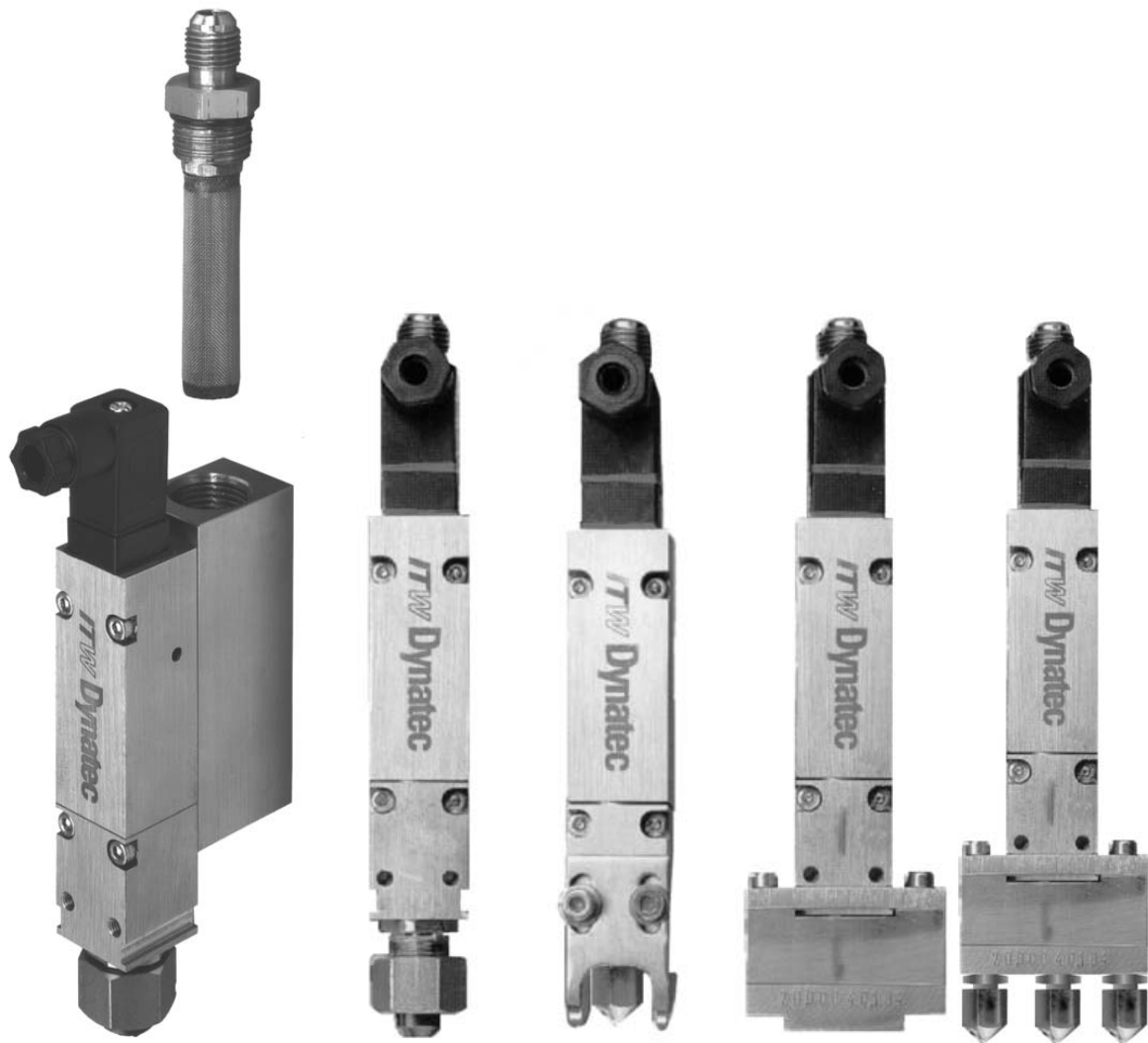




Adhesive Application Solutions | ISO 9001 certified

DynaCold & DynaCold F Cold Glue Applicators

Technical Documentation, No.40-26, Rev.4.24
English - Original instructions



ITW Dynatec
An Illinois Tool Works Company
www.itwdynatec.com

Information about this manual



Read all instructions before operating this equipment!

It is the customer's responsibility to have all operators and service personnel read and understand this information. Contact your ITW Dynatec customer service representative for additional copies.



NOTICE:

Please be sure to include the serial number of your application system each time you order replacement parts and/or supplies. This will enable us to send you the correct items that you need.

Note: Most common screws, nuts and washers called out in the manual are not for sale and they can be obtained locally at your hardware Store. Specialty fasteners are available by contacting ITW Dynatec's Customer Service.

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Chapter 1

Safety Instructions

1.1 General Considerations



- All operators and service personnel must read and understand this manual before operating or servicing equipment.
- All maintenance and service on this equipment must be performed by trained technicians.



Read and adhere to the manual before using the system!

1. Read and follow these instructions.
Failure to do this could result in severe personal injury.
2. Keep the binding rules for accident prevention valid for your country and the place of installation. Also keep the approved qualified technical rules for safety-conscious and professional work.
3. Additional safety instructions and/ or symbols are located throughout this manual. They serve to warn maintenance personnel and operators about potentially hazardous situations. Adhere strictly to these instructions.
4. Inspect the product for unsafe conditions daily and replace all worn or defective parts. Use only original spare parts and fittings.
5. Keep work area uncluttered and well lit. Remove all material or things not needed for the production from the workspace of the equipment!
6. All covers and guards must be in place before operating this equipment.
7. Subject to technical modifications without notice!
8. To ensure proper operation of the equipment, use specified electrical and/or air supply sources.
9. Do not attempt to alter the design of the product/equipment unless written approval is received from ITW Dynatec.
10. Take special note of the properties of the adhesive used with the product/system of the manufacturer's regulations and the adhesive safety data sheet.
11. Keep all manuals readily accessible at all times and refer to it often for the best performance from your equipment.

1.2 Safety Symbols in this Manual

Mandatory signs

	General mandatory sign		Wear foot guard!
	Read and adhere to the documentation!		Wear protective gloves!
	Switch the unit voltage-free before working! Main switch OFF!		Wear protective clothing!
	Wear headgear, protective goggles and ear protection!		

Warning signs

NOTE: The dangers and risks exist if the corresponding instructions are not heeded and the precautionary measures are not taken!

	Caution, danger spot! This sign points to possible dangers for life and physical condition or to possible risks for machine and material or to possible risks for environment. The word “DANGER” in addition with this points to possible dangers of life The words “WARNING” and “CAUTION” in addition with this sign point to possible risks of injury. The word “ADVICE” and “NOTE” in addition with this sign points to possible risks for machine, material or environment.		Danger, high voltage! This sign points to possible dangers for life and physical condition caused by electricity. Risk of injury, mortal danger!
			Caution, high pressure! This sign points to possible risks of injury caused by high pressure. Risk of injury!
			Caution, rotating rolls! This sign points to possible risks of injury caused by inrunning nip (at rolls) and crushing. Risk of injury!

Prohibition signs

	Fire danger! Smoking prohibited!		Fire danger! Fire and open flames prohibited!
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1.3 Safe Installation and Operation



Read and adhere to the manual!

1. Do not use adhesive that is dirty or that may be chemically contaminated. Doing so can cause system clogging and pump damage.
2. When in use, never point the applicator to yourself or to any other person.
3. In case of an emergency or exceptional incident, press the emergency stop button in order to stop the unit quickly.
4. Use the unit only as it is intended to.
5. Never let the unit run unattended.
6. Operate the applicator only in a faultless and fully functional condition. Check and make sure that all safety devices work in proper form!



Smoking, fire and open flames prohibited! Fire danger!

Make absolutely sure that there is no smoking and no fire being lit in the work area!

1.4 Personal Protective Equipment



WARNING! ABSOLUTELY REQUIRED!

1. It is very important that you PROTECT YOUR EYES when working around hot melt adhesive equipment and other liquids! Wear a face shield conforming to ANSI Z87.1 or safety glasses with side shields which conform to ANSI Z87.1 or EN166. Failure to wear a face shield or safety glasses could result in severe eye injury.
2. Wear ear protection to protect against hearing damage when the sound pressure level is above 80 dB (A).
3. During all work, wear close-fitting protective clothing with low tear strength and no wide sleeves that cover all parts of the body at risk. Otherwise there is a risk of injury! Do not wear rings or other jewelry, etc.
4. Wear protective gloves to protect your hands and the skin against friction, abrasions, aggressive materials, punctures and deep injuries.



1.5 Electrical



DANGER HIGH VOLTAGE

1. Dangerous voltages are needed to operate the applicator. To avoid personal injury, do not touch exposed connections and components while input power is on.
2. Disconnect, lockout and tag external electrical power before removing protective panels.
3. A secure connection to a reliable earth ground is essential for safe operation.
4. An electrical disconnect switch with lockout capability must be provided in the line ahead of the unit. Wiring used to supply electrical power should be installed by a qualified electrician.
5. Notify the maintenance personnel immediately, if cables are damaged. Provide for exchanging the defective components immediately.

1.6 High Pressure



WARNING HIGH PRESSURE PRESENT

1. To prevent serious injury from adhesive under pressure when servicing the applicator, stop the adhesive supply (cold glue pump) and relieve the adhesive system's hydraulic pressure (i.e. by draining any adhesive in the applicator into a waste container) before opening any hydraulic fittings or connections.
2. IMPORTANT NOTE: Even when a system's pressure gauge reads "0" psi, residual pressure and trapped air can remain within it causing adhesive and pressure to escape without warning when a filter cap or a hose or hydraulic connection is loosened or removed. For this reason, always wear eye protection and protective clothing.
3. Keep the given operating pressure.
4. Notify the maintenance personnel immediately, if hoses or components are damaged. Ensure that the defective components are replaced immediately.

1.7 Servicing, maintenance

1. Only trained and qualified personnel are to operate and service the applicator.
2. Before any service work disconnect the external power supply and the pressure air supply!
3. Never service or clean equipment while it is in motion. Shut off the equipment and lock out all input power at the source before attempting any maintenance.
4. Follow the maintenance and service instructions in the manual.
5. Keep the maintenance rates given in this documentation!
6. Any defects in the equipment that impact safe operation have to be repaired immediately.
7. Check screws that have been loosened during the repair or maintenance, if they are tight again.
8. Replace the air hoses regularly as part of preventative maintenance, even if they do not show any visible damage! Pay attention to the manufacturer's instructions!
9. Adhere to the current safety data sheet of the manufacturer when using hazardous materials (cleaning agents, etc.)!

1.8 Secure transport

1. Examine the applicator immediately after receipt, if it has been delivered in perfect condition.
2. Let damages in transit certify by the carrier and announce them immediately to ITW Dynatec.
3. Always transport and store the applicator with great care:
 - Do not throw or drop the applicator.
 - Do not place objects on the applicator or packaging.
 - Protect the applicator from dirt, damp, heat and cold.
 - Do not use force when unpacking the applicator. Do not damage plastic parts.
 - If storing the applicator, leave it in its packaging until installation.

1.9 Storage

Store the applicator in its packaging until installation.

The following instructions apply to applicator storage:

- Store in a dry place. Relative humidity: max. 60%.
- Do not store in the open or in an aggressive atmosphere.
- Protect from direct sunlight. Storage temperature: 15°C to 25°C.
- Keep dust off applicator. Avoid mechanical vibration and damage.
- Do not place underneath other objects or place other parts on top of it.

1.10 Measures in case of fire

Measures in case of fire:

Wear safety shoes, heat-resistant protective gloves, safety goggles and protective clothes that cover all vulnerable parts of the body.

Firefighting - burning hot melt:

Please keep attention to the safety data sheet given by the adhesive manufacturer.

**EXTINGUISH FIRE****Appropriate extinguishing agents:**

Foam extinguisher, Dry powder, Spray, Carbon dioxide (CO₂), Dry sand.

For safety reasons not appropriate extinguishing agents: None.

Firefighting - burning electrical equipment:**Appropriate extinguishing agents:**

Carbon dioxide (CO₂), Dry powder.

1.11 Keep attention to environmental protection standards



1. When working on or with the unit, the legal obligations for waste avoidance and the duly recycling / disposals have to be fulfilled.
2. Keep attention, that during installations, repairs or maintenance matters hazardous to water, like adhesive / adhesive scrap, lubricating grease or oil, hydraulic oil, coolant and cleaner containing solvent do not pollute the ground or get into the canalization!
3. These matters have to be caught, kept, transported and disposed in appropriate reservoirs!
4. Dispose these matters according to the international, national and regional regulations.

Chapter 2

Description and Technical Specs

2.1 Applicable Safety Regulations

2.1.1 Intended Use

The DynaCold applicator may only be used for application of cold glue. When in doubt, seek permission from ITW Dynatec.



Only use the applicator for its intended purpose and in an entirely safe operating condition! The system may only be operated when in perfect condition and always in accordance with the instructions. This is the only way to ensure operational safety!

The operator - and not ITW Dynatec - is liable for all personal injury or property damages resulting from unintended use!

Intended use includes, that you

- read this documentation,
- heed all given warnings and safety instructions, and
- do all maintenance within the given maintenance rates.

