

Operating Instructions

Safeguard for future use!



Sample application

Torch cleaning station DIX PRS 600 Wire cutter DIX PRA 600

Copyright © 2012 DINSE G.m.b.H.

These instructions or excerpts thereof shall not be duplicated, translated or reproduced, nor shall they be stored, processed, transmitted or distributed by any electronic means without the prior written permission of DINSE G.m.b.H.



Read these operating instructions without fail before commissioning, to make sure that you use the **DINSE**-product safely. The owner must make available these operating instructions to the operator and make sure that the operator reads and understands the instructions.

Preserve the operating instructions in a safe place for future reference. Display a note prominently in the working area specifying the place where the instructions are kept.



These products comply with
2004/108/EC - Electromagnetic compatibility
2006/ 42/EC - Machine safety

As concerns 1: Electromagnetic compatibility is assessed on the basis of the following standards:

EN 61000-6-2 - Interference immunity

EN 61000-6-4 - Emissions

The results are documented in test reports 17/334

As concerns 2: Machine safety is assessed on the basis of the standards mentioned next.

EN ISO 12100-1 - Machine safety
- Basic terminology and methodology

EN ISO 12100-1 - Machine safety
- Technical guidelines

DIN EN ISO 13857 - Machine safety
- Safety clearances to prevent contact
between hazardous areas and upper limbs

1. Introduction	5
2. Safety	9
2.1 Symbols used in operating manual	9
2.2 Intended purpose	10
2.3 Safeguarding against potential hazards during regular usage	11
2.4 Authorized operators	14
2.5 Limited Warranty	14
2.6 Packaging and dispatch	15
2.7 Recycling/Disposal	15
3. Technical data	16
4. Commissioning	17
4.1 Setup and mounting	17
4.2 Installation and setup	18
4.2.1 Replacing the rotary grinder	18
4.2.2 Setting the rotary grinder	20
4.2.3 Function test	22
4.2.4 Injecting with non-stick agent	23
4.2.5 Automatic injection of the gas nozzle	24
4.2.6 Installing the protective cover	24
4.3 Pin assignment of the electrical connection of the DIX PRS 600	25
4.4 Program sequence with robot „Clean gas nozzle“	25
5. Servicing the DIX PRS 600	26
6. Fault remedy	27
7. Pneumatic and wiring diagram	29
7.1 Pneumatic diagram DIX PRS 600	29
7.2 Wiring diagram DIX PRS 600	30
8. Wire cutter DIX PRA 600	31
8.1 Technical data	31
8.2 Installation when retrofitting the DIX PRA 600	32
8.2.1 Installing the wire cutter on the torch cleaning station	32
8.2.2 Pneumatic connection	33
8.3 Pin assignment of the electrical connection	36
8.3.1 Program sequence with robot "Cut wire"	36
8.4 Servicing the DIX PRA 600	37
8.5 Pneumatic and wiring diagram	38
8.5.1 Pneumatic diagram DIX PRA 600	38
8.5.2 Wiring diagram DIX PRA 600	38
9. Options	39



You have purchased a quality product from **DINSE G.m.b.H.**
Thank you for your confidence in our products.

This carefully manufactured product is under constant supervision during production. Each system is tested for proper functionality before and after assembly.

Tests during production, precisely matched materials and manufacture on special high-grade production machines characterize this technically sophisticated welding accessory.

Please contact us if you have any questions or requests concerning accessories or equipment. Our application engineers will be glad to assist you.

DINSE G.m.b.H.

Tarpen 36 • 22419 Hamburg
Tel. +49 - (0) 40 - 658 75 - 0 • Fax - 200
i n f o @ d i n s e - g m b h . c o m
w w w . d i n s e - g m b h . c o m



EC declaration of conformity
acc. to directive 2006/42/EC, annex II 1.A
(Original EC-declaration of conformity)



Herewith declares

the producer

Name, form of organization: Dinse, GmbH
Address: Tarpen 36
22419 Hamburg Germany

that the following appliance

General identification: Torch-Cleaning-Station
Function: Cleaning of torch and contact tip of MIG/MAG-Torchheads
Model: DIX PRS 600

equates to all relevant regulations of the above mentioned directive, including its time to change that statement valid.

This appliance complies with the following further EC Directives, including its time to change that statement valid:

- 2004/108/EG

The following harmonized standards were applied in full:

- EN 61000-6-2 • EN 61000-6-4 • EN ISO 12100-1 • EN ISO 12100-2
- DIN EN ISO 13857

Person who is authorized to compile the technical documentation:

Name: Michael Meinke Address: Dinse GmbH
Tarpen 36
22419 Hamburg
Germany

Subscriber

Place of issue: Hamburg / Germany
Date of issue: 20.06.2011

Function of the subscriber at the company: Managing director Technical design
Name of the subscriber: Torsten Lischke

Signature:



DINSE G.m.b.H. · Tarpen 36 · 22419 Hamburg · Tel: +49-(0)40-658 75-0 · Fax: -200 · E-Mail: info@dinse-gmbh.com · www.dinse-gmbh.com





EC declaration of conformity
acc. to directive 2006/42/EC, annex II 1.A
(Original EC-declaration of conformity)



Herewith declares

the producer

Name, form of organization: Dinse, GmbH
Address: Tarpen 36
22419 Hamburg Germany

that the following appliance

General identification: Wire-Cutter
Function: Cutting off wires of the torch head
Model: DIX PRA 600

equates to all relevant regulations of the above mentioned directive, including its time to change that statement valid.

This appliance complies with the following further EC Directives, including its time to change that statement valid:

- 2004/108/EG

The following harmonized standards were applied in full:

- EN 61000-6-2 • EN 61000-6-4 • EN ISO 12100-1 • EN ISO 12100-2
- DIN EN ISO 13857

Person who is authorized to compile the technical documentation:

Name: Michael Meinke

Address: Dinse GmbH
Tarpen 36
22419 Hamburg
Germany

Subscriber

Place of issue: Hamburg / Germany

Date of issue: 20.06.2011

Function of the subscriber at the company:

Managing director
Torsten Lischke

Technical design

Name of the subscriber:

Signature:



DINSE G.m.b.H. · Tarpen 36 · 22419 Hamburg · Tel: +49-(0)40-658 75-0 · Fax: -200 · E-Mail: info@dinse-gmbh.com · www.dinse-gmbh.com

SCHWEISSEN

WELDING

SCHWEISSEN

WELDING

SCHWEISSEN

2. Safety

2.1 Symbols used in operating manual

All **DINSE** products are equipped with safety devices. They are manufactured using the latest technology and in accordance with approved safety regulations.










WARNING! Improper or unauthorized use carries the risk of:

- Causing harm to Operator's life and limb
- Causing harm to the product itself and/or other property
- Preventing efficient operation of the product




We are concerned about your safety!

The following symbols are used in this operating manual:

Hazard warnings and instructions

 Danger of electric shock	 Hazard due to harmful or caustic substances
 Danger of hand injury	 Danger due to automatic start-up of machine
 Danger due to flying chips	 Danger of material damage or unsafe conditions
 Wear eye protection!	 Always pull out the power plug before opening.
 De-energize before working	

Other symbols

 <i>Technical information and tips</i>	• List
 Operator's Action is Required.	1. Perform the necessary steps in the prescribed sequence for numbered items. 2.
 Tighten the screw firmly to the prescribed torque	

2. Safety

2.2 Intended purpose

The DIX PRS 600 torch cleaning station is only used to clean the gas nozzles of MIG/MAG welding torches within the scope of its technical data.

The DIX PRA 600 wire cutter is only used to cut the wire electrodes of welding torches within the scope of its technical data.

The DIX PRS 600 torch cleaning station and the DIX PRA 600 wire cutter are designed for a maximum of 24 V DC and a maximum of 6 bar of compressed air.

The power supply and compressed air supply for the DIX PRS 600 torch cleaning station and the DIX PRA 600 wire cutter must satisfy these requirements!

Check for compliance before using the equipment for the first time.

Arbitrary conversions and modifications of the DIX PRS 600 torch cleaning station and the DIX PRA 600 wire cutter are not permitted due to safety considerations.

2. Safety

2.3 Safeguarding against potential hazards during regular usage

Attention: Always observe the accident prevention and safety regulations listed below. Failure to follow these reasonable safety measures can endanger your life!



Electric shock can be lethal!

- Before performing any inspection or maintenance, disconnect the power plug and make sure the supply voltage cannot be turned on by anyone during inspection or maintenance!
- Welding torches and electrode holders should always be placed in an insulated holder when not in use.
- Do not use torch, ground, or supply cables that show any signs of damaged insulation.
- Damage should be repaired immediately by a qualified electrician!



The DIX PRM 600 torch cleaning agent presents a health hazard if vapors or spray are inhaled or if it comes into contact with your eyes or prolonged contact with the skin.

Ingesting the torch cleaning agent can lead to aspiration and chemical pneumonitis!

