Hypertherm®

Abrasive pot

Operator Manual

809080 | Revision 1 | English

One of Hypertherm's long-standing core values is a focus on minimizing our impact on the environment. Doing so is critical to our, and our customers', success. We are always striving to become better environmental stewards; it is a process we care deeply about.

Abrasive pot

Operator Manual

809080
Revision 1

English
Original Instructions

March 2022

Hypertherm Inc.
Hanover, NH 03755 USA
www.hypertherm.com

North America

USA and Canada

Technical service

800-643-9878 Toll-free

TechnicalService-Hanover@Hypertherm.com

Customer service

800-737-2978 Toll-free

Return materials

866-643-7711 Toll-free

Asia Pacific

TechnicalService-Asia@Hypertherm.com

Singapore

65 6841 2489

65 6841 2490 Fax

China

86-21-60740003

86-21- 60740393 Fax

Japan

+81-6-6225-1183

+81-6-6225-1184 Fax

India

+91-11-40521201/ 2/ 3/

+91 7838908053 Mobile

+91-11 40521204 Fax

Korea

+82-51-747-0358

+82-51-701-0358 Fax

Australia and New Zealand

+61 (0) 7 3103 1695

+61 (0) 4 3760 6995 Mobile

+61 (0) 7 3219 9012 Fax

Europe, Middle East, and Africa

Technical service

00 800 4973 7843 Toll-free

+31(0) 165 596900

+31(0) 165 596906 Fax

TechnicalService-HyperthermEurope@Hypertherm.com

Customer service

00 800 3324 9737 Toll-free

+31 (0) 165 526156

00 800 4973 7329 Toll-free fax

+31 (0) 165 596948 Fax

Return materials

+31 (0) 165 596936

+31 (0) 165 596906 Fax

South America

TechnicalService-LANZA@Hypertherm.com

Brazil

55 11 2409 2636

55 11 2408 0462 Fax

Argentina

+54 (11) 5199-4668

Peru

+51 (1) 718-5090

Chile

+56 (2) 495-7369

Venezuela

+58 (212) 335-7522

México

52 55 5681 8109

52 55 5681 7978

52 55 5683 2127 Fax

Waterjet product warranty coverage

Product	Warranty coverage up to:
HyPrecision pumps	27 months from the ship date, or 24 months from the date of proven installation, or 4,000 hours of operation, whichever occurs first
PowerDredge™ abrasive removal system	15 months from the ship date or 12 months from the date of proven installation, whichever occurs first
EcoSift™ abrasive recycling system	15 months from the ship date or 12 months from the date of proven installation, whichever occurs first
Bulk abrasive pots	15 months from the ship date or 12 months from the date of proven installation, whichever occurs first
Abrasive regulators	15 months from the ship date or 12 months from the date of proven installation, whichever occurs first
On/off valve air actuators	15 months from the ship date or 12 months from the date of proven installation, whichever occurs first
Diamond orifices	600 hours of operation with the use of a thimble filter and compliance with Hypertherm's water quality requirements

Consumable parts are not covered by this warranty. Consumable parts include, but are not limited to, high-pressure water seals, check valves, cylinders, bleed-down valves, low-pressure seals, high-pressure tubing, and filters.

Warranty

Hypertherm maintains a global regulatory management system to make sure that products comply with regulatory and environmental requirements.

National and local safety regulations

National and local safety regulations shall take precedence over instructions supplied with the product. The product shall be imported, installed, operated, and disposed of in accordance with national and local regulations applicable to the installed site.

Certification test marks

Certified products are identified by 1 or more certification test marks from accredited testing laboratories. The certification test marks are found on or near the data plate.

Each certification test mark means that the product and its safety-critical parts conform to the national safety standards as reviewed and determined by that testing laboratory. Hypertherm puts a certification test mark on its products only after that product is manufactured with safety-critical parts that have been approved by the accredited testing laboratory.

Once the product has left the Hypertherm factory, the certification test marks are invalidated if any of these events occurs:

- The product is modified in a manner that creates a hazard or nonconformance with the applicable standards.
- Safety-critical parts are replaced with unapproved spare parts.
- Assembly is unauthorized.
- An accessory that uses or generates a hazardous voltage is added.
- There is tampering with a safety circuit or other feature that is designed into the product as part of the certification, or otherwise.