Any other use is considered to be unintended.



IMPORTANT!

The product is partly completed machinery. It must only be put into use when it is established that the machine into which the partly completed machine is intended to be incorporated meets the specifications of the applicable directives!

2.1.2 Unintended Use, Misuse



WARNING! Risk of injury!

Using the applicator in a way other than intended can lead to serious damage!

The applicator may not be used under the following conditions:

- In defective condition.
- In a potentially explosive atmosphere.
- With unsuitable operating/processing materials.
- When the values stated under Technical Data are not complied with.

The applicator may not be used to process the following materials:

- Aggressive materials such as acids, alkalis, cleaning agents, chemicals, poisons, highly flammable or similar substances or gases.
- Toxic, explosive and easily flammable materials.
- Erosive and corrosive materials.
- Food products.

2.1.3 Residual Risks

In the design of the applicator, every measure was taken to protect personnel from potential danger. However, some residual risks cannot be avoided.

Take into account the following risks in particular:

**WARNING! Risk of injury!**

- Danger from electrical voltages and pressurized media.
- Danger from the applicator applying or spraying out high-pressure fluids.
- Pay attention to the possibility of residual mechanical energy.
- Always wear personal protective equipment when working on the applicator!
- Installation, servicing, troubleshooting, cleaning the applicator/system, etc. must only be done when the applicator is in an unpressurised state.

**NOTE!**

Knowledge of the safety and user instructions in this manual is the basis for safe and fault-free operation.

**NOTE!**

The Operating Instructions must always be kept at the place of use! The Operating Instructions must be freely accessible at all times to operators, servicing personnel, etc.

General and local regulations on accident prevention and environmental protection must also be observed.

In addition to the precautions recommended by the manufacturer, the operator must take appropriate steps to guard against the risks arising from residual energy.

Personnel must be instructed about the risks and the countermeasures to be taken.

**WARNING! Risk of hearing damage!**

Hearing damage may result from the volume and length of exposure to noise. Wear ear protection when working with the applicator!

**WARNING! Danger from electrical energy!**

The electrical energies can cause severe injury. Electricity presents mortal danger if the insulation or individual components are damaged!

Therefore:

- Switch the main switch off and secure it against being switched back on before starting any servicing, cleaning or repair work.
- During all work on the system, always depressurize the applicator first.
- Do not remove safety equipment or disable it by modification.

**IMPORTANT!**

The applicator is used in a machine and does not have a dedicated controller. The user must ensure that the applicator is integrated in the machine control system in compliance with the applicable accident prevention regulations.

Note the following in relation to this:

The machine control system must disconnect all power supply cables in the event of a power failure or emergency stop. After the power supply is restored, the applicator must not make any uncontrolled movements.

2.1.4 Obligations of the operator

The operator is obliged only to allow persons to work with the product who:

- are familiar with the fundamental regulations relating to work safety and accident prevention.
- have been instructed in working with the product, and
- have read and understood these instructions.

The operator must also identify any other hazards that may arise from the special working conditions at the place of use of the product by carrying out a risk assessment. In relation to the risk assessment, operating instructions must be prepared, which combine all further instructions and safety instructions.

The operator will also make the required protective equipment available to the personnel. A list of the necessary personal protective equipment can be found in chapter 1.



NOTE!

Only authorized, trained and instructed specialist personnel are permitted to handle the product.

All persons who are required to work on the product are obliged, before starting work:

- to observe the fundamental regulations relating to work safety and accident prevention.
- have read and understood these instructions.
- to wear the personal protective equipment according to chapter 1.

The use of personal protective equipment depends on the environment where the applicator/system is used and on the medium being employed. For this reason, also observe the risk assessment of the workplace prepared by the operator.

2.1.5 Technical changes

Any kind of technical changes having impact to the security or the operational liability of the system must only be done by written agreement of ITW Dynatec. Suchlike changes made without given a corresponding written agreement will lead to immediate exclusion of liability granted by ITW Dynatec for all direct and indirect subsequent damages.

Do not undertake any alterations to the system without the permission from ITW Dynatec as this may affect the safety.

2.1.6 Using foreign components

ITW Dynatec takes no responsibility for consequential damages caused by using foreign components or controllers that have not been provided or installed by ITW Dynatec.

ITW Dynatec does not guarantee that foreign components or controllers used by the operating company are compatible to the ITW Dynatec-system.

Only use original spare parts and fittings, as only these meet the technical requirements and offer the necessary safety. ITW Dynatec is not liable for damages caused by the use of non-original parts.

2.1.7 Setting-up operation

We recommend asking for an ITW Dynatec-service technician for the setting-up operation, to ensure a functioning system. Let yourself and the people working with or working on the system be introduced to the system on this occasion.

ITW Dynatec takes no responsibility for damages or faults caused by any untrained personnel.

2.2 Description of DynaCold & DynaCold F

2.2.1 Description

The electric applicators DynaCold and DynaCold F with ball valve are suitable for applying cold glue to different carrier materials. Depending on the design of the nozzle, the glue can be applied either contactless or through contact of the nozzle or nozzle plate with the carrier material.

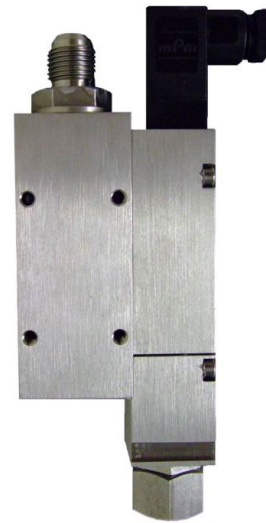
The applicators with appropriate nozzle can apply different glue patterns, like full jet, dot, stripe and bead patterns. The module needle strokes of 0.2 mm and 0.4 mm are available.

DynaCold F series are equipped with a filter block and a material filter which prevents the nozzles from clogging when the glue is contaminated.

DynaCold series are not equipped with a filter block and a material filter, but they can also be subsequently retrofitted with a filter block and a filter.



DynaCold with supply part



DynaCold F with filter block

DynaCold and DynaCold F Applicator examples:



DynaCold with
full-jet nozzle



DynaCold with
contact-nozzle



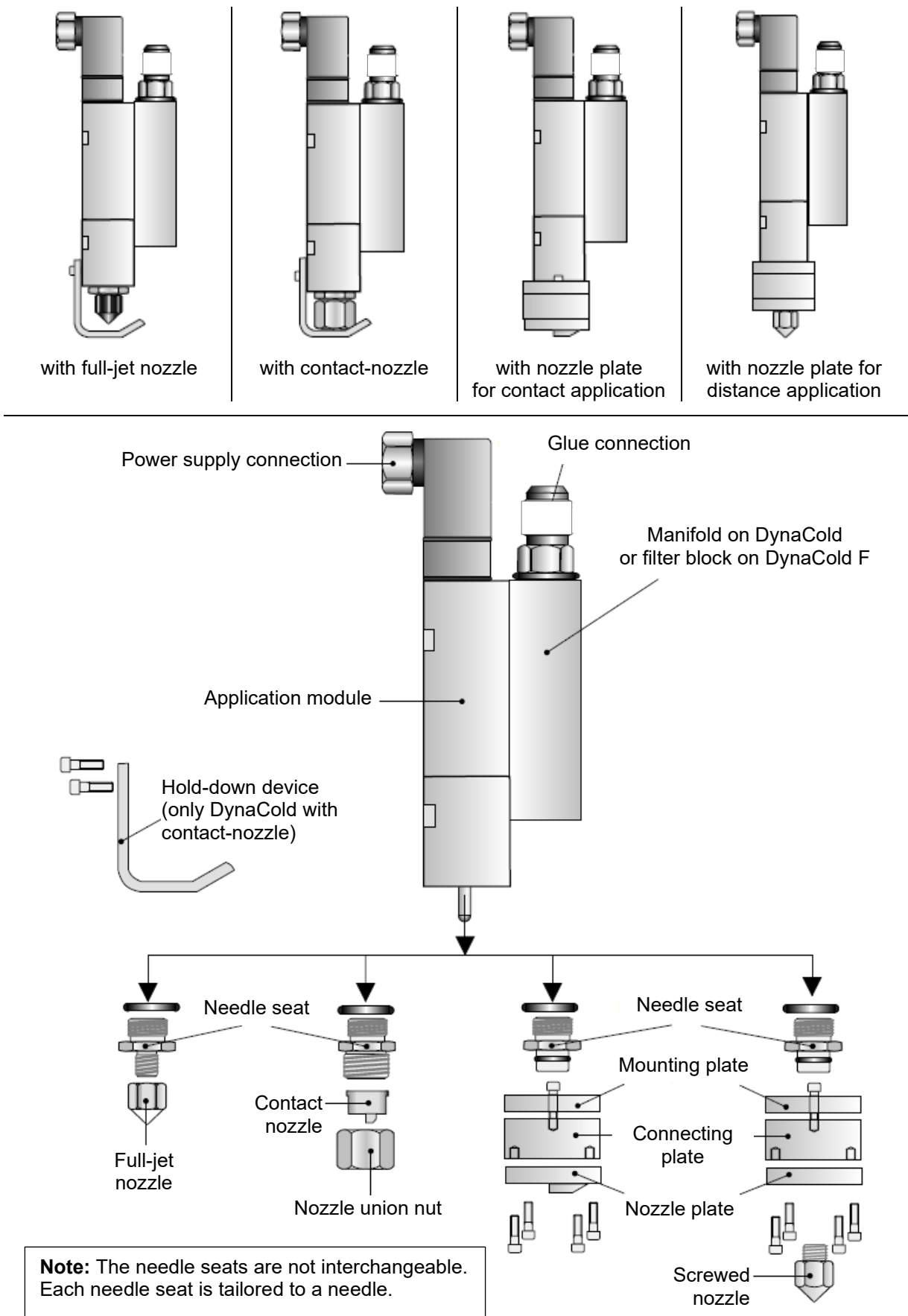
DynaCold with
nozzle plate for
contact application



DynaCold with
nozzle plate for
distance application

2.2.2 DynaCold and DynaCold F Assemblies

DynaCold and DynaCold F assemblies:



2.2.3 Characteristics

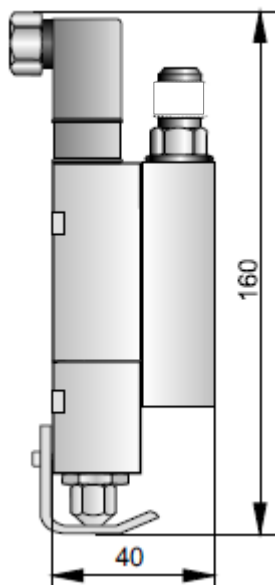
- Suitable for use in low and high pressure systems
- Service-friendly modular design
- Seal-less ball closure, therefore low-wear and suitable for longer down-times
- Rustproof stainless steel design, splash-proof IP 65
- Large selection of nozzles and nozzle plates available

2.2.4 Technical Data

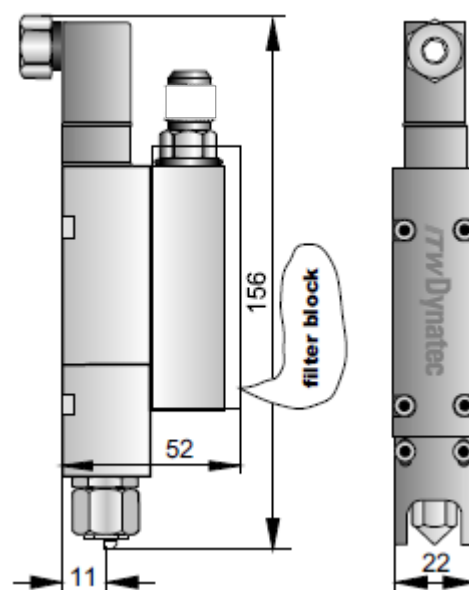
Model	DynaCold (F) with full-jet nozzle	DynaCold (F) with contact-nozzle	DynaCold (F) with nozzle plate for contact application	DynaCold (F) with nozzle plate for distance application
Application type	non-contact	contact	contact	contact
Glue pattern	full-jet, dot	stripe, bead	stripe, bead	stripe, bead
Nozzle design	screw-on nozzle	screw-on nozzle	nozzle plate 45 x 32 mm	nozzle plate 45 x 32 mm
Number of orifices	1	1 - 2	1 - 10	1-10
Material pressure	max. 30 bar	max. 30 bar	max. 30 bar	max. 30 bar
Material viscosity	50 – 2200 mPas	50 – 6000 mPas	50 – 6000 mPas	50 – 2200 mPas
Cycle rate	max. 500/s			
Operating voltage	24 VDC			
Power consumption	9 W			
Noise emission	< 70 dB(A)			
Storage temperature	room temperature			

2.2.5 Dimensions

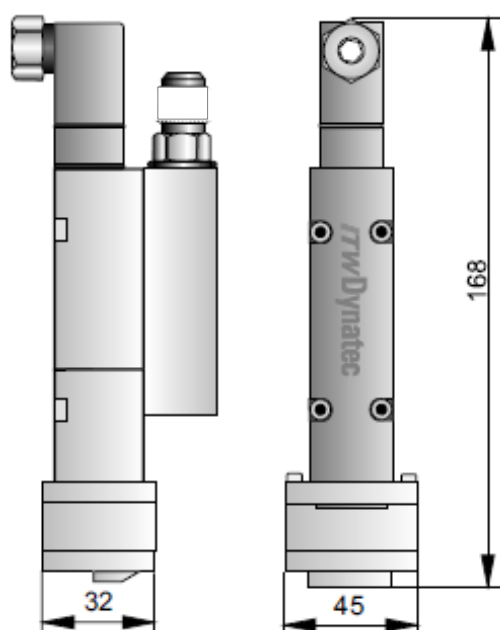
The dimensions are expressed in "mm".



