures. Grounding / potential equalization
It must be ensured that the extrusion gun is properly grounded
(maximum resistance 106 Ω).

If abnormalities are detected during operation, the unit must be shut down immediately and it is to keep up with WALTHER PILOT consultation.

1.3 Improper Use

The extrusion gun shall not be used otherwise than 1.2 Intended use is written in the section.
Any other use is improper.
To inappropriate use include, for example:
- spraying of material on people and animals
- the spraying of liquid nitrogen.

2 Technical Description

The WALTHER PILOT extrusion gun is a gun that can be processed by the existing material pressure of the pump extrudable materials. The max. Operating pressure is 350 bar .
The gun body is made of cast aluminum and the model V 10 250 40 000 is for easy cleaning Teflon ® coated. The medium to be processed is supplied to the extruding gun of a piston or diaphragm pump under pressure. When you press the trigger , the medium is pressed out of the stage nozzle (extruded) .
In the PILOT extrusion gun , the material pressure is controlled by the pump and the amount of material can then be finely adjusted by an additional 18 of the securing bushing Pos . The scope of the extrusion gun consists of the airless , caterpillar -shaped dispensing of pasty materials. It can thermoplastics, elastomers , silicones , greases , adhesives, glues , waxes , etc. , depending on the consistency of workable materials are extruded . The stage nozzle has different diameter sizes . By severing at the respective notch you can the change required nozzle diameter maximum.

3 Safety

3.1 Identification of Safety Instructions

Warning
This picture and the accompanying warning note "Warning" indicate possible risk and dangers to yourself.

Caution
This picture and the accompanying note "Caution" indicate possible damage to equipment, workpieces, etc.

Notice
This picture and the accompanyingnote "Notice" indicate additional and useful information to help you in handling the spray gun with even greater confidence and efficiency.

3.2 General Applicable Safety Precautions

All applicable accident prevention rules and regulations as well as other recognized industrial safety and health rules and regulations must be observed at all times

Use the spray gun only in well-ventilated rooms. Fires, naked light and smoking are strictly prohibited in the working area. WARNING - during the spraying of flammable materials (e.g. lacquers, adhesives, cleaning agents, etc), there is an increased risk to health as well as an increased risk of explosion and fire.

An adequate grounding of the extrusion gun is to ensure, for example, through the fluid hose (maximum resistance 106Ω).

Before carrying out any maintenence or service work, always ensure that the air and material feed to the spray gun have been de-pressurized. The extremely high pressure at the gun or pump outlet can cause serious injury.Risk of injury!

When spraying make sure your hands and other body parts are clear from the pressurized nozzle of the extrusion gun - the extremely high injection pressure can cause serious injury.
Use diaphragm or piston pumps only in the context of a fluid regulator to prevent the maximum allowable operating pressure of 350 bar can not be exceeded.

Do not point the extrusion gun towards people or animals - risk of injury.

Always observe the spraying and safety instructions given by the manufacturers of the spraying material and the cleaning agent. Aggressive and corrosive materials in particular can be harmful to health.

Exhaust air containing particles (overspray) must be kept away from the working area and presonnel. In spite of these measures, always wear the regulation breathing masks and protective overalls when using the gun. Airborne particles represent a serious health hazard!

After carrying out assembly or maintenance work, always ensure that all nuts, bolts and screw connections have been fully tightened before the gun is used.

Use only original replacement parts, since WALTHER canonly guarantee safe and fault-free operation for original parts.

For further information on the safe use of the spray gun and the spraying materials, please contact WALTHER Spritz- und Lackiersysteme GmbH, D-42327 Wuppertal.

4 Assembly

Warning
Material lines that are attached with a hose must additionally be secured by a hose clamp.

Warning
Risk of Injection. Spray from the dispensing valve, leaks, or ruptured components can inject material into the body and cause serious injury, including the need for amputation.

- Although material injected into the skin may look like an ordinary injury, these are extremely serious injuries. If injection occurs, get immediate medical attention.

- Nozzle valve should never be pointed at people of body parts
- Do not put your hands or fingers over the nozzle valve.
- Never use the Extrusion gun without the trigger guard.
- Before each use, make sure that the gun trigger safely operates the valve.
- Always lock the trigger safety valve when not in use.
- Before performing any cleaning, checking or servicing the equipment or clogged valve nozzle following the steps given in 5.2 Starting and shutting down.