A Conformité Européene (CE) mark constitutes a manufacturer's declaration of conformity to applicable European directives and standards. Only those versions of Hypertherm products with a CE mark found on or near the data plate have been tested for compliance with the European Low Voltage Directive and the European Electromagnetic Compatibility Directive.

Differences in national standards

Nations can apply different performance, safety, or other standards. National differences in standards include, but are not limited to:

- Voltages
- Plug and cord ratings
- Language requirements
- Electromagnetic compatibility requirements

These differences in national or other standards can make it impossible or impractical for all certification test marks to be put on the same version of a product. For example, the Canadian Standards Association (CSA) versions of Hypertherm's products do not comply with European electromagnetic compatibility requirements and therefore do not have a CE mark on the data plate.

Countries that require a CE mark or have compulsory electromagnetic compatibility regulations must use CE versions of Hypertherm products with the CE mark on the data plate. These include, but are not limited to:

- Australia
- New Zealand
- Countries in the European Union
- Russia

It is important that the product and its certification test mark be suitable for the end-use installation site. When Hypertherm products are shipped to one country for export to a different country, the product must be configured and certified properly for the end-use installation site.

Higher-level systems

When an original equipment manufacturer (OEM) or system integrator adds equipment such as cutting tables, motor drives, motion controllers, or robots to a Hypertherm waterjet cutting system, the combined system is considered a higher-level system. A higher-level system with hazardous moving parts can constitute industrial machinery or robotic equipment, in which case the system integrator or end-use customer can be subject to more regulations and standards than those applicable to the waterjet cutting system as manufactured by Hypertherm.

It is the responsibility of the end-use customer and the OEM or system integrator to do a risk assessment for the higher-level system, and to provide protection against hazardous moving parts. Unless the higher-level system is certified when the OEM or system integrator incorporates Hypertherm products into it, the installation can be subject to approval by local authorities. Seek advice from legal counsel and local regulatory experts if you are uncertain about compliance.

External interconnecting cables between parts of the higher-level system must be suitable for contaminants and movement as required by the final end-use installation site. When the external interconnecting cables are subject to oil, dust, water, or other contaminants, hard usage ratings can be required.

When external interconnecting cables are subject to continuous movement, constant flexing ratings can be required. It is the responsibility of the end-use customer or the OEM or system integrator to make sure that the cables are suitable for the application. Since there are differences in the ratings and costs that can be required by local regulations for higher-level systems, it is necessary to verify that external interconnecting cables are suitable for the end-use installation site.

Proper disposal of Hypertherm products

Hypertherm waterjet cutting systems, like all products with electronics, can contain materials or parts, such as printed circuit boards, that can not be discarded with ordinary waste. It is your responsibility to dispose of Hypertherm product or part in an environmentally suitable manner and in compliance with national and local codes.

In the United States, check all federal, state, and local laws. In the European Union (EU), check the EU directives, national, and local laws. In other countries, check national and local laws. Consult with legal or other compliance experts when applicable. For more information, go to www.hypertherm.com/customer-support/product-service/recycling.

Proper handling and safe use of chemicals

Material safety data sheets (MSDS) and safety data sheets (SDS) are part of a hazard communication plan that supplies detailed information about hazardous chemicals. The information includes the chemical's toxicity and reactivity, first aid for exposure, approved storage and disposal, recommended protective equipment, and spill-handling procedures.

The Occupational Safety and Health Administration (OSHA) has presented new hazardous chemical labeling requirements as a part of its recent revision of the Hazard Communication Standard (29 CFR 1910.1200), to align with the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The GHS is an international system for standardizing chemical classification and labeling.

Chemical regulations in the USA, Europe, and other locations require that Material Safety Data Sheets (MSDS) and Safety Data Sheets (SDS) be made available for chemicals that are supplied with the product and chemicals used in or on the product. This list of chemicals is supplied by Hypertherm.

To see MSDS and SDS:

1. Go to www.hypertherm.com.

1. Search for **documents library**.

2. Select **Waterjet Family** from the All dropdown list under Product/Product type.

3. Select **Material Safety Data Sheets** from the All Categories dropdown list.

These navigation instructions can change without notice.

Particle emission and wastewater quality

Hypertherm does not manufacture or supply the materials that are cut and has no knowledge whether the particles released from materials that are cut will pose a physical hazard or health risk. Please consult with your supplier or other technical advisor if you need guidance concerning the properties of the material you will cut using a Hypertherm product.

If you are not fully aware of and up to date on all applicable government regulations and legal standards for the installation site, consult a local expert before purchasing, installing, and operating the equipment.