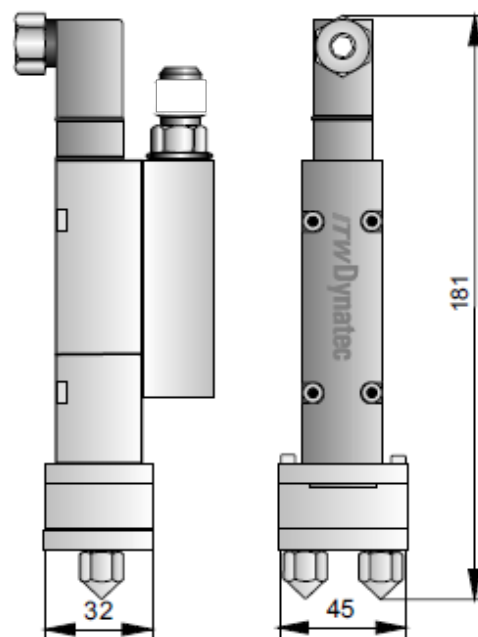
DynaCold & DynaCold F
with full-jet nozzle



DynaCold F
with contact-nozzle



DynaCold & DynaCold F
with nozzle plate
for contact application



DynaCold & DynaCold F
with nozzle plate
for distance application

Chapter 3

Installation & Start-Up

3.1 Typical Installation

3.1.1 Safety Instructions



CAUTION

- Before setting up, please read this documentation carefully.
- Pay attention to all the installation and connecting advices.
- Heed all safety instructions mentioned in chapter 1.
- All installation and start-up procedures must be performed by qualified, trained and skilled technicians.



WARNING

Before installation:

- Remove pressure from aggregates and pressure lines which will be used with the system and make sure that the system cannot be switched on accidentally.
- Switch off the power supply, check that the system is voltage free and make sure that the system cannot be switched on accidentally.



WARNING! Risk of injury!

To prevent personal injury and/or property damage, it is essential to observe the following when installing the applicator in a machine or system:

The applicator must be installed in a machine or system in such a way as to rule out hazards, like

- the escape of high-pressure fluids,
- defects in the compressed air supply,
- malfunctions of the applicator, machine or plant,
- failure or malfunction of plant control,
- loud noises or interference with acoustic signals in the vicinity.

To protect persons working on the applicator, machine or plant, effective safety devices and warning signs must be put in place. In addition, relevant safety instructions must be incorporated into the Operating/Installation Instructions for the machine or plant.



MOUNTING ADVICES:

- Only hoses which can withstand the maximum working pressure of the pressure line may be used.
- Lay the cables and hoses so that no risk or least possible risk of stumbling occurs.
- Check all screw connections on the system and retighten if necessary.



WARNING! Risk of injury due to material pressure!

Only qualified personnel may work on the pressure system in accordance with the safety regulations.

When working on the pressure system, make sure that

- the system is depressurized before beginning installation work.
- safety equipment are not removed or disabled.
- you do not set pressures above the maximum permitted values.
- install all hoses safely so that the pressure lines cannot be damaged by moving machine or system components.
- you do not put the pressure system into operation until the installation work is completed.

3.1.2 Typical Installation

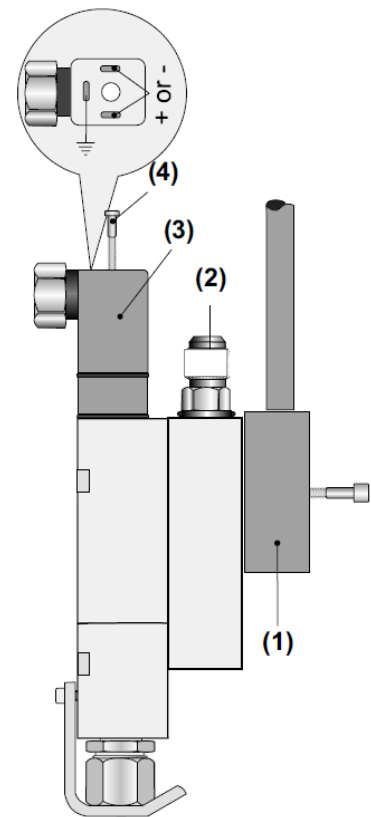
See also pictures in Ch.2.2 Description.

1. Switch off all system components needed to operate the applicator. Secure them against unauthorized switching on.
2. Install and fix the applicator in the machine to the mounting (1) provided by means of two screws using a 3mm Allen key.

The operator should be able to work on the applicator from all sides, for e.g. for adjusting, preparing, maintaining, repairing, cleaning, etc.

3. Interconnect the applicator and the cold glue pressure vessel/tank with the material hose. Screw the material hose onto the material connection (2) of the applicator. Tighten the screwed connection using a 16mm open-end wrench.
4. Connect the power supply cable for the applicator control to the electrical plug (3)
 - Provide necessary electrical connection. See electrical schematics.
 - The unit has to be connected according to the schematics. Heed the regulations of the VDE or local power supply organization in all cases!
 - Never connect or disconnect plug-and-socket connections under load!
5. Secure the plug against unintentional removal by tightening the central screw (4) with a Phillips screwdriver.

Continue with start-up. See next page.



Example: DynaCold (F) with contact-nozzle

3.2 Typical Start-Up

3.2.1 Safety Instructions



NOTES

Start-up the applicator only if

- the functioning of the applicator/system is known, and
- the applicator/system installation has been done according to the details given in the previous chapter. That means all system components are operable.

Read the documentation thoroughly to avoid breakdowns caused by faulty handling.

We recommend asking for an ITW Dynatec-service technician for the setting-up operation, to ensure a functioning unit. Let yourself and the people working with or working on the unit be introduced to the unit on this occasion.

ITW Dynatec takes no responsibility for damages or faults caused by any untrained personal.



WARNING! Risk of injury!

Only trained qualified personnel may put the machine or system into operation in accordance with the safety and accident prevention regulations.

Observe the following before putting the machine or system into operation:

- Ensure that no tools or other foreign bodies are inside the machine or system.
- Check that the applicator/system and all other parts are securely mounted.
- Check that all electrical, hydraulic and pneumatic connections are on the correct ports and are secure.
- Check that the set pressures correspond to the ratings and connection values of the applicator/system.
- Check that safety devices are working.

Once it has been established that the applicator/system is functioning perfectly, the applicator/system may be operated in accordance with all accident prevention regulations.



WARNING!

Risk of injury due to material pressure!

Only qualified personnel may work on the pressure system in accordance with the safety regulations.

When working on the pressure system, pay attention to the following:

- Depressurize the system before beginning work.
- Do not remove or disable safety equipment.
- Do not set pressures above the maximum permitted values.
- Install all hoses safely so that the pressure lines cannot be damaged by moving machine or system components.
- Do not put the pressure system into operation until work is completed.

The applicator/system presents the following hazards during operation:

	WARNING! Risk of injury! Danger from the applicator/system spraying out high-pressure fluids. Always wear safety shoes, protective gloves, safety goggles and protective clothing when working on or with the unit. Risk of injury! Risk of electric shocks! Risk of injury, Mortal danger! The adhesive is pressurized! Risk of risk of injury!
	Risk of stumbling on cables and heated hoses!
	Keep your hands away from running parts of the unit.
	IMPORTANT! In the event of faults or irregularities, shut down the system immediately and inform the local person in charge. If applicator/system faults cannot be corrected (see chap. 5 Faults and Troubleshooting), inform the manufacturer's Customer Service. Only deploy instructed personnel for regular cleaning.

3.2.2 Typical start-up operation

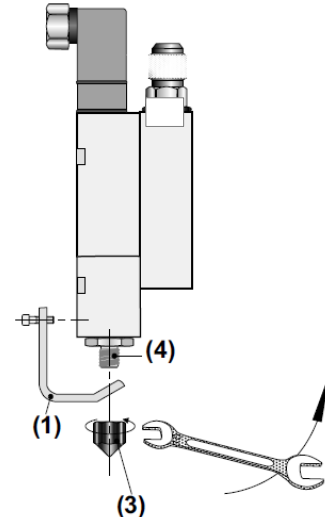
NOTE: The glue application system can contain production-related foreign materials and pollutants. In order to remove all foreign materials and pollutants, it is necessary to first operate (purge) the applicator for a few minutes **without nozzle**. This prevents nozzle clogging.

1. Dismount the nozzle from the applicator.
2. Place a glue collecting vessel (container) under the applicator.
3. Switch on power supply.
4. Switch on material supply and activate gluing.
5. Allow the glue to run out until this no longer contains any visible pollutants.
6. Switch off the applicator/system.
7. Install the nozzle (see next page) and continue production.

3.2.3 Nozzle Installation

A. DynaCold and DynaCold F with full-jet nozzle:

1. Remove the hold-down device (1) from the application module using a 3mm Allen key.
2. Screw the full-jet nozzle (3) onto the needle seat (4) and tighten it using a 10mm open-end wrench.
3. Screw the hold-down device (1) onto the application module.

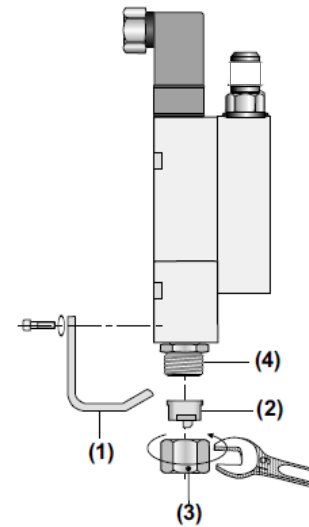


B. DynaCold and DynaCold F with contact-nozzle:

1. Remove the hold-down device (1) from the application module using a 3mm Allen key.
2. Place the nozzle (2) in the union nut (3).

ADVICE: Ensure that the sealing surface between the nozzle and the needle seat is clean.

3. Screw the union nut (3) onto the needle seat (4) and tighten it using a 19mm open-end wrench, simultaneously holding the nozzle in position with a 10mm open-end wrench.
4. Screw the hold-down device (1) onto the application module.

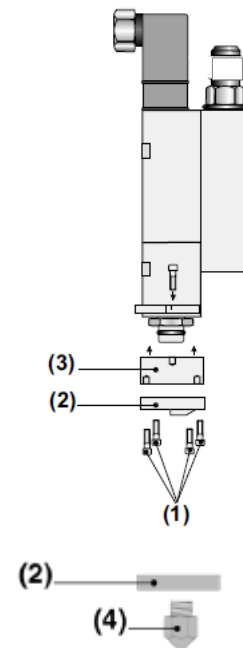


C. DynaCold and DynaCold F with nozzle plate:

1. Remove the four fixing screws (1) from the nozzle plate (2) using a 3mm Allen key.

ADVICE: Prior to installation of the connecting plate (3), lubricate the O-ring on the needle seat with grease or oil. This facilitates installation.

2. Place the nozzle plate (2) on the connecting plate (3) and fix them on the application module by means of the four fixing screws (1) using a 3mm Allen key.



If nozzle plate for distance application:

3. Screw the screw-in nozzles (4) into the nozzle plate (2) and tighten them with a 10mm open-end wrench.

3.3 Switching off

1. Switch off the material supply
2. Shut down the applicator/system at system controller.
3. Switch off the power supply.
4. Remove/clean the material residues from the applicator/system using suitable cleaner.

3.3.1 Removal from service

Temporary removal from service:

1. Purge the applicator with water.
2. Shut down pressure and power sources of the applicator.
3. Release the residual material pressure from applicator/system.
4. Remove all residual glue and clean the nozzle/nozzle plate.
5. Remove all air and glue hoses and all power supply cables.
6. Provide all open screwed unions with screw plugs or caps.
7. Pack the applicator in a corrosion-proof manner.
8. Store the applicator in such a way that they are protected against damage.

Permanent removal from service and disposal:

1. Switch off the applicator.
2. Release the residual material pressure from applicator/system.
3. Remove all residual glue.
4. Remove all air and glue hoses and all power supply cables.
5. Dismantle the applicator and sort into mechanical and electrical components.
6. Arrange for the components to be recycled.

Chapter 4

Maintenance and Repair Notes

4.1 General safety instructions for maintenance and repair



Heed all security advices given in chapter 1.

Use only original parts from ITW Dynatec, otherwise ITW Dynatec's warranty is void!

Maintenance and repair work is only permitted for skilled personnel!

Always wear safety shoes, protective gloves, safety goggles and protective clothing that cover all vulnerable parts of the body while working on the unit! Risk of injury!