- All fluid connections must be checked and tightened before start-up.

- Inspect hoses, tubes, and couplings daily. Replace worn, damaged, or loose parts immediately. Damaged hoses should not be repaired. In this case, the entire hose should be replaced.

4.1 Supply Line Connection

Warning
Use the pump only in the context of a fluid regulator to prevent the maximum allowable operating pressure of 350 bar can not be exceeded.

Material connection:
Attach the supply line at the connection item 20 of the extrusion gun. Maintain a tight screw.

Notice
Use only grounded fluid hoses with a maximum total length of 150 m in order to ensure a continuous ground and they must be resilient enough for an operating pressure of 350 bar. Check the electrical resistance of the fluid hoses at least once a week. If the hose does not have a label, on which the maximum electrical resistance is specified, the maximum resistance values can be obtained from the manufacturer. If the resistance exceeds the recommended limits, replace the hose immediately concerned.

The gun is now ready for operation.

5 Operation

5.1 Safety

Observe the operation of the extrusion gun in accordance with the follow-the safety instructions!

- When work is interrupted, the extrusion system must be depressurized.

- Wear proper respiratory protection and work clothes when you extrude the extrusion gun materials. Airborne particles hazardous to your health.

- In the workspace, Fire, naked flame and smoking is prohibited. Spraying of highly flammable materials (eg glue) there is an increased risk of explosion and fire.

5.2 Start-up and Shut-down

Notice
Before first using the extrusion gun, flush it out with solvent to ensure that it is clean.

Warning
Turn power off before refitting the extrusion pressure from the system and check the gauge, otherwise there is a risk of injury.

Before you can set the extrusion gun in operation, the fluid pressure must be available at the extrusion gun.

Caution
The material pressure must not be set higher than:
- 350 bar

Start-up

1. Before first use, the trigger lock is locked by screwing in the safety button until it stops at the back bushing Item 18.

2. Set the pump to minimum speed required to extrude the material with a satisfactory discharge rate.
3. Slowly unscrew the safety button (back bushing Item 18) and press the trigger Item 8 to achieve the desired discharge rate. If there is not enough speed, then the appropriate discharge rate can be further tuned alternating between safety button and pump (on site air pressure regulator).

4. If the settings are correct, you can start with the extrusion process.

Shut-down

1. Release the trigger lever fully and screw in the safety button (back bushing item 18) until it stops.
2. Turn off material supply to the pump.
3. Place the trigger guard Item 10 firmly to a grounded metal pail, turn on the safety button and pull the trigger lever to relieve the pressure.

4. Open the pressure relief valve (on site) on the pump to increase the pressure from the pump, the valve and out of the hoses. The pressure relief valve should remain open until work resumes. Triggering the gun may not be sufficient to relieve the pressure. Keep a container handy to collect any leaking material.

Warning
The entire extrusion line must be always depressurized after work. The pressurized pipes can burst and injure persons close by the outflowing material.

5.3 Setting the Material Flow Rate

The setting of the material flow rate - and thus the spray jet width - shall be initially based on the selection of a suitable nozzle size. Setting the material pressure regulator on the material and on the safety button of the back bushing (Item 18) may also be affect the flow rate.

5.4 Regulating Material Pressure

The suitable material pressure you place on the pump (air pressure regulator on site) and the material pressure regulator. Pay attention to the instructions and safety of the manufacturer.

5.5 Retooling Extrusion Gun

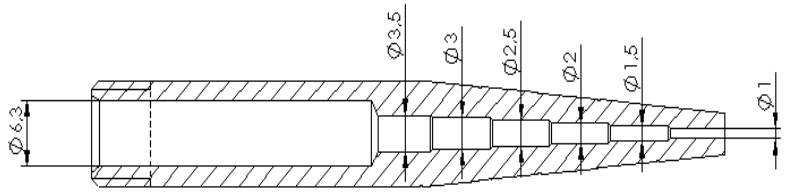
Warning
Turn off pressure retooling the extrusion gun from the system and check the gauge, otherwise there is a risk of injury.