The end user is responsible for the safe operation of this equipment.

The safety precautions in this manual are general and can not anticipate every situation. Hypertherm Inc. acknowledges that unforeseen situations such as equipment failure, site variability, insufficient maintenance, failure of control equipment, and other events can cause equipment damage, injuries, or death. It is the user's responsibility to identify hazards and to take the steps necessary to minimize risks.

Keep these instructions near the equipment. This manual is intended to familiarize the user with the equipment and its parts, safe operation, and maintenance.

All people who operate or are exposed to this equipment must know this information:

- Applicable safety standards
- The use, limitations, and care of personal protective equipment
- The location of the written hazard communication program and safety data sheets
- How to recognize hazardous energy sources
- The correct methods for isolating and controlling energy, including lock out–tag out procedures

 **DANGER**	A person who works on deenergized machinery can be seriously injured or killed if the machinery is reenergized without permission. All workers must respect lock out–tag out devices. All workers in an area where energy-control procedures are used must receive training regarding the energy-control procedure and the prohibition against removing a lock-out or a tag-out device.

User qualification and training

All users must read and understand these instructions before installing, operating, or doing maintenance on this equipment.

Do not permit an untrained person to operate a waterjet pump. Operators must be qualified to operate and maintain this equipment. Training should include this information:

- How to start and stop the pump during routine operation and in an emergency situation
- The conditions and actions that can lead to injuries to people and damage to the pump
- How to operate all controls
- How to identify and respond to fault indicators
- How to do maintenance procedures
- A copy of the operator manual

This list is not all-inclusive.

Emergency medical information and treatment

The use of high-pressure equipment exposes the operator and other people in the area to high-pressure water. Potential harms include eye injuries, lacerations, infections, and amputations. Do not put ice or heat on a waterjet injury. Support injured limbs and extremities above heart level if possible.

A high-pressure injection injury is a surgical emergency. Seek immediate medical treatment for all high-pressure waterjet injuries. Delayed treatment can cause serious injuries or death.

Waterjet operators should carry a waterproof emergency medical tag or card that describes the nature of high-pressure waterjet injuries and the recommended treatment. Show the tag or card to emergency responders and medical professionals.

This card can be copied, cut out, laminated, and folded.

MEDICAL INFORMATION **A high-pressure injection injury is a surgical emergency.** **Seek immediate medical treatment for all high-pressure waterjet injuries.** **Delayed treatment can cause serious injuries or death.**	**The person carrying this card has been exposed to a waterjet of up to 4,137 bar (60,000 psi) and a velocity of 609 m/s (2,000 feet/second). The waterjet can contain abrasive materials.** Skin can appear intact or show a minor pinhole-sized puncture wound. The injured area can become swollen, painful, and pale over the next 4 to 6 hours. Tissue becomes ischemic and necrotic within 12 hours. Consult a surgical specialist immediately for decompression, removal of foreign materials, and debridement. Administer broad-spectrum, intravenous antibiotics for Gram-negative and Gram-positive organisms. X-ray is the imaging of choice. Acute compartment syndrome is possible. Leave the wound open.	Do not use solvents other than isotonic sodium chloride solution for irrigating the wound. Do not use digital or local nerve blocks. Give analgesics by mouth or injection.

Information and hazard symbols

Some symbols in this table could apply to other products.

 **DANGER**	This symbol identifies an imminently hazardous situation, which, if not avoided, will cause serious injuries or death.
 **DANGER**	Dangerous voltage To reduce the risk of serious injuries or death, wear approved protection and follow safety recommendations when working with electricity.
 **WARNING**	This symbol identifies a potentially hazardous situation, which, if not avoided, can cause serious injuries or death.
 **WARNING**	A waterjet is a cutting tool. A high-pressure injection injury is a surgical emergency. Seek immediate medical treatment for all high-pressure waterjet injuries. Delayed treatment can cause serious injuries or death.
 **WARNING**	Do not touch a hot surface.
 **WARNING**	Do not operate this equipment without the guard installed.
 **WARNING**	Risk of explosion
 **CAUTION**	This symbol identifies a potentially hazardous situation, which, if not avoided, can cause minor or moderate injuries or property damage.
	Caution This symbol identifies a potentially hazardous situation, which, if not avoided, can cause minor or moderate injuries or property damage.
	High-pressure water can cause eye injuries. Wear approved eye protection when operating or working near this equipment.
	Prolonged exposure to noise can cause permanent hearing loss. Wear approved ear protection and control exposure time when operating or working near this equipment.
	High-pressure water can cause severe cuts or lacerations, abrasions, and punctures. Wear approved hand protection when operating or working near this equipment. Precision parts have sharp corners or edges. Wear protective gloves when handling parts.
	Some materials produce airborne contaminants or suspended particles when cut. Wear approved respiratory protection.
	Refer to the instruction manual. Read and understand all of the safety guidelines in this manual.