- Do not drink the DIX PRM 600.
- Do not inhale the vapors or spray of the DIX PRM 600.
- Ensure an adequate supply of fresh air.
- Wear oil-resistant protective clothing, gloves and protective eyewear when handling the torch cleaning agent.



Risk of injury to the hands or other body parts due to automatic starting of the torch cleaning station DIX PRS 600 or the wire cutter DIX PRA 600!

- Do not place your hands near the milling area, if the DIX PRS 600 or the DIX PRA 600 is ready!
- Ensure that the DIX PRS 600 and the wire cutter DIX PRA 600 is de-energized and de-pressurized while you are replacing the rotary grinder.
- Ensure that the DIX PRS 600 and DIX PRA 600 is protected against unintentional start-up, including by other persons.



Risk of eye injury due to flying chips and splashing torch cleaning agent during the cleaning process!

- Always wear safety goggles or a visor.

2. Safety

2.3 Safeguarding against potential hazards during regular usage



Observe the safety regulations mentioned below.

- The DIX PRS 600 torch cleaning station and the DIX PRA 600 wire cutter start automatically. If the installation site is located within a fused area, which must be entered during setup and maintenance work, the devices must be integrated into a higher-level safety system by the system operator. In this case, you must also ensure that the entire system is shut down. The system must be secured against an unintentional restart, including by other persons. Failure to observe this can lead to serious injuries and/or damage to the system or its components.

- During use outdoors, provide for appropriate protection against all weather conditions (especially rain and frost).

- The specified operating pressure must not be exceeded.

- The DIX PRS 600 torch cleaning station or the DIX PRA 600 wire cutter may only be operated as independent products if the housing is closed.



- The compressed air supply must be interrupted during setup or maintenance work to ensure that the devices are de-pressurized. The power plug must also be pulled to ensure that the devices are de-energized.

The devices must be secured against unintentional restarting, by other individuals as well. Failure to observe this can lead to serious injuries and/or damage to the devices or their components.

- Add-ons, which are not offered as accessories, may only be attached with the manufacturer's approval.

2. Safety

2.3 Safeguarding against potential hazards during regular usage

- If the DIX PRS 600 torch cleaning station is to be used in an environment with corrosive or caustic vapors or liquids, the manufacturer's approval is required.
Failure to observe this will void the warranty.
- If the DIX PRA 600 wire cutter is to be used in an environment with corrosive or caustic vapors or liquids, the manufacturer's approval is required.
Failure to observe this will void the warranty.
- When shutting down the welding system, you must ensure that no welding torches remain in the DIX PRS 600 torch cleaning station.
- Before start-up, check to see whether the right gas nozzle grinder is installed for the gas nozzle in use.
- During the installation and start-up, ensure that the DIX PRS 600 torch cleaning station and the DIX PRA 600 wire cutter are never unintentionally put into operation, including by other persons.



2. Safety

2.4 Authorized operators

The torch cleaning station must only be operated by individuals who have been trained by **DINSE G.m.b.H.** and who have read and understand the relevant safety instructions contained in this manual!

2.5 Limited Warranty

Seller guarantees Goods meet applicable standards only when used as directed under normal operation or service. This guarantee is effective for one (1) year from the date of shipment for the original Buyer and is not transferable.

Please refer to the complete warranty claim at www.dinse-us.com for further details and exceptions of the warranty.

Warranty claims can only be asserted given:

- Use for the intended purposes
- Proper operation
- **Use of original components and spare parts from DINSE G.m.b.H.**
- Observance of safety instructions

In the event your **DINSE** product needs repair, any repairs must be performed by either **DINSE** electricians or qualified electricians appointed by **DINSE G.m.b.H.!**

If you have a complaint about your **DINSE** product during the valid warranty term, do NOT make any modifications to the product. Please send the product “as-is” to **DINSE G.m.b.H.** immediately.



Unauthorized tampering, modifications, repairs, or changes to the DINSE product will result in lack of warranty coverage and will void any warranty claims, implied or otherwise, as well as any suitability or fitness for particular purposes claims by DINSE G.m.b.H.!

2. Safety

2.6 Packaging and dispatch

The torch cleaning station has been checked and carefully packed before shipment, however damages may occur during shipping and this product should be carefully inspected prior to use.

In case of damage, contact immediately and return the entire torch cleaning station at your expense to:

DINSE G.m.b.H.

Tarpen 36 • 22419 Hamburg
Tel. +49 - (0) 40 - 658 75 - 0 • Fax - 200
i n f o @ d i n s e - g m b h . c o m
w w w . d i n s e - g m b h . c o m

IN THE EVENT YOUR DINSE Torch cleaning station NEEDS TO BE RETURNED:

1. Please be sure to carefully pack the torch cleaning station in a suitable container with sufficient packing material in order to avoid causing any damages during shipping.
2. Please include a note describing the problem(s) with sufficient detail. This will help our service department to determine the cause of the problem sooner, and can reduce the time it takes to repair the torch cleaning station.

2.7 Recycling/ Disposal



Only applies to EU countries.

Do not discard electrical tools with ordinary waste!

As per EU directive 2002/96/EC regarding old electrical and electronic equipment and as implemented in national law, used electrical tools must be collected separately and recycled in an eco-friendly manner.

Applies to other countries.

Some of the materials can be reused. Reusing some parts of raw materials from used products is an important way of helping to protect the environment.

Contact your local authority in the event that you require information on local collection points.

3. Technical data



Welding procedure	MIG/MAG welding and brazing
Program control	pneumatic
Control	24 V DC
Compressed air	6 bar, max.
Air consumption	7 l/s
Cleaning time	4 s, max.
Protection class	IP 23
Dimensions	260/ 180/ 350 (L/B/H in mm)
Weight	9.6 kg
Ambient temperature	
- during operation	- 10° C bis + 40° C
- during transport and storage	- 10° C bis + 55° C



4. Commissioning

4.1 Setup and mounting



Risk of injury, especially to the hands and other limbs due to the automatic start-up of the DIX PRS 600 torch cleaning station or the DIX PRA 600 wire cutter!

- Ensure that the DIX PRS 600 and the DIX PRA 600 are de-energized and de-pressurized until the installation is completed.
- Ensure that the DIX PRS 600 and the DIX PRA 600 are protected against unintentional start-up, including by other persons.

The DIX PRS 600 torch cleaning station can be installed in any desired position, with some restrictions. The container for the non-stick agent must always be vertical to ensure that the non-stick agent does not drain out.

Firmly secure the DIX PRS 600 on a shock-resistant support using four M8 x 16 mm screws.

Or secure the DIX PRS 600 on the optionally available DIX PRF 600 base using four M8 x 20 mm screws.

If you use the DIX PRF 600 base, it must be anchored to the floor using four \varnothing 12 mm screws.



4. Commissioning

4.2 Installation and setup

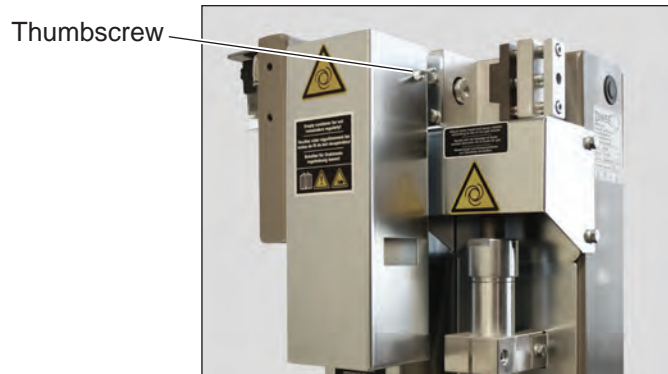
4.2.1 Replacing the rotary grinder



Risk of injury, especially to the hands and other limbs due to the automatic start-up of the DIX PRS 600 torch cleaning station!

- Ensure that the DIX PRS 600 is de-energized and de-pressurized while you are replacing the rotary grinder.
- Ensure that the DIX PRS 600 is protected against unintentional start-up, including by other persons.

1. Select the correct rotary grinder for the gas nozzle that is in use. You can determine the correct grinder using the list of grinders on page 40.
2. Unscrew the thumbscrew on the protective cover of the wire cutter.
3. Remove the protective cover from the wire cutter.



4. Remove the three hexagonal head screws of the protective cover of the spray nozzles using an SW 10 open-ended wrench.
5. Remove the protective cover from the spray nozzles.

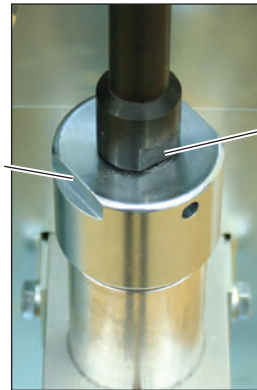


4. Commissioning

4.2 Installation and setup

1. Using an SW 36 open-ended wrench, secure the shaft on the spanner flat of the motor protective cap.
2. Using a second SW 17 open-ended wrench, manually loosen and unscrew the rotary grinder counter-clockwise.
3. Manually screw the selected grinder clockwise onto the motor shaft.
4. Using an SW 36 open-ended wrench, secure the shaft on the spanner flat of the motor protective cap.
5. Using a second SW 17 open-ended wrench, firmly tighten the grinder clockwise.