High adhesive pressure! Risk of injury!

Always assume that the system is under pressure, proceed with caution.

Before starting with maintenance and cleaning works:

- Remove pressure from applicator/system and from aggregates and pressure lines which are used with the system and make sure that the system cannot be switched on accidentally.
- Switch off the power supply to the system and ensure that the system is power free and make sure that the system cannot be switched on accidentally.



NOTE on Maintenance Interval!

The applicator/system must be checked regularly for wear. It is not possible to specify when wear and tear may occur, since this depends on the material being processed, the switching frequency, and the conditions under which the applicator/system is used.

4.2 Cleaning the Applicator



ADVICE

Heed all security advices given in Ch.4.1.

Clean the applicator when

- it is soiled by use.
- a different material is to be used.
- wearing parts have to be replaced.



IMPORTANT!

Do not use any sharp-edged, metallic aids for external cleaning; only use soft brushes and clothes with suitable cleaner.

4.3 Purging the Applicator

**ADVICE**

Heed all security advices given in Ch.4.1.

After a long period of operation, dirt particles accumulate in the components through which the glue is conducted. This can impair the glue application. It is therefore important that the applicator is regularly purged with water.

1. Shut down the pressure and power sources of the system.
2. Secure the system against unauthorized switching on.
3. Release the residual material pressure from applicator/system.
4. Unscrew the nozzle/nozzle plate.
5. Remove the material hose from the material connection using a 16mm open-end wrench.
6. Connect a water hose to the glue connection.
7. Place a collecting vessel under the applicator.
8. Switch the system on and turn on the water.
9. Allow the water to run through the applicator/system until the dirt particles are purged out of the applicator.
10. Switch the system off and turn off the water.
11. Remove the water hose and reconnect the material hose.
12. Clean the nozzle/nozzle plate with warm water and screw it on the applicator.
See also Ch.4.4.

After finishing the maintenance or repair work:

- Remove all materials and tools used during the repair or maintenance from the workspace of the system.
- Switch on the pressure and power sources.
- Continue production.

4.4 Removal and Cleaning of Nozzle and Nozzle Plate



ADVICE

Heed all security advices given in Ch.4.1.

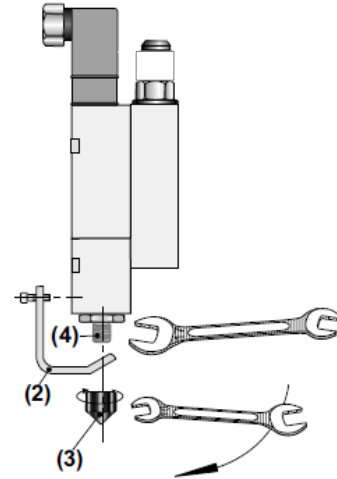
1. Shut down the pressure and power sources of the system.
2. Secure the system against unauthorized switching on.
3. Release the residual material pressure from applicator/system.
4. Continue with the applicator/nozzle type. See following sub-chapters.

A. DynaCold and DynaCold F with full-jet nozzle:

1. Remove the two screws from the hold-down device (2) using a 3mm Allen key and remove the hold-down device (2).
2. Remove the nozzle (3) from the needle seat (4) using a 10mm open-end wrench.

ADVICE: Hold the needle seat (4) firmly in position with a 17mm open-end wrench to prevent the needle seat from being unscrewed.

3. Clean the nozzle (3) with warm water.
In the case of heavy contamination, use a suitable cleaner.



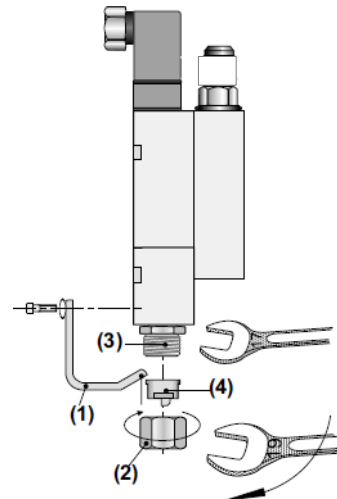
B. DynaCold and DynaCold F with contact-nozzle:

1. Remove the two screws from the hold-down device (1) using a 3mm Allen key and remove the hold-down device (1).
2. Remove the union nut (2) with nozzle (4) from the needle seat (3) using a 19mm open-end wrench.

ADVICE: Hold the needle seat (3) firmly in position with a 17mm open-end wrench to prevent the needle seat from being unscrewed.

3. Remove the nozzle (4) from the union nut (2).
4. Clean the nozzle (4) with warm water.
In the case of heavy contamination, use a suitable cleaner.

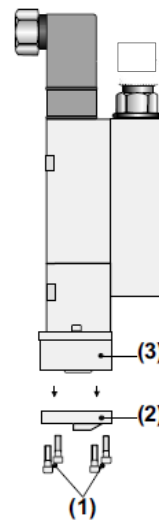
ADVICE: Ensure that the sealing surface between the nozzle and the needle seat is smooth and clean.



C. DynaCold and DynaCold F with nozzle plate:

1. Remove the four screws (1) from the nozzle plate (2) using a 3mm Allen key and remove the nozzle plate (2) from the connecting plate (3).
2. Clean the nozzle plate (2) with warm water. In the case of heavy contamination, use a suitable cleaner.

ADVICE: Ensure that the sealing surface between the nozzle plate (2) and the connecting plate (3) is smooth and clean.

**After finishing the maintenance or repair work:**

- Remove all materials and tools used during the repair or maintenance from the workspace of the system.
- Switch on the pressure and power sources.
- Continue production.

4.5 Cleaning and Changing of Filter (on DynaCold F only)



ADVICE

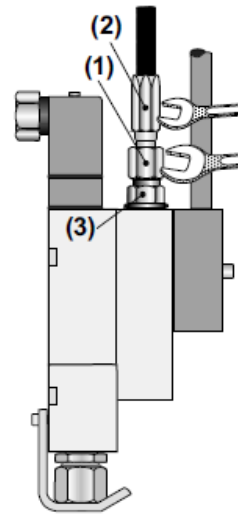
Heed all security advices given in Ch.4.1.



NOTE on Maintenance Interval!

The frequency of maintenance work depends on the material being processed, the switching frequency, and the conditions under which the applicator/system is used. **We recommend replacing/cleaning the filter after approximately 120 working hours or every week.**

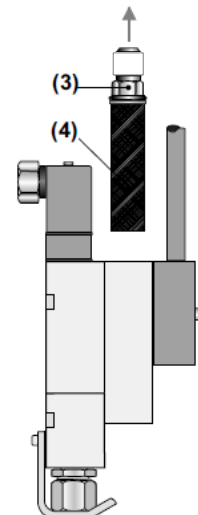
1. Shut down the pressure and power sources of the system.
2. Secure the system against unauthorized switching on.
3. Release the residual material pressure from applicator/system.
4. Remove the swivel nut (1) of the material hose from the material connection (3) by using an open-end wrench and while doing this use another open-end wrench to secure the crimp connection (2).



5. Remove the connection nipple (3) together with the filter from the filter block using an open-end wrench AF(SW) 17.
6. Take the connection nipple (3) out together with the filter (4).
7. Clean the filter with warm water and suitable cleaner. The dirt particles accumulate in the filter.

Replace the filter in case of severe dirt accumulation or mechanical defects.

8. Install the filter in reversed order.



After finishing the maintenance or repair work:

- Remove all materials and tools used during the repair or maintenance from the workspace of the system.
- Switch on the pressure and power sources.
- Continue production.

4.6 Removal of the Application Module and Replacement of O-rings



ADVICE

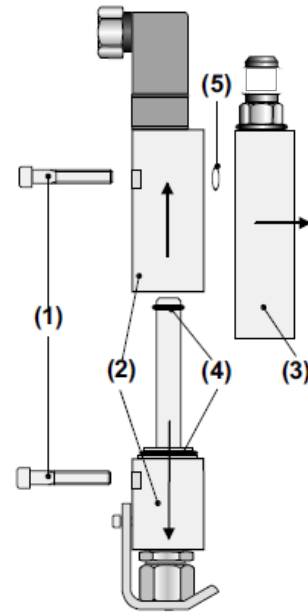
Heed all security advices given in Ch.4.1.

1. Shut down the pressure and power sources of the system.
2. Secure the system against unauthorized switching on.
3. Release the residual material pressure from applicator/system.
4. Place a collecting vessel under the applicator.
5. Remove the four screws (1) using a 2.5mm Allen key and remove the application module (2) from the supply part (3).
6. Pull the application module apart.

CAUTION: When doing this, hold the coil back, otherwise the connection cables may tear off.

CAUTION: Grease the O-rings with silicone before installing.

7. Replace the two O-rings (4) on the anchor tube.
8. Replace the O-ring (5) on the contact surface to the supply part.



Example: DynaCold with contact-nozzle

After finishing the maintenance or repair work:

- Remove all materials and tools used during the repair or maintenance from the workspace of the system.
- Switch on the pressure and power sources.
- Continue production.

4.7 Removal and Cleaning of Needle and Needle Seat



ADVICE

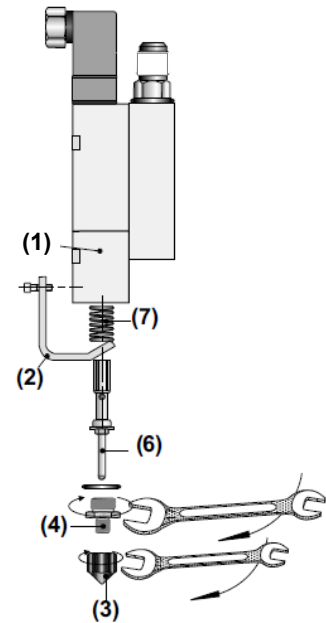
Heed all security advices given in Ch.4.1.

IMPORTANT: The needle seat and the needle are matched by Dynatec. Only then can a proper functioning be ensured. Therefore, these components must only be replaced in pairs.

1. Shut down the pressure and power sources of the system.
2. Secure the system against unauthorized switching on.
3. Release the residual material pressure from applicator/system.
4. Continue with the applicator/nozzle type. See following sub-chapters.

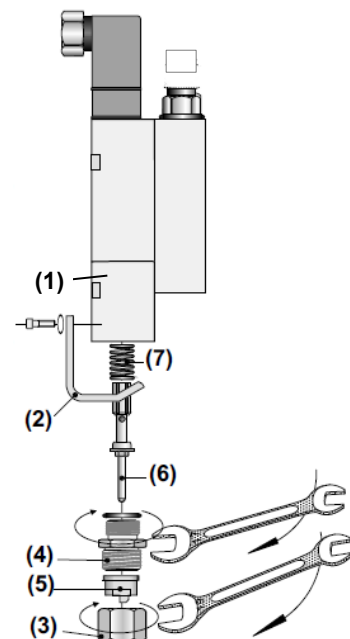
A. DynaCold and DynaCold F with full-jet nozzle:

1. Remove the two screws from the hold-down device (2) from the application module (1) using a 3mm Allen key and remove the hold-down device (2).
2. Remove the nozzle (3) from the needle seat (4) using a 10mm open-end wrench.
3. Remove the needle seat (4) from the application module (1) using a 17mm open-end wrench.
4. Pull out the needle (6) together with the pressure spring (7).
5. Install the new needle and needle seat in reverse order.



B. DynaCold and DynaCold F with contact-nozzle:

1. Remove the two screws from the hold-down device (2) from the application module (1) using a 3mm Allen key and remove the hold-down device (2).
2. Unscrew the union nut (3) from the needle seat (4) using a 19mm open-end wrench and remove the nozzle (5).
3. Remove the needle seat (4) from the application module (1) using a 17mm open-end wrench.
4. Pull out the needle (6) together with the pressure spring (7).
5. Install the new needle and needle seat in reverse order.

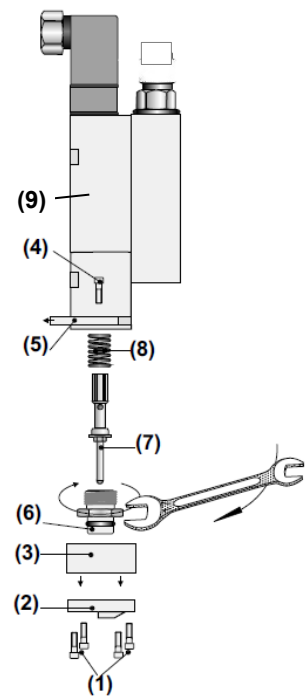


C. DynaCold and DynaCold F with nozzle plate:

1. Remove the four screws (1) from the nozzle plate (2) using a 3mm Allen key and remove the nozzle plate (2) from the connecting plate (3).
2. Remove the two fixing screws (4) from the mounting plate (5) using a 3mm Allen key.
3. Remove the connecting plate (3) and the mounting plate (5) from the application module (9).

NOTE: There is an O-ring in the connecting plate (3) for the nozzle plate (2) and also on the needle seat (6).

4. Remove the needle seat (6) from the application module (9) using a 17mm open-end wrench.
5. Pull out the needle (7) together with the pressure spring (8).
6. Install the new needle and needle seat in reverse order.