	This symbol identifies a mandatory action.
	This symbol identifies a prohibited action.
	This symbol identifies tools or materials that are required or recommended for a procedure.
	This symbol identifies a note or helpful information.

Symbols and marks found on the data plate and the equipment

Some symbols or marks in this table could apply to other products.

	Correct direction of motor rotation (motor rotation arrow)
S/N	Serial number
V	Volts
Φ	Number of phases in a power system
Hz	Frequency (hertz)
FLA	Full-load current (amperage)
SCCR	Short-circuit current rating
IP	Ingress protection rating
Ⓜ Imax	Primary motor maximum current draw (amperes)
Ⓜ kW	Primary motor power output (kilowatts)
l/min	Maximum outlet flow rate (liters/minute)
MPa	Maximum outlet water pressure (megapascals)
DWG	System schematic drawing number
CE	The Conformité Européene (CE) mark shows that a product complies with standards to the product to which the mark is affixed. The CE mark signifies the manufacturer's declaration of conformity to applicable European directives and standards. Only those versions of products with a CE mark found on or near the data plate have been tested for compliance with the European Low Voltage Directive and the European Electromagnetic Compatibility (EMC) Directive.

Section 1
Terminology

Some terms could apply to other products.

abrasive
Fine mesh particles (typically garnet) used for the waterjet cutting process

bar
A unit of pressure; 1 bar equals 100 kPa or 14.5 psi or 100,000 $N{\cdot}m^2$

fitting
A coupling, valve, or gauge that stops, regulates, or directs the flow of water in a pipe

hose
A flexible hollow cylinder; dimensions are based on its inside diameter (ID)

ID (inside diameter)
The diameter measurement of the inside of a hose

kPa
A kilopascal (kPa) is a unit of pressure; 1 kPa equals 0.01 bar or 0.15 psi or 1,000 $N{\cdot}m^2$

OEM
An original equipment manufacturer (OEM) of machines that include Hypertherm products that are sold directly to end users

OD (outside diameter)
The diameter measurement of the outside of a tube

MPa
A megapascal is a unit of pressure relative to vacuum; 1 MPa equals 10 bar or 145 psi or 1,000,000 N·m2

psi
Pound-force per square inch (PSI) is a unit of pressure; 1 psi equals 0.07 bar or 7 kPa or 6,894 $N{\cdot}m^2$

regulator

The air regulator on the abrasive pot

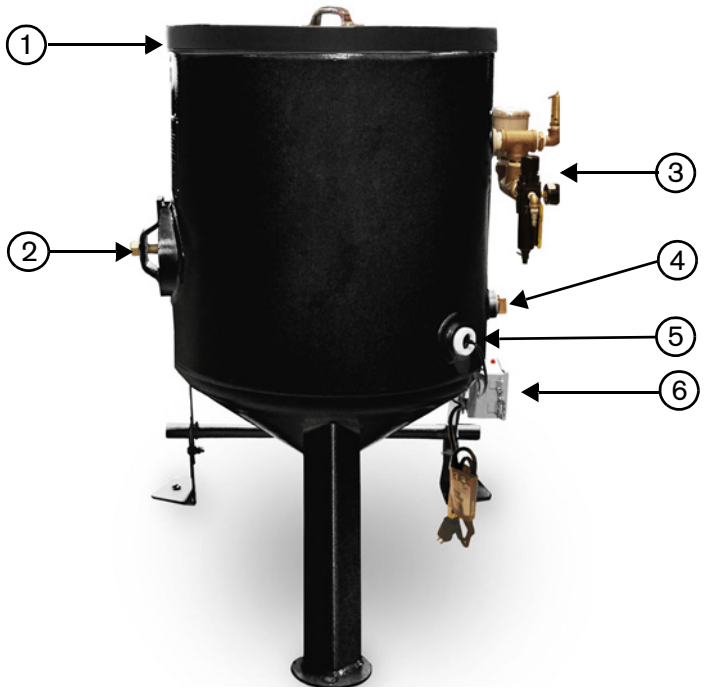
tube

A flexible hollow cylinder; dimensions are based on its outside diameter (OD); the inside diameter (ID) depends on the thickness of the tube

Section 2

Product description

The abrasive pot holds the abrasive before it reaches the abrasive regulator. Air pressure feeds abrasive to the regulator, where it is used for cutting. A single valve pressurizes and depressurizes the pot.