Warning
Disconnect all supply lines before retrofitting any supply of material to the extrusion gun-injury.

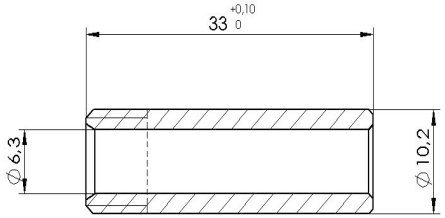
Notice
To carry out the operations listed below, please use the drawing at the beginning of this manual.

Change Fluid Nozzle

1. Remove the Cap Nut (Item 2)
2. Remove the fluid nozzle (Item 1), together with adapter (Item 3) from the valve (Item 5)
   - Now you can unscrew the step nozzle from the adapter, look for the notch indicating the appropriate diameter (see drawing) and cut it off at the notch.



- But you can also use our special nozzle (Item 21).



Assemble in reverse order.

Replacement of Material Filter
For appropriate filtering of the material, you can use coarse-and fine-mesh filter.

1. Make sure the complete extrusion system is depressurized
2. Remove the hose material / material hoses.
3. Remove the material filter.

Assemble in reverse order.

Change Material Needle

1. Remove the cap nut (Item 2)
2. Remove the fluid nozzle (Item 1), together with adapter (Item 3) from the valve (Item 5)
3. Unscrew the needle securing (Item 18) from the gun body (Item 7)
4. Twist out bolt screw (Item 9) to remove the trigger.

5. Loosen the cylinder screw (Item 17) turn the adjusting nut (Item 16) of the fluid needle (Item 4) and take the washer (Item 15).
6. Turn the valve (Item 5) out of the gun body (Item 7).
7. Pull the fluid needle (Item 4) from the gun body.

The assembly is done in reverse order, with needle valve and back bushing applied with a high-strength adhesive.

Notice
An exact setting dimension does not exist. The adjustment nut is screwed as long until the trigger play is approximately 5 mm and is secured to the cylinder screw against rotation.

6 Cleaning and Maintenance

6.1 Safety

- Turn power off before servicing the extrusion pressure from the system - risk of injury.
- Disconnect all material pressure before performing any maintenance to the extrusion gun.
- In the workspace, Fire, naked flame and smoking is prohibited. Spraying of highly flammable materials (eg cleaning agents) there is an increased risk of explosion and fire.
- Notice. the safety precautions of the detergent manufacturer's warnings. Aggressive and corrosive cleaning agents can cause health damage.

6.2 Basic Cleaning

In order for the service life and function of the extrusion gun to be maximized, the extrusion gun must be cleaned and lubricated.

Caution
Never place the extrusion gun in solvent or other cleaning agents. The proper function of the extrusion gun can not otherwise be guaranteed.

Caution
When cleaning any hard or sharp objects. Precision parts, extrusion gun may be damaged and deteriorate the extrusion result.

To clean the extrusion gun cleaning solutions that are specified by the manufacturer of the extrusion material and do not contain the following ingredients:

- halogenated hydrocarbons
  (eg 1,1,1, trichloroethane, methylene chloride, etc.)
- Acids and acidic detergents
- regenerated solvents (so-called cleaning dilutions)
- Paint stripper.

The above-mentioned Constituents cause electroplated components, chemical reactions and lead to corrosion damage.
For damages resulting from such treatment, WALTHER PILOT makes no warranty.
Clean the extrusion gun

- before any material change
- at least once a week
- depending on material and depending on the degree several times a week.

This will give you the safe function of the extrusion gun.

Warning
Turn off the extrusion pressure before cleaning the system (see 5.2 Starting and shutting down).

1. Disassemble the pistol as described in 5.5 *extrusion gun retooling.*
2. Clean the fluid tip with a brush and cleaning agent.
3. Clean all remaining parts and the gun body with a cloth and detergent.

4. Lubricate the following parts with a thin film of grease:
   - material needle
   - valve
   - all moving parts and bearings
   - The internal moving parts must be lubricated at least once a week.
   - The springs should be constantly provided with a thin layer of grease.

Use an acid-free, non-resinous grease and a brush or enter a drop of oil from a dosage bottle.
Then, the extrusion gun is set together in reverse order.