**After finishing the maintenance or repair work:**

- Remove all materials and tools used during the repair or maintenance from the workspace of the system.
- Switch on the pressure and power sources.
- Continue production.

Chapter 5

Faults and Troubleshooting

5.1 General Troubleshooting Notes



ADVICE: Please re-read all security advices given in chapter 1 before troubleshooting.

All troubleshooting or repair procedures must be performed by qualified, trained technicians.

This chapter contains a description of possible malfunctions, causes of these malfunctions and troubleshooting on the DynaCold applicators. Obvious defects, such as mechanical damage or damaged electrical and pneumatic lines, are not treated. These defects should be identified and eliminated during regular inspections of the system.

Malfunctions that cannot be remedied using the measures described must be reported to the manufacturer.

5.2 Preliminary Checks

ADVICE: STOP the applicator/system immediately in case of faults which pose an immediate risk for persons, property and/or the safe operation of the applicator or system.

Verify the following before proceeding:

- Check whether the supply voltage is present.
- Check whether there is glue in the glue container.
- Check all electrical and pneumatic connections.
- Check whether the air pressure reaches operating values.



WARNING! Risk of injury!

Improper, incorrect work on the applicator or system poses serious risks of personal injury and/or damage. Therefore, only trained qualified personnel may correct faults.

The notices and safety rules in chapter 4 "Maintenance and Repair Notes" must be observed before, during and after all work to remedy faults and defects!

5.3 Malfunctions, Troubleshooting guide

NOTE: Instructions for removing and disassembling the individual components are contained in the chapter 4 Maintenance and Repair Notes.

Problem	Possible Cause	Solution
No glue flows out of the application module.	No glue in the tank (glue container).	Refill tank (glue container) with glue.
	Nozzle is clogged.	Clean/replace nozzle.
	Solenoid valve plug is loose.	Fix and tighten the plug.
	Supply voltage not available.	Check and establish supply voltage.
	Solenoid valve coil is defective.	Replace solenoid valve coil.
	Material hose clogged.	Purge/replace the material hose.
Glue flows out of the nozzle when the application head is closed	Dirt in the needle seat or nozzle.	Clean the needle seat and nozzle.
	Needle seat is worn.	Replace needle seat and needle.
	Spring is broken.	Replace spring.

Chapter 6

Drawings and Spare Parts Lists



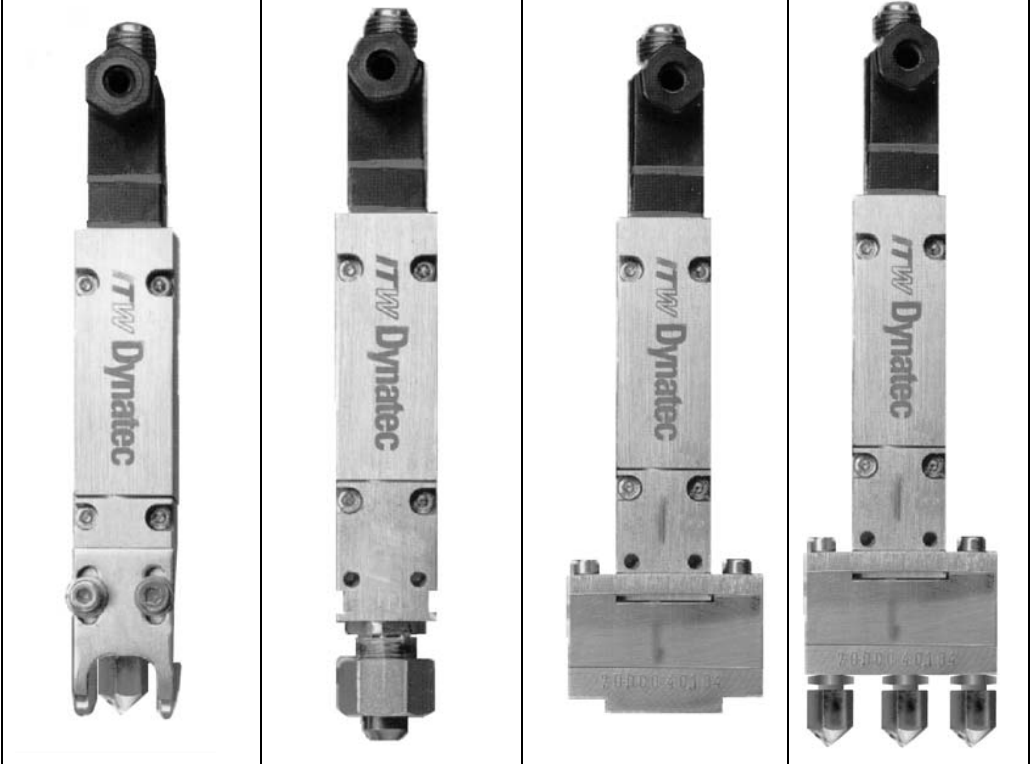
WARNING

All parts must be periodically inspected and replaced if worn or broken. Failure to do this can affect equipment's operation and can result in personal injury.

NOTE: Most common screws, nuts and washers called out in the manual are not for sale and they can be obtained locally at your hardware Store. Specialty fasteners are available by contacting ITW Dynatec's Customer Service.

6.1 Overview, DynaCold and DynaCold F Applicators

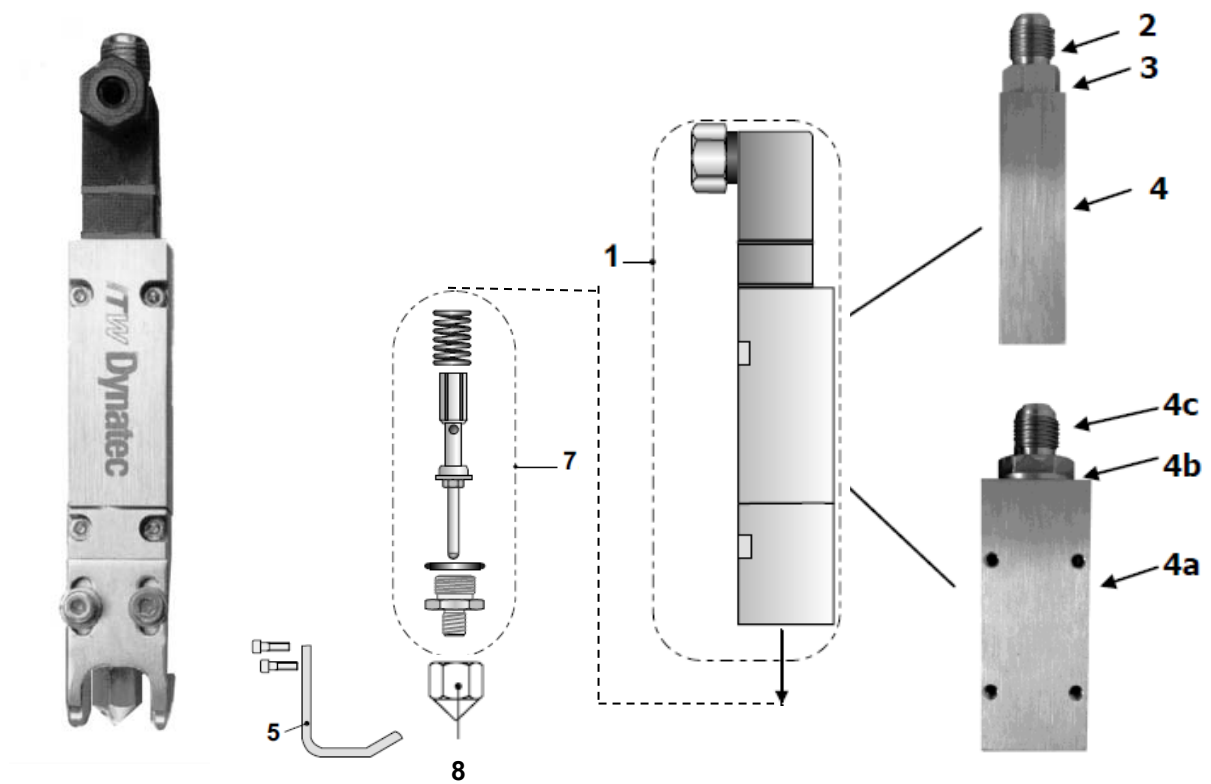
NOTE: The nozzles and nozzle plates are not included in the scope of supply. These must be ordered separately.

			
	With seat for full-jet nozzle	With seat for contact-nozzle	With seat for nozzle plate for contact application
	With seat for nozzle plate for distance application		
DynaCold without filter	PN 70.04304.703 * with needle stroke 0.4 mm	PN 70.04304.705 * with needle stroke 0.4 mm PN 70.04304.701 * with needle stroke 0.2 mm PN 70.04304.708 * with needle stroke 0.2 mm and dual nipple G1/8 - 6 mm	PN 70.04304.704 * with needle stroke 0.4 mm
DynaCold F with filter	PN 70.04304.753 * with needle stroke 0.4 mm	PN 70.04304.755 * with needle stroke 0.4 mm PN 70.04304.751 * with needle stroke 0.2 mm	PN 70.04304.754 * with needle stroke 0.4 mm

* see separate BOM.

6.2 Applicator with seat for full-jet nozzle

- DynaCold with seat for full-jet nozzle, with needle stroke 0.4 mm, (without filter), PN **70.04304.703**
- DynaCold F with seat for full-jet nozzle, with needle stroke 0.4 mm, (with filter), PN **70.04304.753**



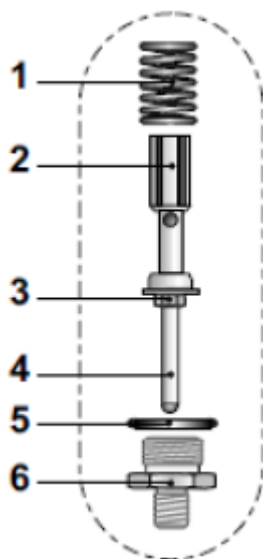
Item	PN	Description	DynaCold PN 70.04304.703	DynaCold F PN 70.04304.753
			Quantity	Quantity
1	70.04000.706 *	Application module without insert parts (item 7)	1	1
2	70.04000.122	Material connection HD G1/8-UNF 1/2/20 G	1	-
3	06.01082.013	O-ring Viton di=10,82 / S=1,78 mm	1	-
4	70.04000.123	Manifold (supply part)	1	-
5	70.04000.762 *	Hold-down device kit	1	1
7	70.04000.707 *	Valve coil armature with seat, stroke adjustment 0.4 mm	1	1
8	#	Full-jet nozzle	1	1
4a	70.04000.150	Filter block	-	1
	70.04000.151	Filter coarse 60-mesh, SW13	-	1
4b	06.01300.218	O-ring	-	1
4c	70.04000.152	Connection nipple on filter block	-	1

* see separate drawing/BOM.

NOTE: The nozzle is not included in the scope of supply. This must be ordered separately. See Full-Jet Nozzle options in Ch.6.7.1.

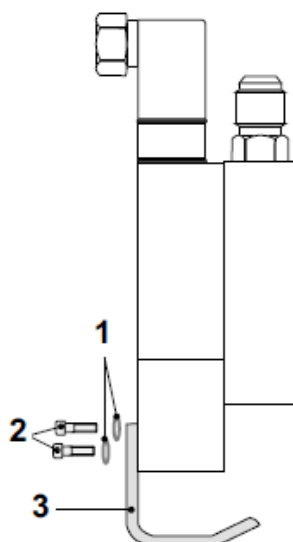
6.2.1 Valve Coil Armature Kit with Seat, PN 70.04000.707

- Valve Coil Armature Kit with Seat, Stroke adjustment 0.4 mm, PN 70.04000.707



Item	PN	Description	Qty
1	04.11009.098	Pressure spring	1
2	*	Valve coil armature	1
3	*	Hex nut M3	1
4	*	Nozzle needle	1
5	06.00925.012	O-ring Viton di=9,25/S=1,78 mm	1
6	*	Needle seat	1

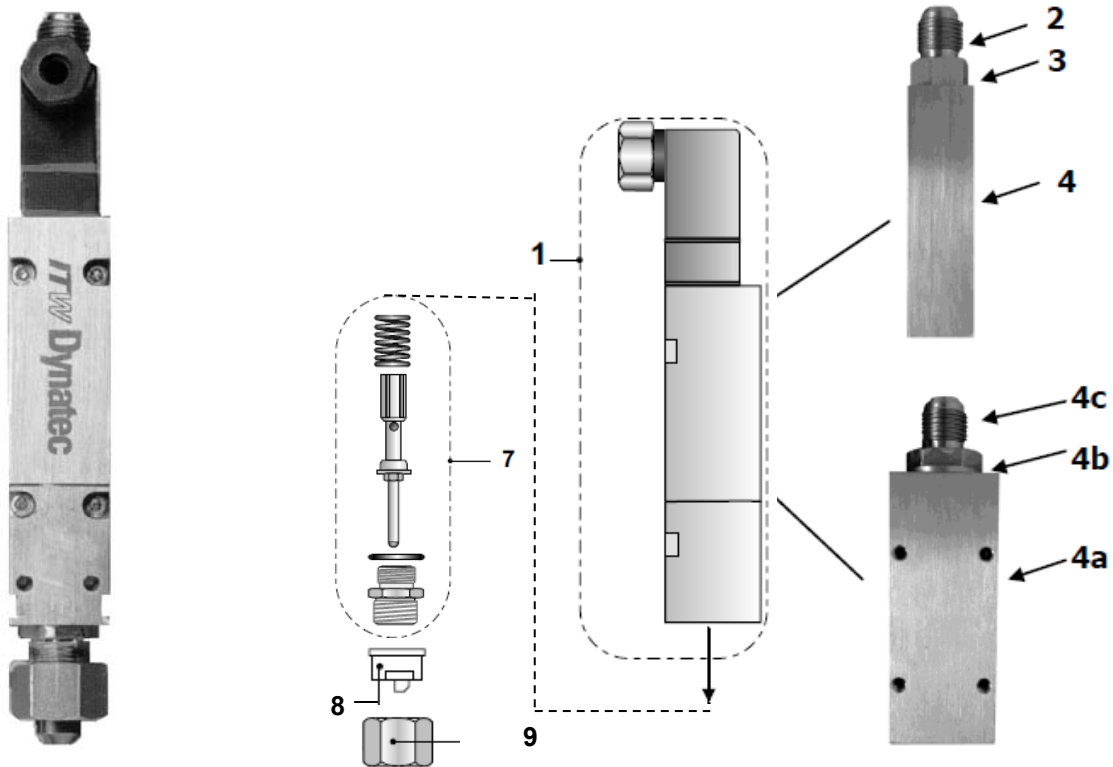
* only as kit.