1 Cover

2 Side access cover

3 Air pressure assembly

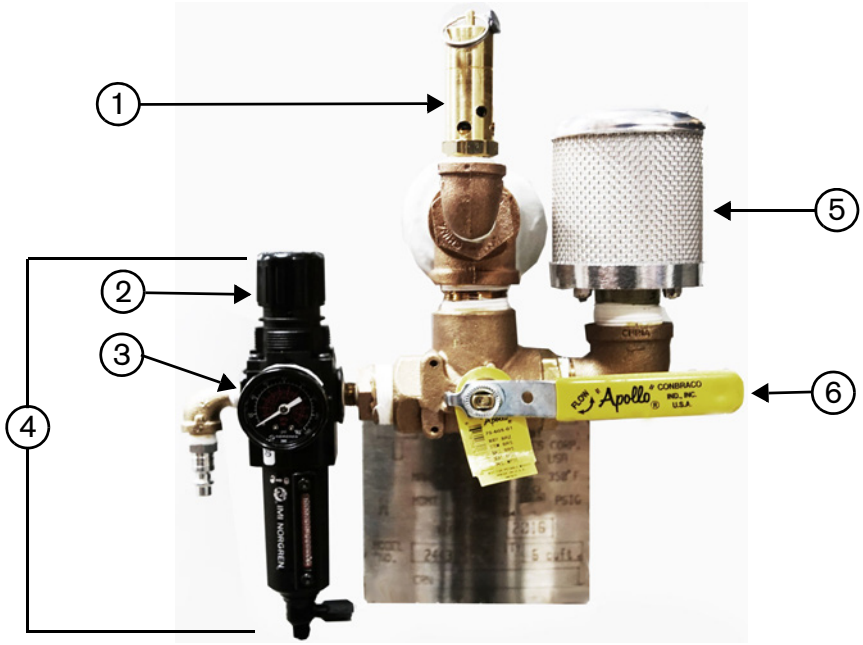
4 Plugged port (unused)

5 Low-level sensor

6 Low-level sensor control box

Items 4 and 5 are interchangeable.

Air pressure assembly



1 Relief valve

2 Air regulator knob

3 Air pressure gauge

4 Air regulator

5 Muffler

6 Ball valve lever

Relief valve

The relief valve allows pressurized air to escape, which prevents the pot from being overpressurized.

Air pressure gauge

The air pressure gauge shows the air pressure in psi, bar, and MPa.

Air regulator

The air regulator controls the pot pressure.

Muffler

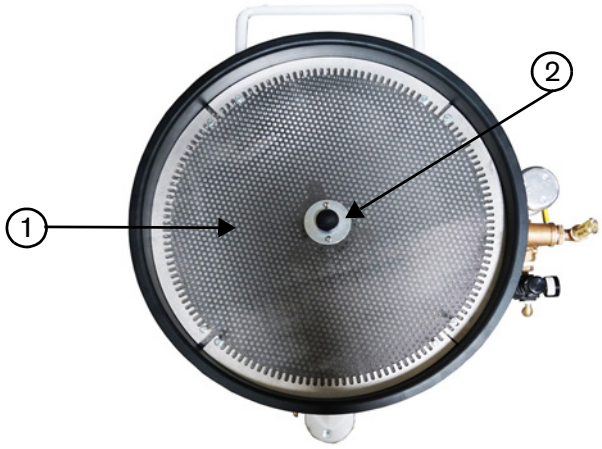
The muffler diffuses air when the pot is depressurized.

Ball valve

The ball valve is a 3-way valve that pressurizes and depressurizes the pot.

Filling screen and pot plug

This view is from the top of the pot with the cover removed.