Spanner flat of the motor protection cap for tightening/loosening (during installation or replacement)



Spanner flat of the rotary grinder for tightening/loosening (during installation or replacement)

Counter hold when tightening/loosening the grinder using the SW 17 open-ended wrench



4. Commissioning

4.2 Installation and setup

4.2.2 Setting the rotary grinder



Risk of injury, especially to the hands and other limbs due to the automatic start-up of the DIX PRS 600 torch cleaning station!

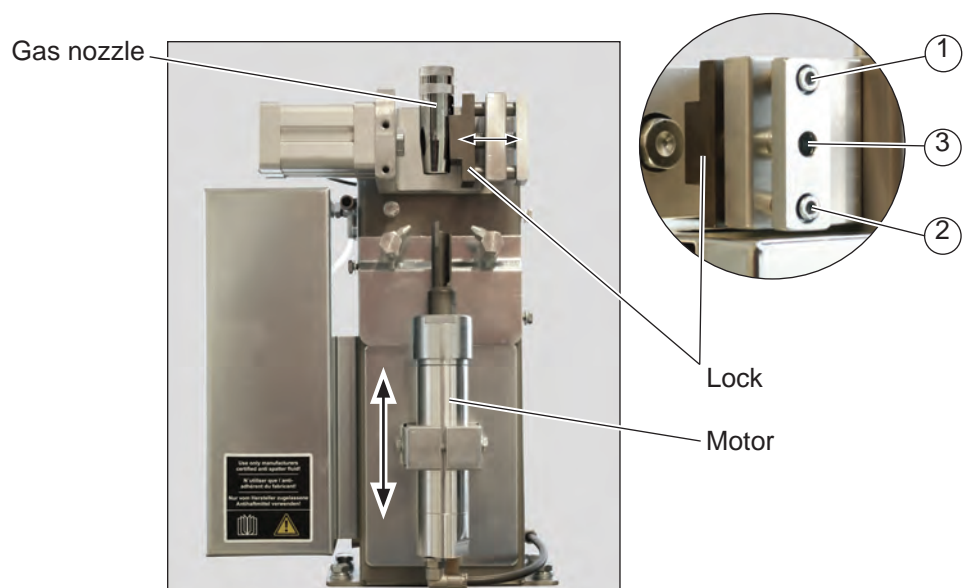
- Ensure that the DIX PRS 600 is de-energized and de-pressurized while you are replacing the rotary grinder.
- Ensure that the DIX PRS 600 is protected against unintentional start-up, including by other persons.

Set the gas nozzle to the center of the rotary grinder.

1. Loosen the upper (1) and lower (2) Allen head screw of the lock using an SW 4 Allen wrench.
2. To set the lock, turn the center Allen head screw (3) of the lock clockwise (or in the opposing direction) using an SW 6 Allen wrench.
3. Manually push the motor with the grinder installed upward to check the setting of the gas nozzle.



When de-pressurized, the motor can be moved by hand.



4. Commissioning

4.2 Installation and setup



Positioning the rotary grinder too high can damage the gas nozzle, the contact tip and the gas distributor.

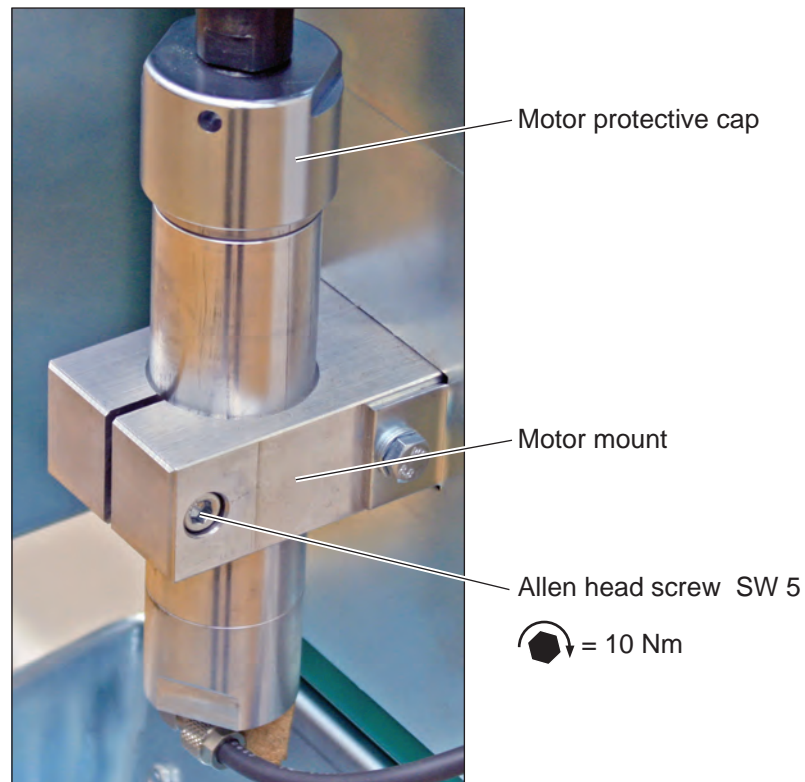
- ▶ Ensure that the rotary grinder is correctly positioned.
- ▶ The rotary grinder must not touch the gas nozzle, the contact tip or the gas distributor.

Set the grinding depth.

1. Loosen the Allen head screw on the motor mount using an SW5 Allen wrench.
2. Carefully push the motor downward until the motor protective cap rests on the motor mount.
3. Manually push the motor mount into the uppermost position.
4. Push the motor with the installed rotary grinder into the cleaning position.

The rotary grinder must not touch the gas nozzle, the contact tip or the gas distributor.

5. Tighten the Allen head screw on the motor mount using an SW5 Allen wrench to a torque of 10 Nm.



4. Commissioning

4.2 Installation and setup

4.2.3 Function test



The basic function of the DIX PRS 600 gas nozzle cleaning station can also function without an electrical connection if the compressed air supply is connected (6 bar/ 87 psi).

To do this, the solenoid valve is manually actuated (turn a slotted screw 90°)



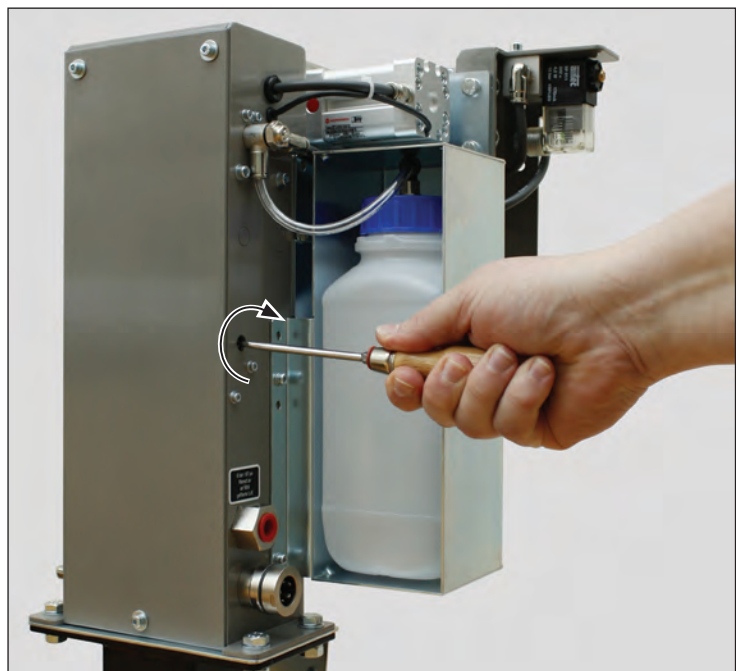
WARNING!



Risk of injury, especially to the hands and other limbs due to the automatic start-up of the DIX PRS 600 torch cleaning station!

Proceed as follows:

1. Connect the DIX PRS 600 torch cleaning station to the robot control system.
 - 24 Volt input for solenoid valve
 - 24 Volt output back from the proximity switch, clamping cylinder
2. Connect the compressed air supply.
3. The clamping cylinder should be back in position.
4. Put the robot with a completely installed welding torch into the cleaning position.
5. Turn the slotted screw on the solenoid valve 90° to test the function of the DIX PRS 600.
6. After the function test is completed, turn the slotted screw on the solenoid valve back 90°.



4. Commissioning

4.2 Installation and setup

4.2.4 Injecting with non-stick agent

The injection time is controlled by a pneumatic signal contact breaker to achieve a constant injection time. The amount of non-stick agent that is injected can be individually set. The rule is: as much as needed and as little as possible.