6.2.2 Hold-down Device Kit, PN 70.04000.762

Item	PN	Description	Qty
1	I02.00430.125	Washer 4,3	2
2	I00.10408.912	Cylinder head screw M4x8 mm	2
3	70.04000.124	Hold-down device	1

6.3 Applicator with seat for contact-nozzle

- DynaCold with seat for contact-nozzle, with needle stroke 0.4 mm, (without filter), PN **70.04304.705**
- DynaCold with seat for contact-nozzle, with needle stroke 0.2 mm, (without filter), PN **70.04304.701**
- DynaCold with seat for contact-nozzle, with needle stroke 0.2 mm and dual nipple G1/8-6 mm, (without filter), PN **70.04304.708**
- DynaCold F with seat for contact-nozzle, with needle stroke 0.4 mm, (with filter), PN **70.04304.755**
- DynaCold F with seat for contact-nozzle, with needle stroke 0.2 mm, (with filter), PN **70.04304.751**



Item	PN	Description	DynaCold 70.04304.705 Quantity	DynaCold 70.04304.701 Quantity	DynaCold 70.04304.708 Quantity	DynaCold F 70.04304.755 Quantity	DynaCold F 70.04304.751 Quantity
1	70.04000.706 *	Application module without insert parts (item 7)	1	1	1	1	1
2	70.04000.122	Material connection HD G1/8-UNF 1/2/20 G	1	1	-	-	-
	07.01418.301	Material connection G1/8 => 6 mm hose, plastic	-	-	1	-	-
3	06.01082.013	O-ring Viton di=10,82 / S=1,78 mm	1	1	-	-	-
4	70.04000.123	Manifold	1	1	1	-	-
7	70.04000.708 *	Valve coil armature with seat, stroke adjustment 0.4 mm	1	-	-	1	-
	70.04000.745 *	Valve coil armature with seat, stroke adjustment 0.2 mm	-	1	1	-	1
8	#	Contact-nozzle	1	1	1	1	1
9	70.00100.115	Union nut	1	1	1	1	1
4a	70.04000.150	Filter block	-	-	-	1	1
	70.04000.151	Filter coarse 60-mesh, SW13	-	-	-	1	1
4b	06.01300.218	O-ring	-	-	-	1	1

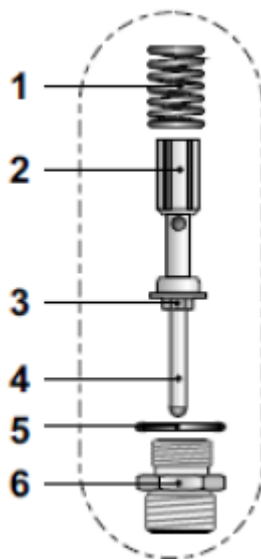
4c	70.04000.152	Connection nipple on filter block	-			1	1
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* see separate drawing/BOM.

NOTE: The nozzle is not included in the scope of supply. This must be ordered separately. See Contact-nozzle options in Ch.6.7.4 and 6.7.5.

6.3.1 Valve Coil Armature Kit with Seat

- Valve Coil Armature Kit with Seat, Stroke adjustment 0.4 mm, PN 70.04000.708
- Valve Coil Armature Kit with Seat, Stroke adjustment 0.2 mm, PN 70.04000.745

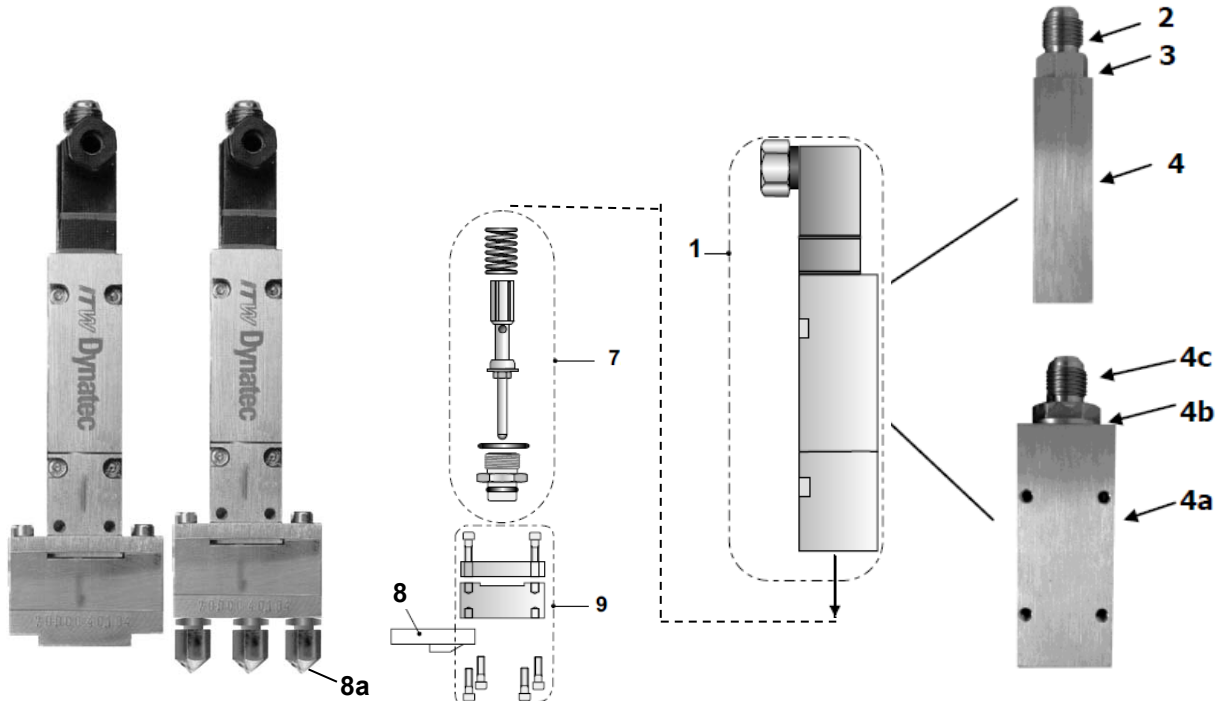


Item	PN	Description	Qty
1	04.11009.098	Pressure spring	1
2	*	Valve coil armature	1
3	*	Hex nut M3	1
4	*	Nozzle needle	1
5	06.00925.012	O-ring Viton di=9,25/S=1,78 mm	1
6	*	Needle seat	1

* only as kit.

6.4 Applicator with seat for nozzle plate and screw-in nozzle

- DynaCold with seat for nozzle plate and screw-in nozzle, with needle stroke 0.4 mm, (without filter), PN **70.04304.704**
- DynaCold F with seat for nozzle plate and screw-in nozzle, with needle stroke 0.4 mm, (with filter), PN **70.04304.754**



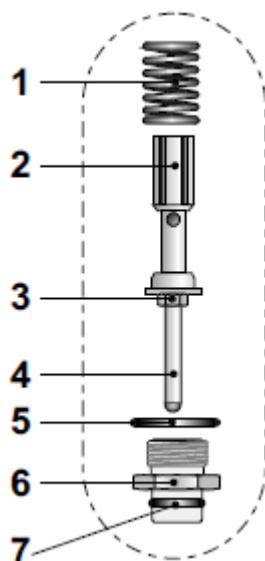
Item	PN	Description	DynaCold PN 70.04304.704 Quantity	DynaCold F PN 70.04304.754 Quantity
1	70.04000.706 *	Application module without insert parts (item 7)	1	1
2	70.04000.122	Material connection HD G1/8-UNF 1/2/20 G	1	-
3	06.01082.013	O-ring Viton di=10,82 / S=1,78 mm	1	-
4	70.04000.123	Manifold (supply part)	1	-
7	70.04000.710 *	Valve coil armature with seat, stroke adjustment 0.4 mm	1	1
8	#	Nozzle plate	1	1
8a	#	Screw-in nozzle(s)	from 2	from 2
9	70.04000.715 *	Mounting and Connecting plates for nozzle plate, assembly	1	1
4a	70.04000.150	Filter block	-	1
	70.04000.151	Filter coarse 60-mesh, SW13	-	1
4b	06.01300.218	O-ring	-	1
4c	70.04000.152	Connection nipple on filter block	-	1

* see separate drawing/BOM.

NOTE: The nozzle and nozzle plate are not included in the scope of supply. These must be ordered separately. See Screw-In Nozzle options in Ch.6.7.3 and Nozzle Plate options in Ch.6.8 and 6.9.

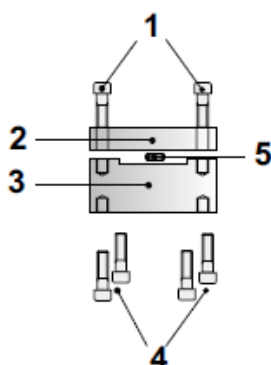
6.4.1 Valve Coil Armature Kit with Seat, PN 70.04000.710

- Valve Coil Armature Kit with Seat, Stroke adjustment 0.4 mm, PN 70.04000.710



Item	PN	Description	Qty
1	04.11009.098	Pressure spring	1
2	*	Valve coil armature	1
3	*	Hex nut M3	1
4	*	Nozzle needle	1
5	06.00925.012	O-ring Viton di=9,25/S=1,78 mm	1
6	*	Needle seat	1
7	06.01000.001	O-ring Viton 10,0 x 2,0 mm	1

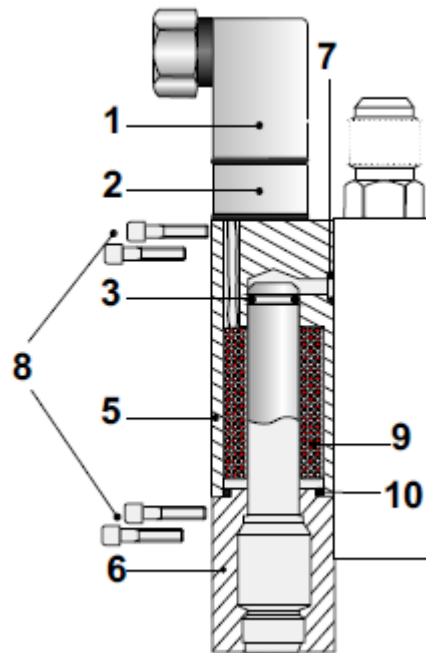
* only as kit.

6.4.2 Mounting and Connecting Plates for Nozzle Plate, PN 70.04000.715

Item	PN	Description	Qty
1	I00.10410.912	Cylinder head screw M4x10mm	2
2	70.04000.136	Mounting plate	1
3	70.04000.137	Connecting plate for nozzle plate	1
4	I00.10408.912	Cylinder head screw M4x8 DIN912 - A2	4
5	06.00368.007	O-ring Viton di=3,68/S=1,78 mm	1

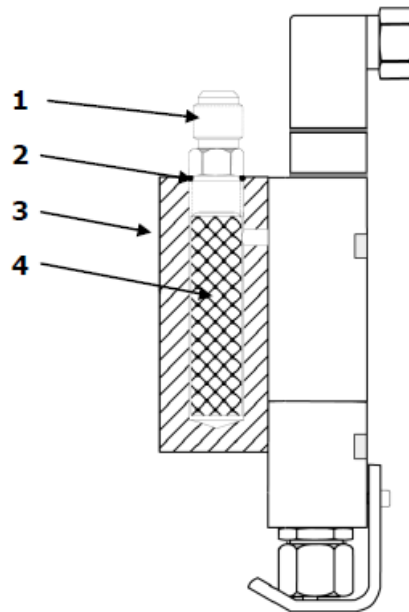
6.5 Application Module without insert parts, PN 70.04000.706

CAUTION: Do not disassemble the coil body! The coil could be damaged!