1 Filling screen

2 Pot plug knob

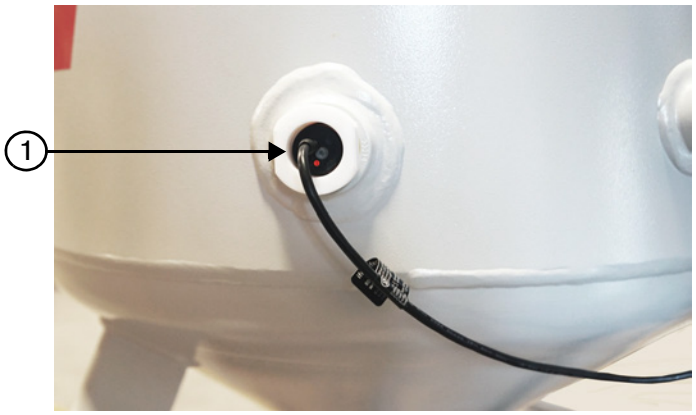
Filling screen

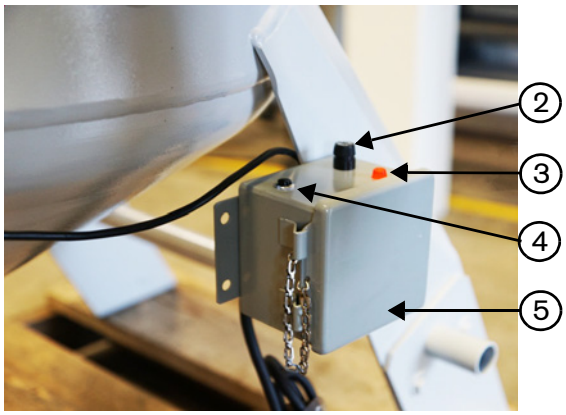
The filling screen helps break up abrasive as it's poured into the pot. It also captures debris that could block abrasive flow.

Pot plug knob

The pot plug knob is attached to the pot plug, which is used to pressurize the pot.

Low-level sensor





1 Low-level sensor

2 Fuse

3 Low-level indicator light

4 Test button

5 Low-level sensor control box

The low-level sensor detects the abrasive level in the pot.

The low-level indicator light turns on when the abrasive level is low.

Press the test button to make sure the low-level indicator light turns on.

Section 3
Options

The abrasive pot is available with these optional features.

Feed hose

Standard pots are equipped with a 50-foot feed hose. A 100-foot feed hose (part number 14563) is also available.

Section 4
Operation

Hypertherm products are designed and manufactured with a commitment to continuous quality control and safety. Contact a Hypertherm Technical Service Associate for information about the installation, operation, maintenance, and repair of this equipment.

The pot operates with air supplied by a 3-way 2-position ball valve. When the ball valve is in the horizontal position, the valve is open and air pressurizes the pot. When the ball valve is in the vertical position, the valve is closed and the pot depressurizes.

Safety

	Refer to the instruction manual. Read and understand all of the safety guidelines in this manual.
	Follow all safety requirements and applicable safety laws and regulations.
	Examine and clean the equipment regularly. Make repairs immediately.
	Keep the work area clean and free of fluid spills.

Tips

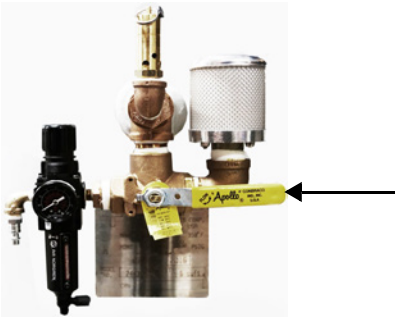
- Use catch basins under areas where water or abrasive can spill during maintenance or repair procedures.
- Follow local protocols for recycling or disposal of parts and materials. Refer to **Recycling and end of product life** on page 36.

Inspect the pot before operation

- Look for air leaks, deterioration, damage, or other conditions that can interfere with operation.
- Make sure that all connections and fasteners are tight, including locking devices, hoses, hose clamps, and fittings.
- Inspect the air regulator bowl for water. If the bowl has moisture in it, empty the bowl and wipe it out with a dry cloth. Refer to page 30 for instructions.

Pressurize the pot

1. Open the ball valve.



Ball valve in the open position

2. Remove the cover. Pull up on the plug on top of the filling screen.
3. Replace the cover.

Depressurize the pot

Close the ball valve. Pressurized air escapes through the muffler.

Ball valve in the closed position

Fill the pot with abrasive

CAUTION	Stop cutting before filling the pot.
	Depressurize the pot before adding abrasive to the pot.

1. Remove the cover.
2. Pour the abrasive through the filling screen into the pot.
3. Replace the cover.

Pressurize the pot before cutting.