The DIX PRM 600 torch cleansing agent presents a health hazard if vapors or spray are inhaled or if it comes into contact with your eyes.

- Do not inhale the vapors or spray of the DIX PRM 600.
- Provide for sufficient fresh air.
- Wear protective eyewear when handling DIX PRM 600.

The manually actuated „injection“ is used:

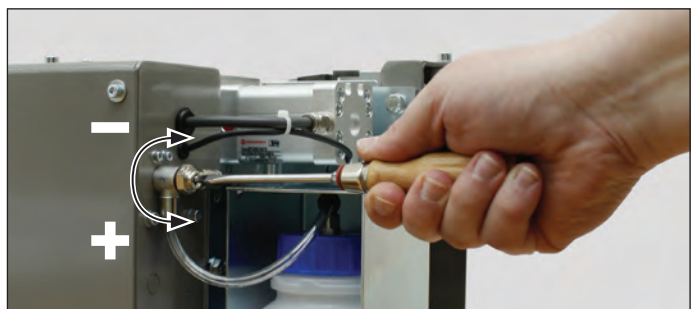
- For the initial start-up
 - When the non-stick agent container has been completely emptied
 - When the amount of the non-stick agent is to be set
1. Connect a supply container that is full of non-stick agent.
 2. Press the manual injection actuator until spray is visible at the spray nozzles.

Manual actuator „Injection“



3. Turn the dosing screw on the throttle valve to set the desired amount of non-stick agent that is to be used.
4. Press the manual actuator to control the amount of non-stick agent that is set.

- Less non-stick agent
- + More non-stick agent



4. Commissioning

4.2 Installation and setup

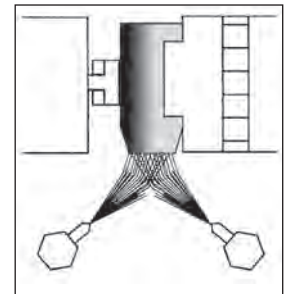
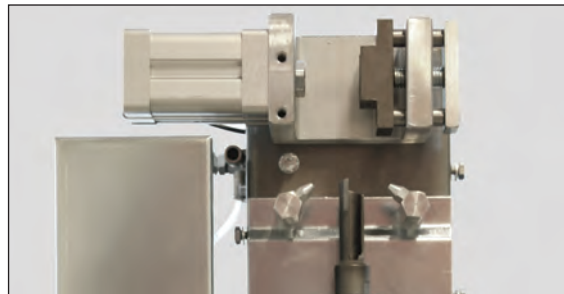
4.2.5 Automatic injection of the gas nozzle

After the gas nozzle is cleaned, the motor moves back to the initial position and actuates the 5/2-way distributing valve and supplies air pressure to the signal contact breaker.

Non-stick agent is sucked out of the supply container through the 5/2-way distributing valve and a special nozzle. It then shoots out through the injection nozzles and coats the gas nozzle with non-stick agent.

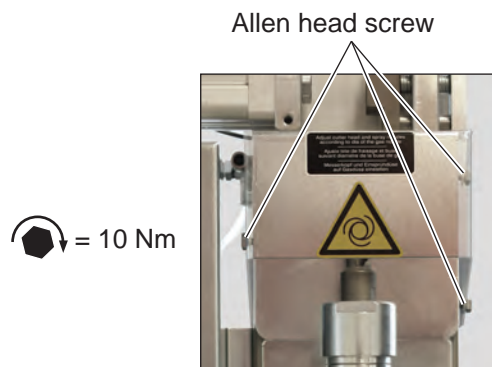
After approx. 0.5 seconds the signal contact breaker stops the injection process.

The two streams of spray must meet in front of the gas nozzle to ensure that they enter the gas nozzle.



4.2.6 Installing the protective cover

1. Manually push the motor into the lowermost position.
2. Install the protective cover of the spray nozzles and firmly tighten the three hexagonal screws using an SW 10 open-end wrench, to a torque of 10 Nm (Figure on left).
3. Install the protective cover for the wire cutter and firmly tighten the thumbscrew (figure on right).



4. Commissioning

4.3 Pin assignment of the electrical connection of the DIX PRS 600

PIN	Assignment
1	24 V _{DC} output for robot (cleaning start)
2	0 V _{DC}
3	24 V _{DC} power supply
4	Input for robot (clamping cylinder limit switch)
5	Ground/housing not connected

4.4 Program sequence with robot „Clean gas nozzle“



ONLY blow-out the tandem welding system outside of the torch cleaning station, because otherwise contaminants may get into the station.

Danger of personal injury and material damage. Only start the program if all measures have been taken for commissioning.

Make sure that:

- ▶ the correct electrical and pneumatic connection was selected
- ▶ the correct cleaning cutter for the double gas nozzles is in the station
- ▶ the correct non-stick spray is used
- ▶ the torch cleaning station is operable in its initial position

1. Input S1 „Clamping cylinder limit switch open“, PIN 4 = I
The torch cleaning station is ready to operate.

2. Move robot into cleaning position.

3. Set output of robot (cleaning start), PIN 1 = I (solenoid valve = I)
3 to 5 seconds long until the motor is up in the end position.
The gas nozzle is clamped, the rotary grinder is rotating and the motor moves upward.

4. Approx 1.5 seconds after setting output of cleaning, the prompt appears: If S1 is „Clamping cylinder limit switch open“, PIN 4 = 0
If PIN 4 does not = 0 – EMER STOP!

5. If output of cleaning is off, PIN 1 = 0 (solenoid valve = 0)
The motor moves down. When the motor is down, the rotary grinder stops. The clamping cylinder opens and the gas nozzle is automatically injected with non-stick agent for approx. 0.5 seconds.

6. When the motor is down, the following prompt appears:
If S1 is „Clamping cylinder limit switch open“, PIN 4 = 1
If PIN 4 does not = 1 after 8 seconds – EMER STOP!
7. Move the robot out of the cleaning position no earlier than 0.5 seconds after the injection process.

The DIX PRS 600 torch cleaning station is largely maintenance-free thanks to the use of high-quality components.

The DIX PRS 600 can be operated without pneumatic oil.

Conduct regular inspections to guarantee problem-free operation. Individual checks and maintenance tasks should be performed at intervals depending on the conditions under which the torch cleaning station is operated. Each user must accordingly define a customized maintenance schedule.



Risk of injury, especially to the hands and other limbs due to the automatic start-up of the DIX PRS 600 torch cleaning station!

- De-energize and de-pressurize the DIX PRS 600 before starting any maintenance work.
- Ensure that the DIX PRS 600 is protected against unintentional restart, including by other persons.

To ensure problem-free functioning, the following items should be observed:

- General visual inspection of the DIX PRS 600 torch cleaning station for damage and signs of wear.
- Check that all loose connections are fitted correctly.
- Lubricate all of the moving shafts once a month.
- Weekly cleaning is recommended.
- The level of non-stick agent in the container depends on the cleaning cycle and the set amount. It must be checked regularly.
- Visual inspection of the connecting lines for damage.
- Observe the maintenance instructions for the peripheral devices.

Use only original components and spare parts from DINSE G.m.b.H.!

6. Fault remedy



All products undergo strict control during and after production. If something should nevertheless malfunction, check the DIX PRS 600 torch cleaning station in accordance with the list provided below.
If the specified measures are not successful, please contact DINSE G.m.b.H. for your own safety.