6.3 Routine Cleaning

When changing material or after work, you can also clean the extrusion gun, without having to disassemble it.

Warning
Turn off the extrusion pressure from the system before cleaning *(see 5.2 Starting and shutting down).*

Before you perform the Routine maintenance, the following condition must be met:

- Make sure that the cleaning agent used to the process fits the material. Perform the following steps:

1. Place the extrusion gun into operation *(see 5.2 putting into operation).*
2. Flush the gun with the lowest possible pressure.
3. To maintain grounding continuity when flushing must ensure the gun to be pressed firmly against one side of a grounded metal pail, then trigger the gun.
4. Spray the extrusion gun until only a clear detergent is sprayed from the gun.

The entire extrusion line should now be depressurized until the next use.

7 Repair

Warning
Turn power the extrusion pressure from the entire system before servicing *(see 5.2 Starting and shutting down).*

Warning
Disconnect all power before any repairs, the material feed to the extrusion gun - risk of injury.

Notice
To carry out the operations listed below, please use the drawing at the beginning of this manual.

7.1 Replace Leaking Valve Seat

1. Remove the fluid nozzle in accordance with 5.5 *retooling extrusion gun.*
2. Turn the valve (Item 5) out of the gun body (Item 7).
3. Replace the two seals (Item 6) with new ones.
4. Before beginning turn the valve again, you should secure the thread with a high-strength adhesive coat to achieve optimum sealing.

The assembly of the remaining components is carried out in reverse order.

7.2 Replace Leaking Gasket

1. Remove the fluid nozzle and needle material as described in 5.5 *extrusion gun retooling.*
2. Turn the pack screw (Item 14) with the packing pressure pin (Item 13) from the gun body.

3. Remove the V-pack (Item 12) and the packing support plate (Item 11) out of the gun body. To do this, use a solid wire whose end is bent into a small hook.

4. Now replace the new packing support washer and new V-pack in the gun body. To do this, use a special tool that has the shape of the packing pressure pin. With the difference that the tool has a pin at the front the inner diameter of the V-pack. Install the components individually.

5. Now turn the screw pack with pushpins in again.
6. Before the packing bolt is tightened, slide in the material needle from the front. After tightening, the material needle should still be movable.

The assembly of the remaining components is carried out in reverse order.

Notice
The parts taken from the gun use parts should not be re-used, otherwise a functionally reliable sealing effect is not guaranteed.

7.3 Replace Leaking Material Needle

Disassemble the pistol as described in 5.5 *extrusion gun retooling.*

Assemble in reverse order.

Notice
All moving and sliding parts must be greased before installation in the gun body with an acid-free, non-gumming grease.

Repair Kit:
WALTHER PILOT repair kit available that contains all wearing parts for the PILOT EXTRUSION GUN (350 bar).

Part. No.: V 16 250 00 000
Consisting of: material needle assy. (Item 4), valve (item 5), seal 2x (item 6), packing support washer (item 11), V-Pack 6x (key 12), packing pressure pin (item 13), washer (item . 15).

8 Troubleshooting and Solutions

Warning
Make sure the entire extrusion system is depressurized before servicing.

Warning
Prior to any repair material supply must be shut off - risk of injury.

Problem	Cause	Remedy
Leak at the nozzle	•Material needle (Item 4)	Check settings or Replace material needle
Too little material	•Dirty filter	-Clean
	•Nozzle too small or clogged	-Choose larger diameter or clean
	•Fluid pressure too low	-Increase fluid pressure
Valve seat leak	•Worn seals	-Replace seals
	• Worn valve	-Replace valve
Fluid leaks fromgun body	•Packing (Item 12) leaking	-Replace packing

9 Disposal

The costs incurred in cleaning and maintenance materials should be disposed of in accordance with the laws and regulations properly and professionally.

Warning
Pay particular attention to the instructions of the manufacturer of extrusion and detergent. Risk to the health of humans and animals.

10 Technical Data

Net Weight	570 g
Nozzle equipment of your choice:	Stage Nozzle (Item 1) Special Nozzle (Item 21)
Pressure Range max. pressure.	350 bar
Operating Temp:	42°C

Subject to technical changes.