Adjust the pot pressure

	Set the pressure at about 2 bar (0.2 MPa or 30 psi).

The pressure knob on the top of the air regulator adjusts the pot pressure.

To increase pressure, turn the pressure knob anticlockwise to a pressure less than desired, then turn the pressure knob clockwise.

To decrease pressure, turn the pressure knob anticlockwise.

Section 5
Troubleshooting

Safety

	Refer to the instruction manual. Read and understand all of the safety guidelines in this manual.
	Examine and clean the equipment regularly. Make repairs immediately.
	Follow all safety requirements and applicable safety laws and regulations.

Abrasive flow can be limited or stopped by a variety of causes.

The pot is empty

When the pot is empty, the feed hose fills with air and the abrasive does not flow.

Fill the pot. Refer to **Fill the pot with abrasive** on page 27 for instructions.

Abrasive blows out of the top of the regulator

1. Make sure that there is enough abrasive in the pot. When the abrasive level is low, air can flow past the abrasive and blow abrasive out of the top of the regulator. Refer to **Fill the pot with abrasive** on page 27 for instructions.

2. Make sure that the pot pressure is correct. If the pressure is too high, air can blow through the abrasive. Refer to **Adjust the pot pressure** on page 27 for instructions.

The abrasive is contaminated

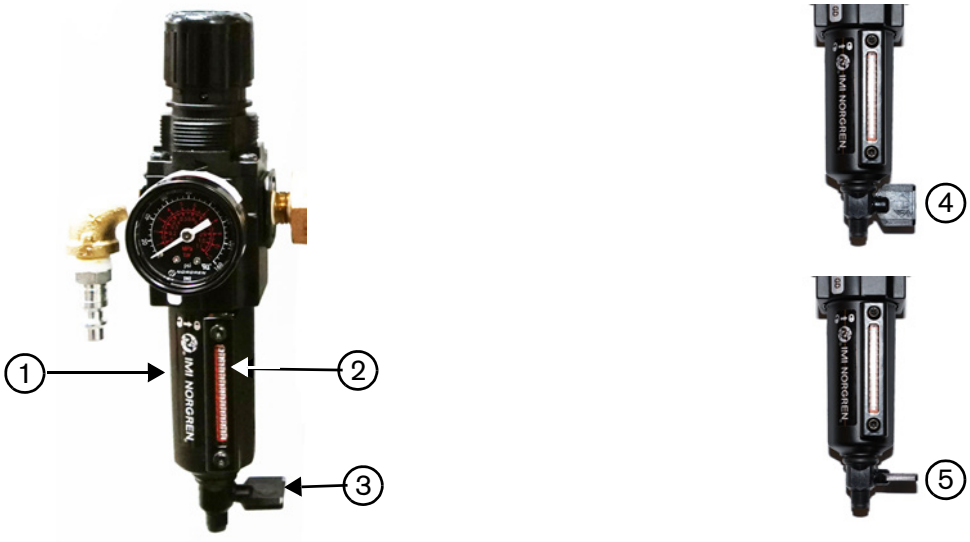
Debris such as pieces from the abrasive bags can block the feed hose. Wet abrasive can also block the feed hose.

Prevent humidity in the abrasive with an air dryer on the compressed air source.

1. Close the ball valve. Pressurized air escapes through the muffler.
2. Disconnect the feed hose from the bottom of the abrasive pot. Direct the abrasive into a container.
3. Inspect the abrasive and the pot for moisture and debris. Discard contaminated abrasive. Refer to **Recycling and end of product life** on page 36.

There is water in the regulator bowl

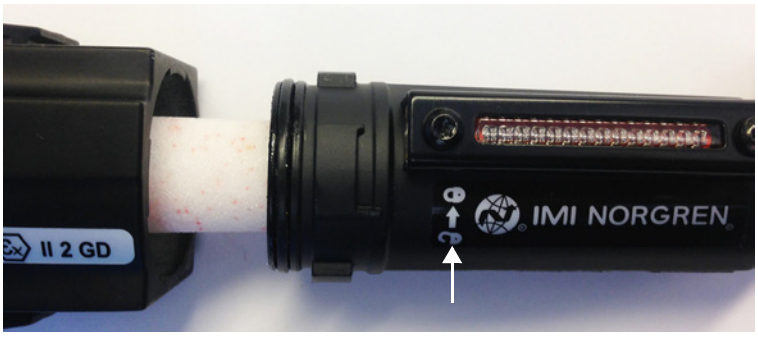
The liquid level indicator on the air regulator displays the water level in the air regulator bowl.