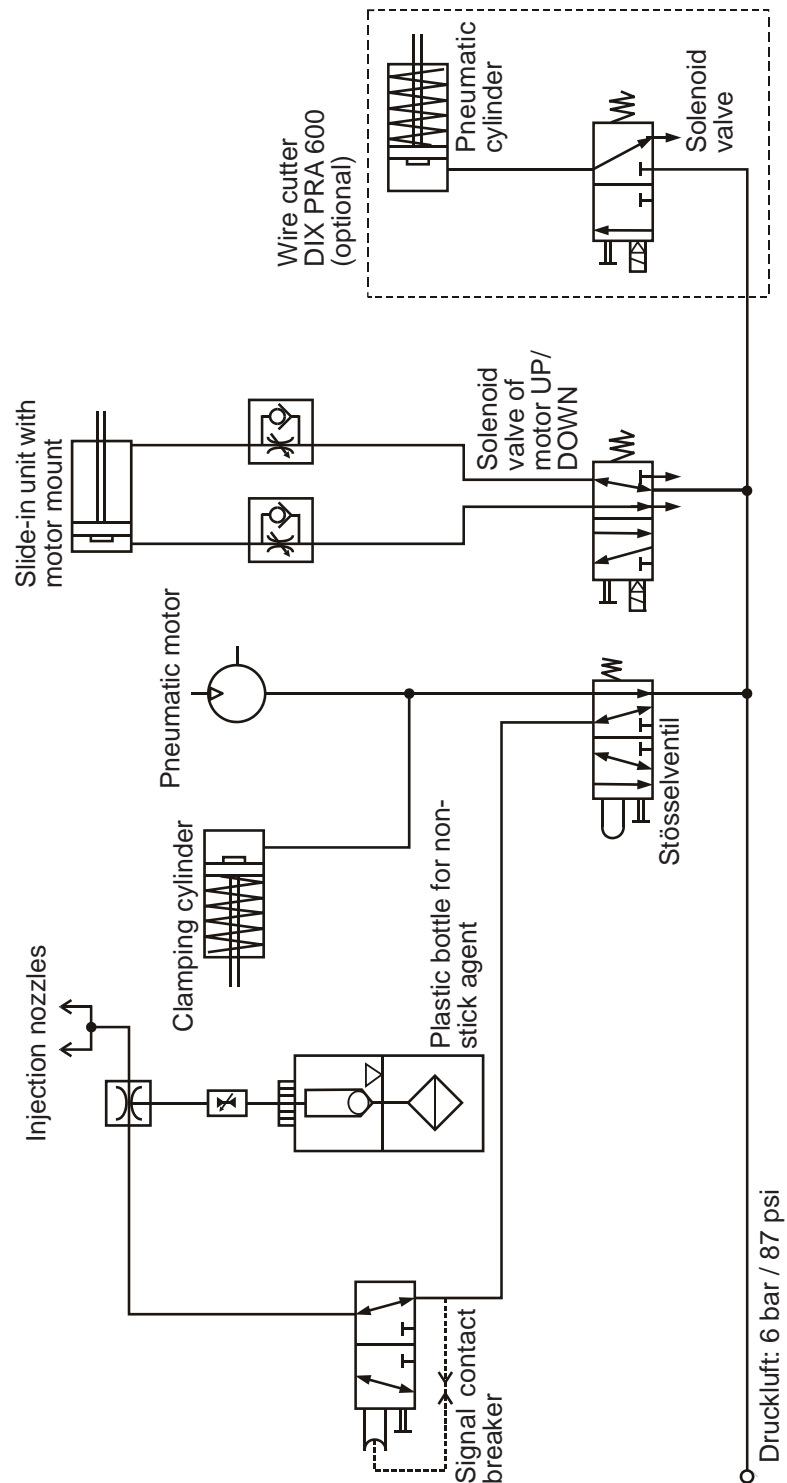
Malfunction	Possible causes	Remedy
The motor does not move up/down	No voltage at the solenoid valve	Check the 24 VDC voltage at the valve
	The solenoid valve is defective	Check the solenoid valve and replace it if necessary
	The throttle valve cannot be regulated	Turn the throttle valve open and closed, replace if necessary
	The seal in the cylinder is defective	Replace the entire seal set
The motor remains in the cleaning position	The solenoid valve is not in the "ZERO" position after the voltage is disconnected	Check the 24 VDC voltage at the valve
	The solenoid valve is defective	Check the solenoid valve and replace it if necessary
The motor does not rotate	The distributing valve is defective	Check the distributing valve and replace it if necessary
	The air hose is defective	Check the air hose and replace it if necessary
	The motor is defective	Check the motor and replace it if necessary
Robot does not move in or out of cleaning position	Gas nozzle "The signal is still set" clamped	Check the limit switch of the clamping cylinder and replace it if necessary

6. Fault remedy

Malfunction	Possible causes	Remedy
The non-stick agent is not injected	The wrong non-stick agent was used	Only use the Dinse DIX PRM 600 non-stick agent
	The injection amount is too little	Increase the injection amount at the throttle valve.
	The injection nozzle(s) is/are clogged or defective	Drill the injection nozzle(s) open with a 0.8 mm drill, replace the injection nozzle(s) if necessary
	The distributing valve is defective	Check the distributing valve and replace it if necessary
	The signal contact breaker is defective	Check the signal contact breaker and replace it if necessary
The non-stick agent is injected unevenly	The solenoid valve is defective	Check the solenoid valve and replace it if necessary
	The injection amount is too little	Increase the injection amount at the throttle valve.
	The injection nozzle(s) is/are clogged or defective	Drill the injection nozzle(s) open with a 0.8 mm drill, replace the injection nozzle(s) if necessary
The welding torch was poorly cleaned or damaged	The injection nozzles are not adjusted	Check the setting of the injection nozzles and correct it if necessary
	The compressed air motor is incorrectly positioned (vertical)	Check the setting of the motor and correct it if necessary
	The welding torch is secured in the wrong position	Check the setting of the lock and correct it if necessary
The welding wire is bent during cleaning	The wrong rotary grinder is selected for the gas nozzle	Select the correct rotary grinder from the list of accessories on page 40
	The welding wire is very soft	Move the welding wire back to the contact tip before cleaning

7. Pneumatic and wiring diagram

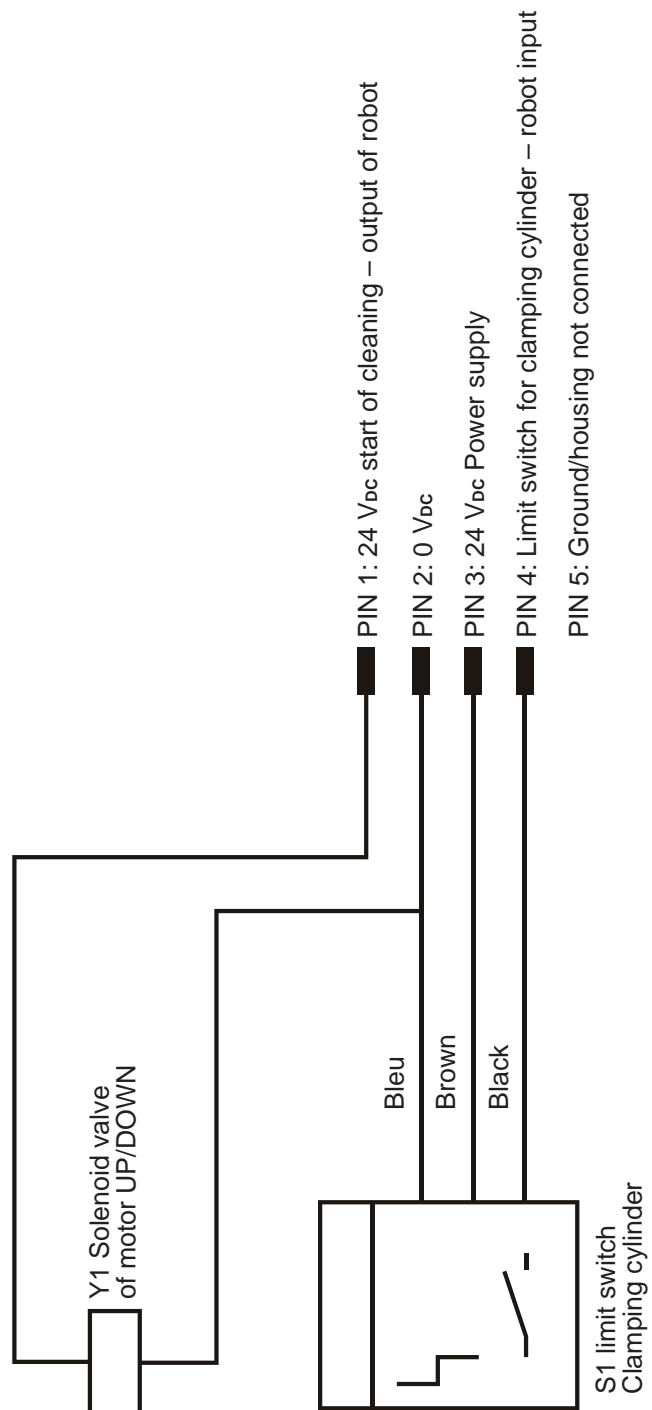
7.1 Pneumatic diagram DIX PRS 600



**Ensure that repairs are generally only carried out by
DINSE G.m.b.H. or specialists trained by DINSE G.m.b.H.!**

7. Pneumatic- and wiring diagram

7.2 Wiring diagram DIX PRS 600



**Ensure that repairs are generally only carried out by
DINSE G.m.b.H. or specialists trained by DINSE G.m.b.H.!**

8. Wire cutter DIX PRA 600

8.1 Technical data

Control	24 V DC
Compressed air	6 bar, max.
Protection class	IP 21
Dimensions	230/ 80/ 180 (L/B/H in mm)
Weight (incl. drip cup)	4.3 kg
Ambient temperature	
- during operation	- 10° C bis + 40° C
- during transport and storage	- 10° C bis + 55° C



8. Wire cutter DIX PRA 600

8.2 Installation when retrofitting the DIX PRA 600

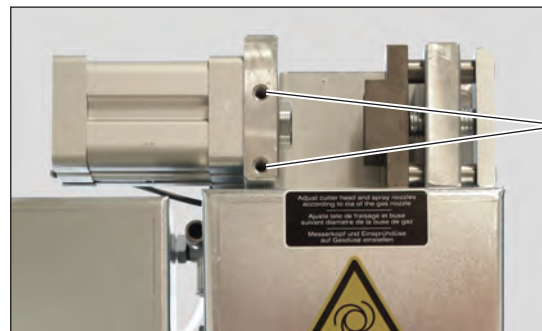
8.2.1 Installing the wire cutter on the torch cleaning station



Risk of injury, especially to the hands and other limbs due to the automatic start-up of the DIX PRS 600 torch cleaning station or the DIX PRA 600 wire cutter!