Item	PN	Description	Qty
1	05.01003.104 (107974)	Connector (plug) R, 17x17 mm, for electrical cold-glue applicator	1
2	05.01003.105	Plug socket, 3-pole, 17x17 mm	1
3	06.00607.010	O-ring Viton di=6.07/S=1.78 mm	1
5	70.04000.120	Coil housing	1
6	70.04000.121	Coil armature	1
7	06.00570.582	O-Ring Viton di=5,70/S=1,90 mm	1
8	00.10325.912	Hexagon socket screw M3x25 mm	4
9	05.54110.004	Coil	1
10	06.01717.017	O-ring Viton di=17.17/S=1.78 mm	1

6.6 Filter block for retrofitting, PN 70.04000.722



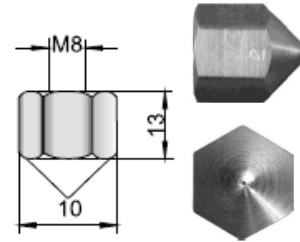
Item	PN	Description	Qty
1	70.04000.152	Connection nipple on filter block	1
2	06.01300.218	O-ring NBR di=13.00/S=2.5 mm	1
3	70.04000.150	Filter block	1
4	70.04000.151	Filter coarse, 60-mesh, SW13	1
	70.04000.153	Filter fine, 140-mesh, SW13	1

6.7 Nozzles

6.7.1 Full-Jet Nozzles

NOTE: Further nozzles are available upon request.

PN	Description
95.00020.102	Full-Jet Nozzle Ø 0.20 mm, 1-orifice
95.00025.102	Full-Jet Nozzle Ø 0.25 mm, 1-orifice
95.00030.102	Full-Jet Nozzle Ø 0.30 mm, 1-orifice
95.00035.102	Full-Jet Nozzle Ø 0.35 mm, 1-orifice
95.00040.102	Full-Jet Nozzle Ø 0.40 mm, 1-orifice
95.00045.102	Full-Jet Nozzle Ø 0.45 mm, 1-orifice
95.00050.102	Full-Jet Nozzle Ø 0.50 mm, 1-orifice
95.00060.102	Full-Jet Nozzle Ø 0.60 mm, 1-orifice
95.00070.102	Full-Jet Nozzle Ø 0.70 mm, 1-orifice
95.00080.102	Full-Jet Nozzle Ø 0.80 mm, 1-orifice
95.00090.102	Full-Jet Nozzle Ø 0.90 mm, 1-orifice
95.00095.102	Full-Jet Nozzle Ø 1.50 mm, 1-orifice



(example picture)

M8 internal thread
SW 10 (wrench size 10)

6.7.2 Single-Orifice Flanged Nozzles, Full-Jet

NOTE: Further nozzles are available upon request.

PN	Description
91.00020.102	Single-Orifice Flanged Nozzle Ø 0.20 mm
91.00025.102	Single-Orifice Flanged Nozzle Ø 0.25 mm
91.00030.102	Single-Orifice Flanged Nozzle Ø 0.30 mm
91.00035.102	Single-Orifice Flanged Nozzle Ø 0.35 mm
91.00040.102	Single-Orifice Flanged Nozzle Ø 0.40 mm
91.00045.102	Single-Orifice Flanged Nozzle Ø 0.45 mm
91.00050.102	Single-Orifice Flanged Nozzle Ø 0.50 mm
91.00060.102	Single-Orifice Flanged Nozzle Ø 0.60 mm
91.00070.102	Single-Orifice Flanged Nozzle Ø 0.70 mm
91.00080.102	Single-Orifice Flanged Nozzle Ø 0.80 mm
91.00090.102	Single-Orifice Flanged Nozzle Ø 1.00 mm
91.00120.102	Single-Orifice Flanged Nozzle Ø 1.20 mm
91.00130.102	Single-Orifice Flanged Nozzle Ø 1.30 mm
91.00150.102	Single-Orifice Flanged Nozzle Ø 1.50 mm



(example picture)

d = 14.5 mm outside
diameter

6.7.3 Screw-In Nozzles

NOTE: Further nozzles are available upon request.

PN	Description
91.60000.125	Screw-in Nozzle HSSS Ø 0.25 mm
91.60000.103	Screw-in Nozzle HSSS Ø 0.30 mm
91.60000.113	Screw-in Nozzle HSSS Ø 0.35 mm
91.60000.104	Screw-in Nozzle HSSS Ø 0.40 mm
91.60000.114	Screw-in Nozzle HSSS Ø 0.45 mm
91.60000.105	Screw-in Nozzle HSSS Ø 0.50 mm
91.60000.106	Screw-in Nozzle HSSS Ø 0.60 mm
91.60000.109	Screw-in Nozzle HSSS Ø 0.70 mm
91.60000.108	Screw-in Nozzle HSSS Ø 0.80 mm
91.60000.119	Screw-in Nozzle HSSS Ø 0.90 mm
91.60000.107	Screw-in Nozzle HSSS Ø 1.00 mm
91.60000.110	Screw-in Nozzle HSSS Ø 1.50 mm



(example picture)

M6 connection thread

6.7.4 Single-Orifice Contact-Nozzles

NOTE: Further nozzles are available upon request.

Single-Orifice Contact-Nozzles, 10 mm width, wide version:

PN	Description	Groove depth
93.02030.108	Single-Orifice Contact-Nozzle Ø 0.30 mm	0.2 mm
93.02035.108	Single-Orifice Contact-Nozzle Ø 0.35 mm	0.2 mm
93.02040.108	Single-Orifice Contact-Nozzle Ø 0.40 mm	0.2 mm
93.02045.108	Single-Orifice Contact-Nozzle Ø 0.45 mm	0.2 mm
93.02050.108	Single-Orifice Contact-Nozzle Ø 0.50 mm	0.2 mm
93.02060.108	Single-Orifice Contact-Nozzle Ø 0.60 mm	0.2 mm
93.02070.108	Single-Orifice Contact-Nozzle Ø 0.70 mm	0.2 mm
93.02090.108	Single-Orifice Contact-Nozzle Ø 0.90 mm	0.2 mm
93.06030.108	Single-Orifice Contact-Nozzle Ø 0.30 mm	0.6 mm
93.06035.108	Single-Orifice Contact-Nozzle Ø 0.35 mm	0.6 mm
93.06040.108	Single-Orifice Contact-Nozzle Ø 0.40 mm	0.6 mm
93.06045.108	Single-Orifice Contact-Nozzle Ø 0.45 mm	0.6 mm
93.06050.108	Single-Orifice Contact-Nozzle Ø 0.50 mm	0.6 mm



(example picture)

d = 14.5 mm
outside diameter

SW 10
(wrench size 10)

Single-Orifice Contact-Nozzles, 6 mm width, narrow version:

PN	Description	Groove depth
93.02025.106	Single-Orifice Contact-Nozzle Ø 0.25 mm	0.2 mm
93.02030.106	Single-Orifice Contact-Nozzle Ø 0.30 mm	0.2 mm
93.02035.106	Single-Orifice Contact-Nozzle Ø 0.35 mm	0.2 mm
93.02040.106	Single-Orifice Contact-Nozzle Ø 0.40 mm	0.2 mm
93.02050.106	Single-Orifice Contact-Nozzle Ø 0.50 mm	0.2 mm



(example picture)

d = 14.5 mm
outside diameter

SW 4
(wrench size 4)

6.7.5 Dual-Orifice Contact-Nozzles

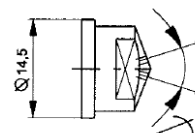
NOTE: Further nozzles are available upon request.

PN	Description	Orifice distance, A=	Groove depth
94.02330.101	Dual-Orifice Contact-Nozzle Ø 0.30 mm	3 mm	0.2 mm
94.02335.101	Dual-Orifice Contact-Nozzle Ø 0.35 mm	3 mm	0.2 mm
94.02340.101	Dual-Orifice Contact-Nozzle Ø 0.40 mm	3 mm	0.2 mm
94.02360.101	Dual-Orifice Contact-Nozzle Ø 0.60 mm	3 mm	0.2 mm
94.02365.101	Dual-Orifice Contact-Nozzle Ø 0.65 mm	3 mm	0.2 mm
94.02830.101	Dual-Orifice Contact-Nozzle Ø 0.30 mm	8 mm	0.2 mm
94.02840.101	Dual-Orifice Contact-Nozzle Ø 0.40 mm	8 mm	0.2 mm

6.7.6 Dual-Orifice Angle-Nozzles, Non-Contact

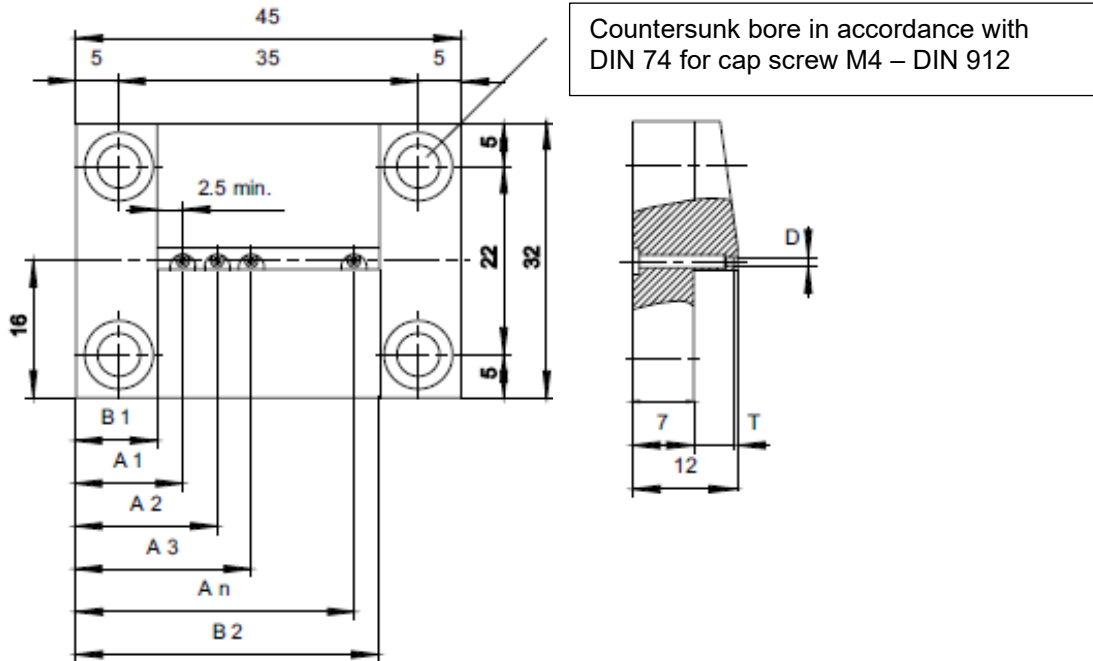
NOTE: Further nozzles are available upon request.

PN	Description	Angle 
92.00330.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.30 mm	30°
92.00335.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.35 mm	30°
92.00340.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.40 mm	30°
92.00345.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.45 mm	30°
92.00350.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.50 mm	30°
92.00360.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.60 mm	30°
92.00370.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.70 mm	30°
92.00430.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.30 mm	45°
92.00435.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.35 mm	45°
92.00440.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.40 mm	45°
92.00445.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.45 mm	45°
92.00450.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.50 mm	45°
92.00460.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.60 mm	45°
92.00470.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.70 mm	45°
92.00480.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.80 mm	45°
92.00490.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.90 mm	45°
92.00630.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.30 mm	60°
92.00635.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.35 mm	60°
92.00640.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.40 mm	60°
92.00645.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.45 mm	60°
92.00650.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.50 mm	60°
92.00660.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.60 mm	60°
92.00670.101	Dual-Orifice Angle-Nozzle, non-contact Ø 0.70 mm	60°



6.8 Nozzle Plates for Contact Application

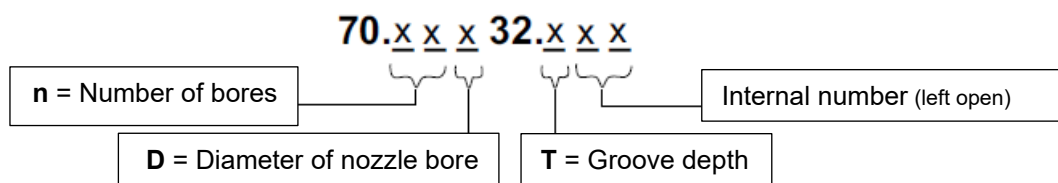
The nozzle plates are manufactured according to your individual requirements.
The basic size of the nozzle plate is 45 x 32 mm.
The number and diameter of the bores can be varied.
The following drawing shows these possibilities:



NOTE: We require the data shown in the drawing when the nozzle plates are ordered for the first time or re-ordered. Please copy this page and enter the data in the following table:

		Nozzle Plate 1	Nozzle Plate 2	Nozzle Plate 3	Nozzle Plate 4	Nozzle Plate 5
Number of bores	n					
Diameter of the bore	D					
Groove depth	T					
Distance 1 to edge	B1					
Distance 2 to edge	B2					
Distance to bore 1	A1					
Distance to bore 2	A2					
Distance to bore 3	A3					
Distance to bore 4	A4					
Distance to bore 5	A5					
Distance to bore 6	A6					
Distance to bore 7	A7					
Distance to bore 8	A8					
Distance to bore 9	A9					
Distance to bore 10	A10					
Distance to bore 11	A11					
Part number *						

* The part number is made up of the following data:

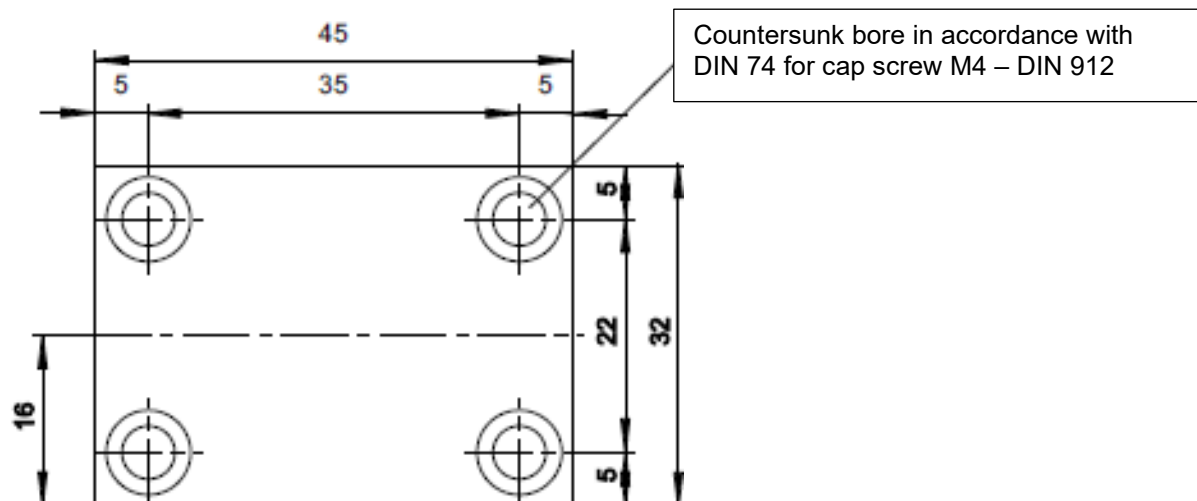


6.9 Nozzle Plate, blank, for Screw-In Nozzles

The nozzle plates are manufactured to meet your individual needs. The number of nozzles and distances are to be determined by the customer.

The basic size of the nozzle plate is 45 x 32 mm.

Please contact us if you have a requirement.

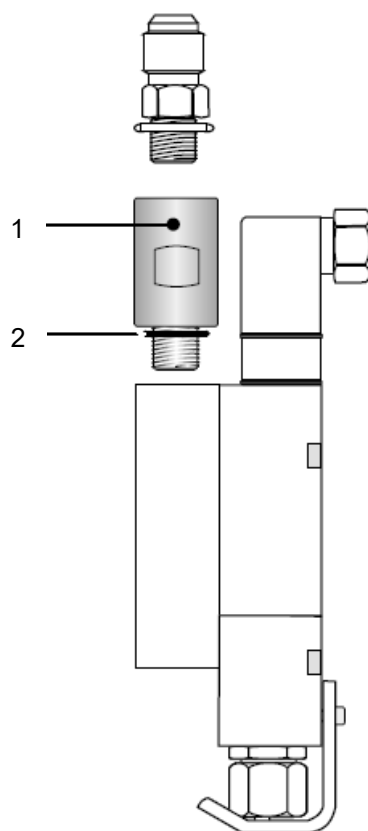


6.10 Nozzle Cleaning Needle Kits



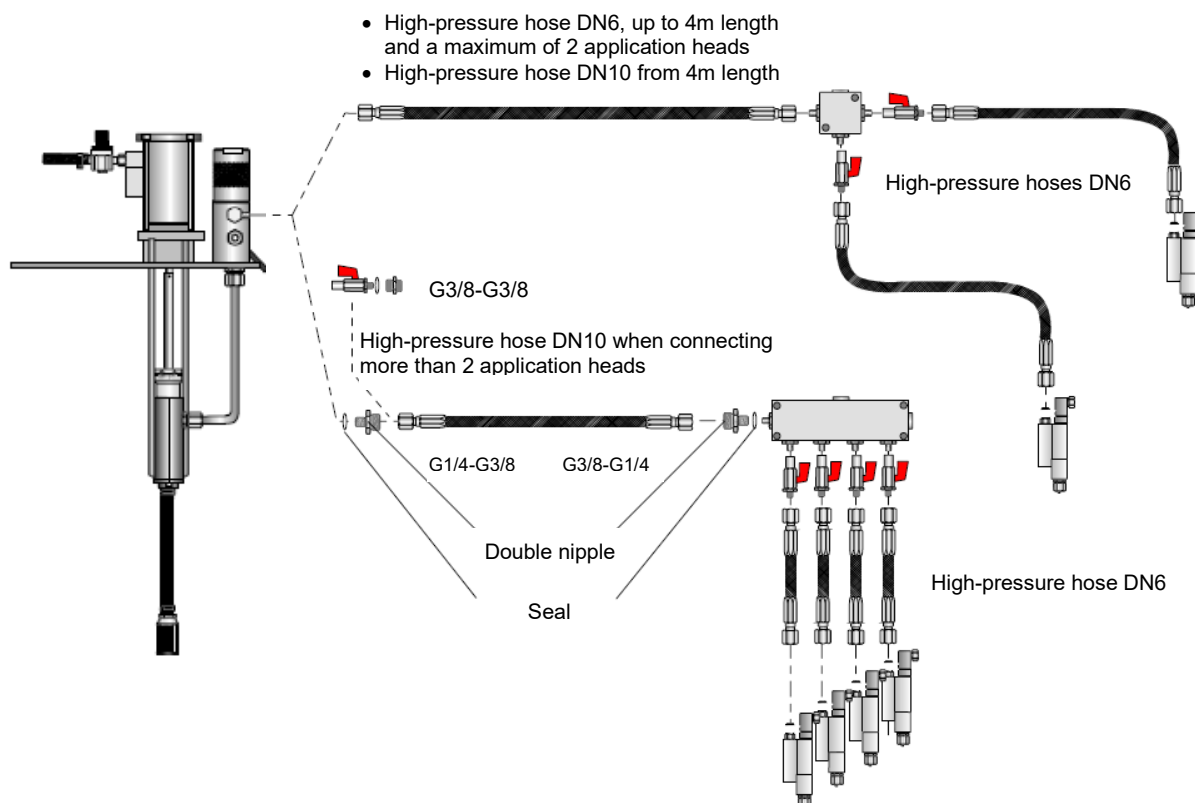
Item	PN	Description
	09.39000.002	Nozzle Cleaning Needle Kit, universal kit, 6 needles with handle, for nozzle-Ø from 0.3mm
	09.39000.015	Nozzle Cleaning Needle Kit, 6 needles, white 0.15, with handle, for nozzles Ø 0.2 - 0.25 mm

6.11 Extension Part for material connection



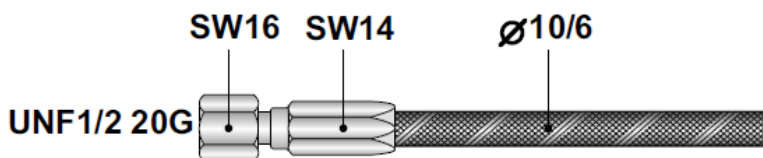
Item	PN	Description	Qty
1	70.04000.144	Extension part	1
2	06.01082.013	O-ring Viton di=10,82/S=1,78 mm	1

6.12 High pressure hoses



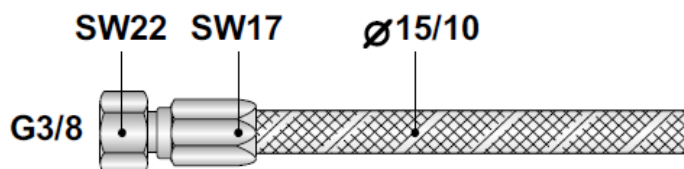
High-pressure hose DN6:

Part no.	Length
30.00002.727	0,2 m
30.00002.729	0,5 m
30.00002.730	1,0 m
30.00002.721	2,0 m
30.00002.731	3,0 m
30.00002.722	4,0 m
30.00002.732	5,0 m
30.00002.728	6,0 m
30.00002.736	7,0 m
30.00002.726	8,0 m
30.00002.733	10,0 m
30.00002.735	15,0 m



High-pressure hose DN10:

Part no.	Length
30.00002.743	3,0 m
30.00002.744	4,0 m
30.00002.745	5,0 m
30.00002.746	6,0 m
30.00002.750	10,0 m

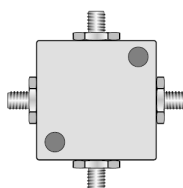


For this hose two double nipples G1/4-G3/8 PN 07.01438.101 and two seals PN 02.11350.001 are required.

6.13 Cold glue manifold for high pressure

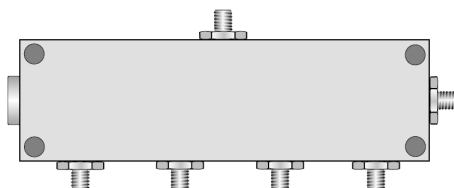
Cold glue manifold for 2 to 3 application heads:

Part no.	Quantity Applicators
30.00002.752	2
30.00002.753	3



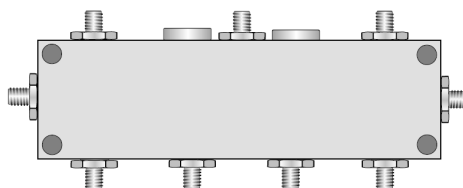
Cold glue manifold for 4 to 6 application heads:

Part no.	Quantity Applicators
30.00002.754	4
30.00002.755	5
30.00002.756	6

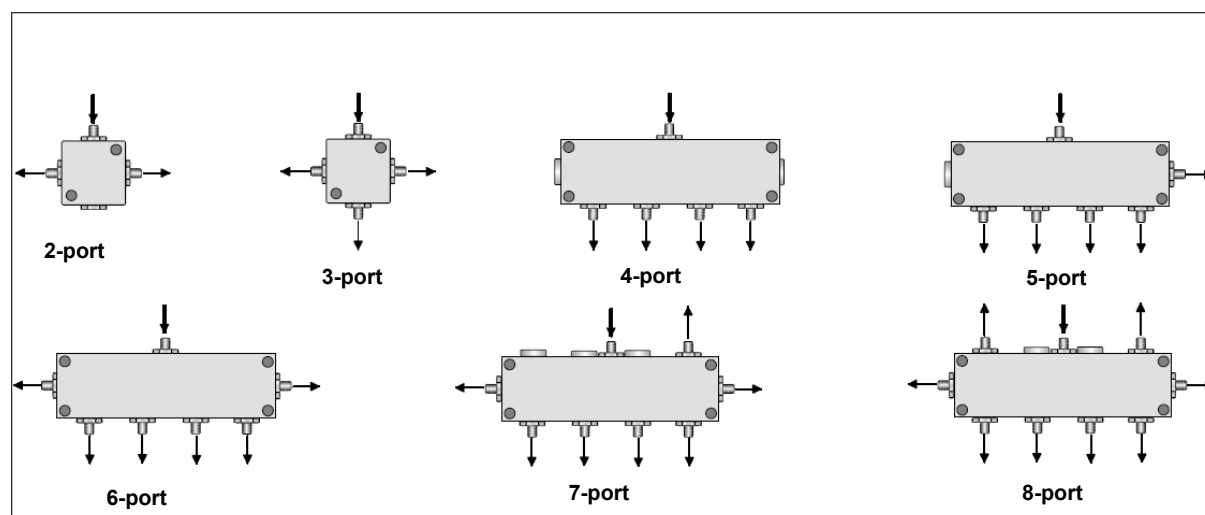


Cold glue manifold for 7 to 8 application heads:

Part no.	Quantity Applicators
30.00002.757	7
30.00002.758	8

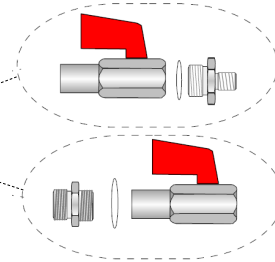


Connection configuration:



6.14 Shut-off unit for high and low pressure

Part no.	Description
30.00004.701	Shut-off unit G1/4-G1/4, inside - outside, complete, application head side
30.00004.702	Shut-off unit G3/8 NW10 complete cold glue pump side



6.15 Recommended Spare Parts

NOTE: In order to avoid longer downtimes, we recommend that you keep a small stock of the following wearing parts!

As a general rule, we recommend that you have the same quantity of the following parts available as listed in the parts lists in Ch. 6 and as listed in your order:

- Module
- Valve coil armature with seat
- O-rings, Seals
- Pressure spring
- Nozzles
- Nozzle nut
- Nozzle plate
- Filter
- Hoses

Manual Revisions

Revision	Page	Description
Rev.4.24	-	New manual layout.

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