1 Air regulator bowl
2 Liquid level indicator
3 Drain handle
4 Drain open
5 Drain closed

1. Turn off the compressed air source.
2. Twist the drain handle 90° to open the drain.
3. When the bowl is empty, twist the drain handle 90° to close the drain.

To remove the bowl, twist the regulator bowl anticlockwise (toward the unlock symbol), then pull the bowl off of the regulator. Wipe the inside of the bowl with a clean, lint-free towel.



The low-level sensor is out of adjustment

The low-level sensor is set at the factory to monitor the abrasive level. The low-level sensor can stop sensing accurately if it is out of adjustment.

To adjust the low-level sensor, refer to the low-level sensor's manufacturer's instructions or contact a Hypertherm Technical Service Associate for assistance.

Section 6
Installation

Safety

	Refer to the instruction manual. Read and understand all of the safety guidelines in this manual.
	Keep the work area clean and free of fluid spills.

Hypertherm products are designed and manufactured with a commitment to continuous quality control and safety. Contact a Hypertherm Technical Service Associate for information and support regarding the installation, operation, maintenance, and repair of this equipment.

Buyer obligations

Hypertherm does not always ship the pump with hydraulic fluid in the tank. It is the buyer's responsibility to fill the tank with hydraulic fluid.

The buyer is responsible for these obligations:

- Cooperate with Hypertherm and the Hypertherm original equipment manufacturer (OEM) regarding the installation of the equipment.
- Research and comply with all local codes, including requirements for wastewater disposal.
- Make sure that all utilities are available during installation.
- Make all connections to the equipment.

Requirements

Location

- Install the pot near the work area but away from sources of moisture.
- To provide access for filling, install the pot near one of the front legs of the cutting machine.
- Make sure that there is a minimum clearance of 91 cm (36 inches) on all sides of the abrasive pot to permit room for maintenance and repair.

Air

The recommended air pressure is 40 psi.

Prevent humidity in the abrasive with an air dryer on the compressed air source.

Electrical power

DANGER	To reduce the risk of electrical shock, the incoming power supply must include a protective earth ground.

The low-level sensor requires a 115 V outlet.

Connect the abrasive regulator to the pot

Unload the pump

	The feed hose should have minimal elevation changes. Do not install the feed hose higher than 3.05 m (10 feet) above the floor.
	The abrasive regulator should be mounted before connecting the abrasive pot to it. Refer to the abrasive regulator manufacturer's instructions.

A hose clamp can be used to secure the hose to the fitting.

1. Connect the feed hose to the hose barb on the bottom of the abrasive pot.

2. Refer to the abrasive regulator manufacturer's instructions to attach the other end of the feed hose to the regulator.

Connect the compressed air to the pot

Required parts, tools, and materials

1/4-inch air hose with a 1/4-inch industrial hose coupling

Compressed air source

1. Connect the air hose to the compressed air source.
2. Connect the other end of the air hose to the 1/4-inch quick connect on the air regulator.

Do the first startup

1. Make sure that the pot is installed correctly and that all of the hose connections are tight.
2. Set up the abrasive regulator according to the manufacturer's instructions. Make sure that the abrasive regulator is closed.
3. Plug the cord from the low-level sensor box into a 115 V outlet.
4. Remove the cover.
5. Pour the abrasive through the filling screen into the pot until the low-level sensor light turns off.
6. Pressurize the pot.
   a. Open the ball valve.
   b. Remove the cover. Pull up on the plug on top of the filling screen.
7. Replace the cover.
8. Adjust the pot pressure to 40 psi. For longer delivery lengths, increase the pot pressure.

	Do not exceed 80 psi.

- To increase pressure, turn the pressure knob anticlockwise to a pressure less than desired, then turn the pressure knob clockwise.
- To decrease pressure, turn the pressure knob anticlockwise.

9. Close the ball valve. Pressurized air escapes through the muffler.

Recycling and end of product life

At the end of the life of the product or its parts, recycle or dispose of materials and parts using an environmentally satisfactory method and in accordance with local regulations. If the product contains substances that are harmful to the environment, remove and dispose of them in accordance with current local regulations. This includes liquids such as hydraulic fluid.

Make sure that hazardous substances are disposed of safely and that the correct personal protective equipment is used. The safety specifications must be in accordance with the current local regulations at all times.