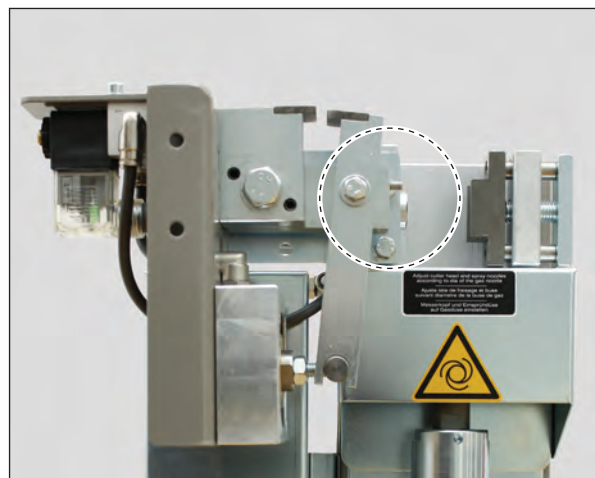
- When working on the DIX PRS 600 and the DIX PRA 600, de-energize and de-pressurize them and secure them against an unintentional restart.

The DIX PRA 600 wire cutter is mounted on the DIX PRS 600 torch cleaning station. Threaded holes (M6) are provided for this purpose on the front of the clamping unit.



Threaded holes M6

- Firmly tighten the DIX PRA 600 using an SW 10 open-end wrench and two M6 x 12 mm hexagonal head screws to a torque of 10 Nm.



Hexagonal head screws 2 x M6 x 12 mm

= 10 Nm

8. Wire cutter DIX PRA 600

8.2 Installation when retrofitting the DIX PRA 600

8.2.2 Pneumatic connection



Risk of injury, especially to the hands and other limbs due to the automatic start-up of the DIX PRS 600 torch cleaning station or the DIX PRA 600 wire cutter!

- ▶ When working on the DIX PRS 600 and the DIX PRA 600, de-energize and de-pressurize them and secure them against an unintentional restart, including by other persons.

To supply the DIX PRA 600 wire cutter with compressed air, the pneumatics in the DIX PRS 600 torch cleaning station must be modified as follows.

1. Remove the three Allen head screws of the rear housing cover using an SW 3 Allen wrench and remove the housing cover.

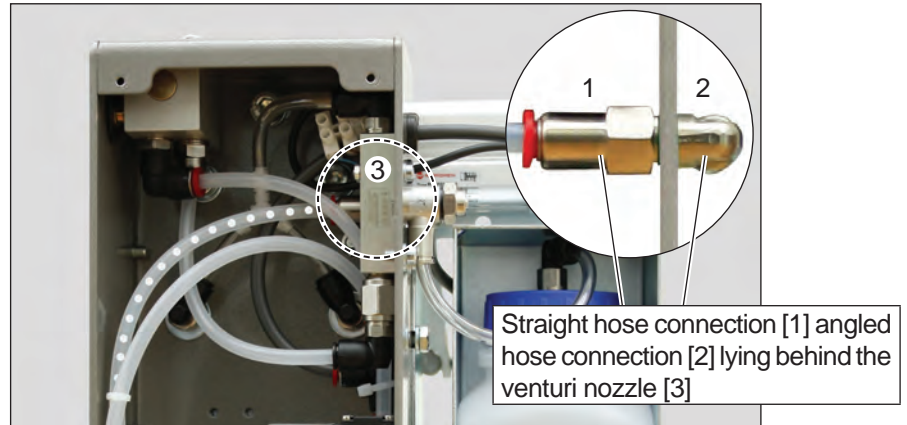
Allen head screws
3 x M5 x 10mm



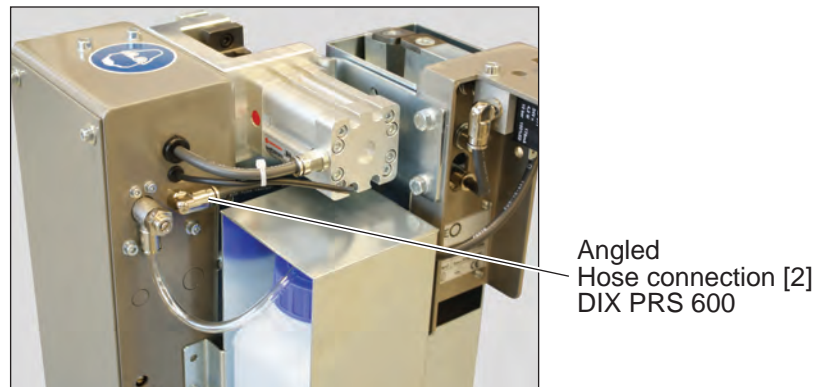
8. Wire cutter DIX PRA 600

8.2 Installation when retrofitting the DIX PRA 600

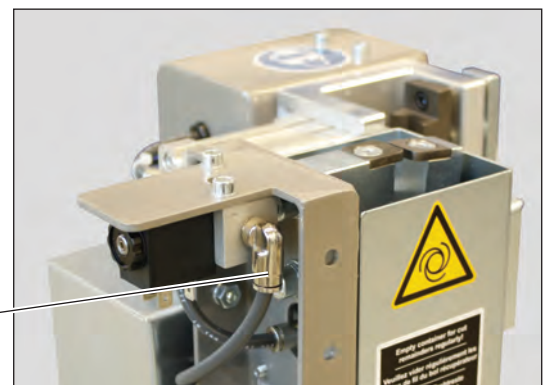
1. Screw the provided angled hose connection [2] onto the straight hose connection [1] behind the venturi nozzle [3].



2. Connect the angled hose connection [2] to the DIX PRS 600 and the solenoid valve [4] to the DIX PRA 600 using the provided pneumatic hose.



Connection Solenoid valve [4] DIX PRA 600



8. Wire cutter DIX PRA 600

8.2 Installation when retrofitting the DIX PRA 600

1. In the DIX PRS 600, cut through the pneumatic hose [5], which leads from the distributing valve [6] to the solenoid valve with manual activation [7].
2. Insert the provided T-piece [8] into the cut pneumatic hose [5].
3. Connect the free connection of the T-piece [8] and the straight hose connection [1] (behind the venturi nozzle [3]) using the second pneumatic hose that is provided [9].
4. Using a SW 3 Allen wrench and the three supplied Allen head screws, firmly mount the rear housing cover on the housing with a torque of 6 Nm.

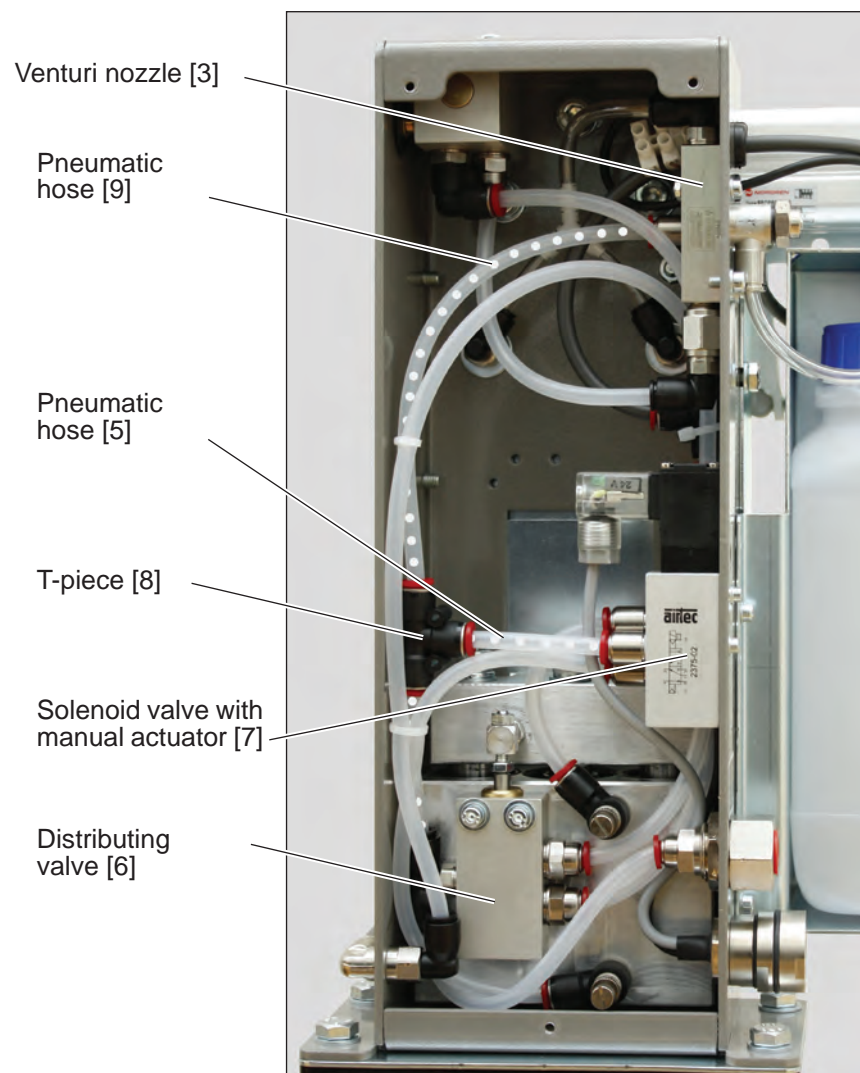


Photo with installed pneumatic hose for wire cutter

8. Wire cutter DIX PRA 600

8.3 Pin assignment of the electrical connection

PIN	Assignment
1	24 V _{DC} output for robot (cut wire)
2	0 V _{DC}

8.3.1 Program sequence with robot "Cut wire"

1. Move robot into cutting position
(Position: Fixed blade in center, lying on the wire but no pressure on the wire)
2. Apply 24 VDC output of robot (wire cutting) until wire is cut
The wire cutter closes.
3. Reset 24 VDC (low) output for robot (wire cutting)
The wire cutter opens.
4. Move robot into cleaning position.
For the rest of the program sequence, see 4.4 Program Sequence with robot „Cleaning the gas nozzle“ page 23.

8. Wire cutter DIX PRA 600

8.4 Servicing the DIX PRA 600

The wire cutter is largely maintenance-free because of the use of high-grade components.

Conduct regular inspections to guarantee problem-free operation. The frequency of single inspections and maintenance work depends on operating conditions. Each user must accordingly define a customized maintenance schedule.



WARNING!



Risk of injury, especially to the hands and other limbs due to the automatic start-up of the DIX PRS 600 torch cleaning station!

- De-energize and de-pressurize the DIX PRS 600 before starting any maintenance work.
- Secure the DIX PRS 600 against an unintentional restart.

To ensure trouble-free functioning, the work described next should be carried out at regular intervals:

- General visual inspection of the DIX PRA 600 wire cutter for damage and signs of wear.
- Check that all loose connections are fitted correctly.
- Lubricate all of the moving shafts once a month.
- Weekly cleaning is recommended.
- Visual inspection of the connecting lines for damage.
- Observe the maintenance instructions for the peripheral devices.

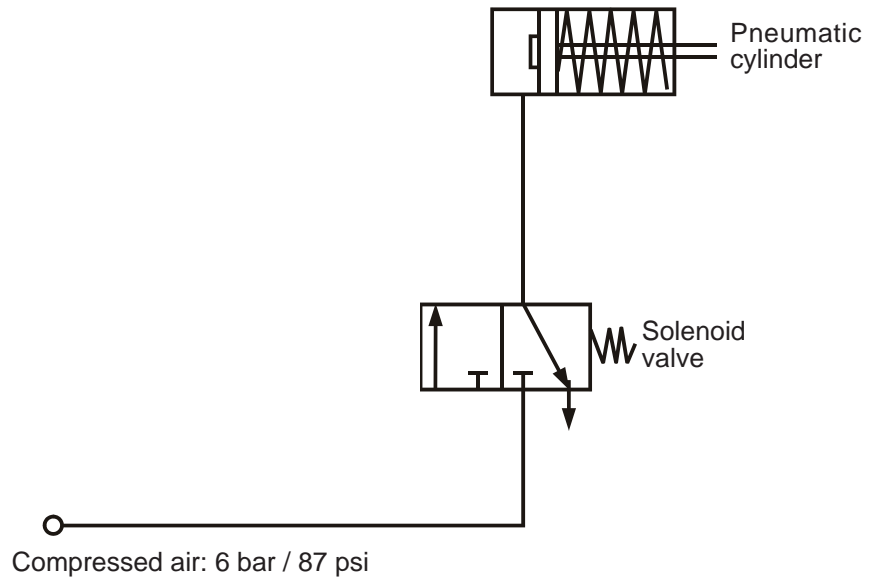


Use only original components and spare parts from the DINSE G.m.b.H.!

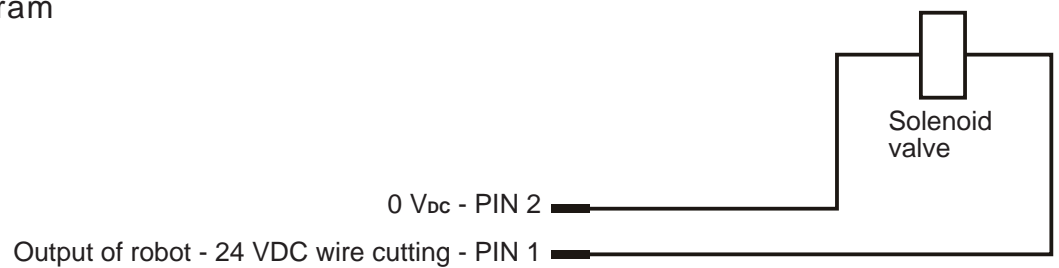
8. Wire cutter DIX PRA 600

8.5 Pneumatic and wiring diagram

8.5.1 Pneumatic diagram DIX PRA 600



8.5.2 Wiring diagram DIX PRA 600



**Ensure that repairs are generally only carried out by
DINSE G.m.b.H. or specialists trained by DINSE G.m.b.H.!**

9. Options

**Torch cleaning agent
(non-stick agent)
DIX PRM 600**

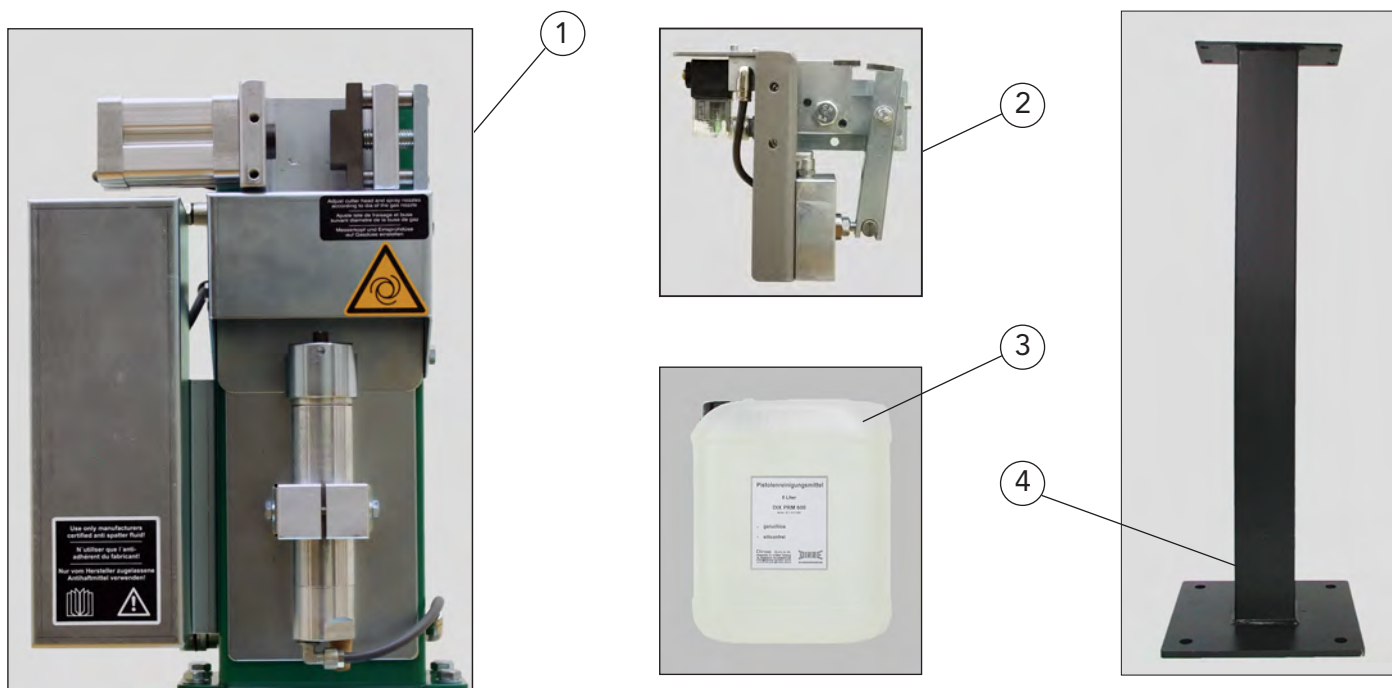


**Assembly fixture
DIX PRF 600**



Torch cleaning station

DIX PRS 600



subject to change!

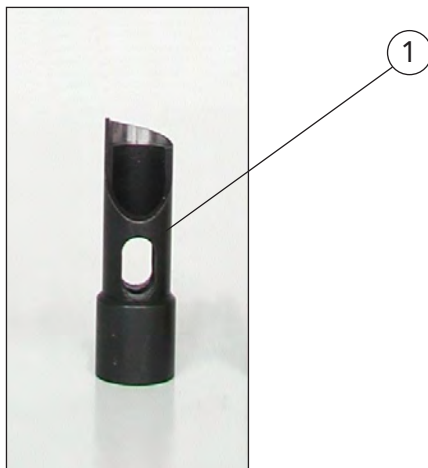
SEGB-PRS600K10

Pos.	Description	Part number	Article number
1	Torch cleaning station (with reamer)	DIX PRS 600	811 012 001
Options:			
2	Wire cutter (only ready-installed available)	DIX PRA 600	811 012 006
3	Torch cleaning agent (5 l)	DIX PRM 600	811 012 002
4	Assembly fixture	DIX PRF 600	811 012 005

► The corresponding reamer you find in the accessories list!
Variants deviating of the standard fittings on request.

Torch cleaning station

DIX PRS 600



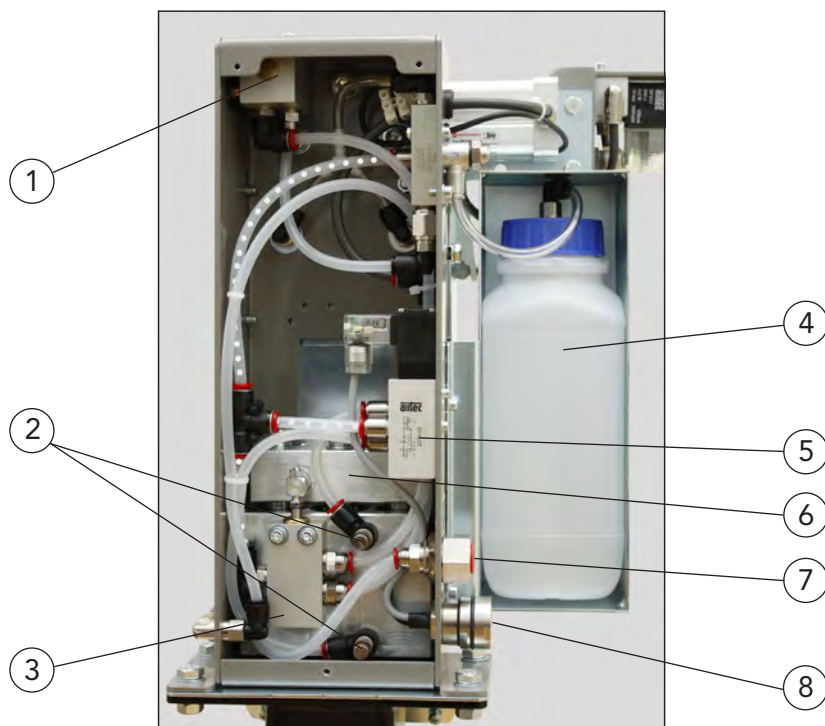
Pos.	Description	Dimension A_D / I_D	Part number	Article number
1	Reamer (for DIX 1-3-5209A)	∅ 8,5 / 6,2 mm	DIX PRX 650	811 012 050
	Reamer (for DIX 1-3-5911AK)	∅ 10,5 / 8,5 mm	DIX PRX 651	811 012 051
	Reamer (for DIX 1-3-5212A)	∅ 11,0 / 7,0 mm	DIX PRX 652	811 012 052
	Reamer (for DIX 1-3-5413A)	∅ 12,0 / 9,0 mm	DIX PRX 653	811 012 053
	Reamer (for DIX 1-3-5215A, DIX 1-3-5415A, DIX 1-3-5914, DIX 1-3-5915A)	∅ 14,0 / 9,0 mm	DIX PRX 654	811 012 054
	Reamer (for DIX 1-3-5415A, DIX KMG 115 TR)	∅ 14,0 / 11,0 mm	DIX PRX 657	811 012 057
	Reamer (for DIX KMG 118 TR)	∅ 17,0 / 11,0 mm	DIX PRX 662	811 012 062

A_D - outside diameter
 I_D - inside diameter

► Other reamers on request.

Torch cleaning station

DIX PRS 600



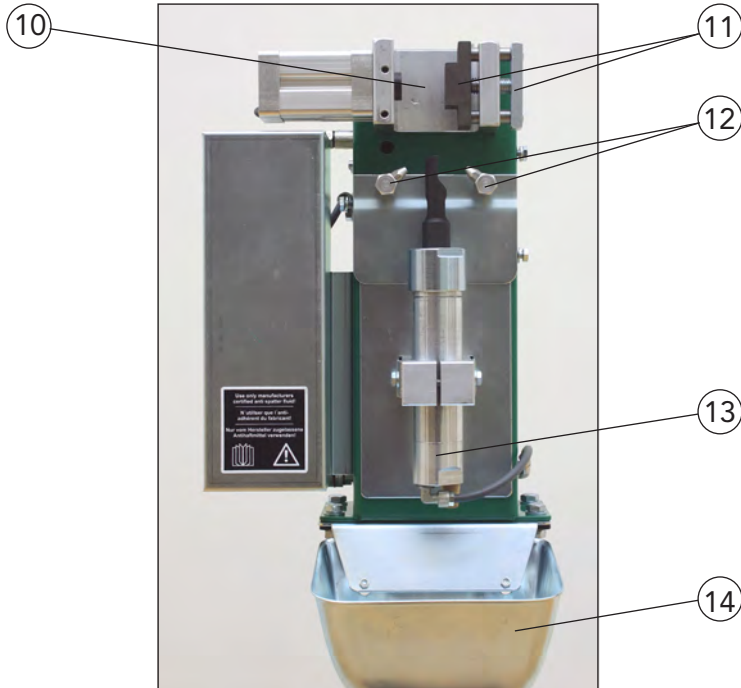
Pos.	Description	Part number	Article number
1	Signal contact breaker	DIX PRX 605	811 012 011
2	Throttle relief valve B	DIX PRX 611	811 012 017
3	Distributing valve (5/2 way)	DIX PRX 608	811 012 014
4	Tank	DIX PRX 622	811 012 028
5	Solenoid valve (with hand operation)	DIX PRX 609	811 012 015
6	Sliding unit	DIX PRX 610	811 012 016
7	Air connection (1/4" complete)	DIX PRX 612	811 012 018
8	Socket (5 pins)	DIX PRX 613	811 012 019
	Plug (5 pins, without picture)	DIX PRX 614	811 012 020

subject to change!

ELGB-PRS600\K10

Torch cleaning station

DIX PRS 600



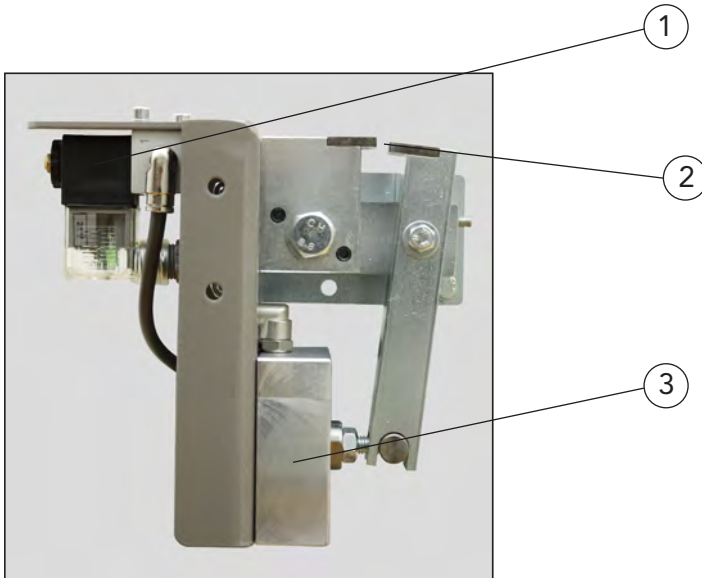
Pos.	Description	Part number	Article number
10	Clamping cylinder,complete	DIX PRX 601	811 012 007
11	Lock, complete	DIX PRX 604	811 012 010
12	Spraying nozzle (without picture)	DIX PRX 621	811 012 027
13	Pneumatic motor	DIX PRX 615	811 012 021
14	Cup (with bracket)	DIX PRX 603	811 012 009
	Limit switch (for clamping cylinder back)	DIX PRX 602	811 012 008

subject to change!

ELGB-PRS600\K10

Wire cutter

DIX PRA 600



Pos.	Description	Part number	Article number
1	Solenoid valve	DIX PRX 623	811 012 029
2	Knife	DIX PRX 620	811 012 026
3	Cylinder	DIX PRX 619	811 012 025