

J & D Innovations, L.L.C.

PDRU Disclaimers and Hazard Warnings

⚠ WARNING

The Pressurized Drum Release Unit (PDRU) should be used ONLY by trained and certified Hazardous Materials Technician Level personnel under 29 CFR 1910.120(q)(6)(iii), who are familiar and knowledgeable with the hazards of pressurized drums and the potentially hazardous substances contained within the drums. Keep these instructions with the tool. Read all instructions before use to avoid death or serious injury and follow the safety instructions set forth in this manual. Obtain and Refer to the Material Safety Data Sheets for the contents of the drum before proceeding. The hazards associated with pressurized drums are significant. Some such hazards may cause death or serious injury and include, but are not limited to the following:

Catastrophic Drum Failure

⚠ DANGER

Never approach a drum that is making a pinging noise. Such noises can indicate ongoing chemical or physical reactions inside a drum or active failure of the drum's construction. A drum that is making a pinging sound is at much greater risk of immediate rupture. This presents a risk of death or serious injury from explosion blast or propelled objects. Evacuate the area and seek protective cover until the pinging has ceased.

⚠ DANGER

Never approach a drum that is visually expanding or deforming. A drum that is visually expanding presents a dynamic threat. The drum could rupture or explode causing fire, gas cloud or the release of pressurized contents in an uncontrolled manner and projecting the drum material as shrapnel presents an extreme danger to all persons and property in the vicinity of the drum. Evacuate the area and seek protective cover until the drum expansion or deformation has ceased.

⚠ WARNING

It is possible that pressure inside a bulging drum can cause the drum to fail suddenly as the pressure inside the drum reaches the point at which the drum "self-vents". In such circumstances the drum's lid, sides or fastening hardware can become projectiles thrown with great force capable of causing death or serious injury or property damage. The "self-venting" rupture of the bulging drum or lid failure can also cause the contents of the drum to escape, often under great pressure, with the risk of injury and environmental contamination. Always approach bulging drums with extreme caution in accordance with current Hazmat protocols and use necessary protective equipment and barriers.

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Important: Keep This Document With the PDRU

Drum Content Hazards

⚠ WARNING

Contents of drum may be flammable resulting in fire or explosion when gases or contents are exposed to oxygen, flame or a spark. This presents a risk of death or serious injury from burn danger or injury from explosion blast or propelled objects. The contents of the drum should be determined before using the PDRU and care should be taken to prevent any flame or spark from being exposed in vicinity of any drum containing flammable product or having residue of flammable products on its surface.

⚠ WARNING

Contents of drum may be a strong caustic acid or base substance that may injure skin, eyes, lungs, or other body parts or may have an adverse or corrosive effect on any material contacted by escaping contents or gases. This presents a risk of death or serious injury, including blindness from contact with substances released or upon drums. The contents of the drum should be determined and Material Safety Data Sheets associated with the contents should be reviewed to determine the hazards presented by the contents of the drum. Protective clothing and equipment should be worn to prevent exposure to hazardous products within a drum and unprotected contact with drum contents should be avoided. If the contents of a drum cannot be determined, it should be assumed that it contains the most dangerous products known to be on site. If site product inventory is not available, the drum should be regarded as presenting the highest threat level.

⚠ WARNING

Contents of drum may be slippery or viscous and release of contents may create a slip hazard or allow stacked drums or debris to slide or fall. This presents a risk of death or serious injury from slip and fall from stepping in drum contents or loss of grip arising from contact with slippery drum contents or crush injury arising from stacked items or stationary items moving from lubrication provided by drum contents being released. Care should be taken to avoid stepping in fluids released from drums. Drums should be secured against movement and items resting against drums should be removed or secured before using the PDRU.

⚠ WARNING

Insure that the area is properly ventilated and appropriate respiratory protection is used when operating the PDRU. Contents of drum may contain dangerous or poisonous gases which may be harmful to persons in the vicinity of drum when the bung cap is opened. This presents a risk of death or serious injury from exposure to hazardous gases including burns, loss of consciousness, asphyxiation, inhalation of toxic substances, blindness, disorientation, or other injury. This danger is greater when the drum is located in a confined space. Insure adequate ventilation when venting any drum. Even non-toxic gases can cause unconsciousness or death if found in sufficient concentration to displace the PDRU operator's access to oxygen.

⚠ WARNING

Contents of drum may contain dangerous, noxious or poisonous gases that may cause loss of consciousness or loss of balance creating a fall hazard, loss of judgment, or other adverse consequences. In addition to working in a well ventilated area, the PDRU operator should have sufficient access to back up personnel in the event of any injury or incapacity. This presents a risk of death or serious injury from exposure to hazardous gases including burns, loss of consciousness, asphyxiation, inhalation of toxic substances, blindness, disorientation, or other injury. This danger is greater when the drum is located in a confined space. Insure adequate ventilation when venting any drum. Even non-toxic gases can cause unconsciousness or death if found in

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sufficient concentration to displace the PDRU operator's access to oxygen. Insure that the area is properly ventilated and appropriate respiratory protection is used when operating the PDRU.

▲ WARNING

Contents of drum may contain bio-hazards that create the risk of exposure to illness or disease. This presents the risk of death or serious injury from illnesses associated with contact with bio-hazard. Protective clothing and equipment should be worn to prevent exposure to hazardous products within a drum and unprotected contact with drum contents should be avoided. If the contents of a drum cannot be determined, it should be assumed that it contains the most dangerous products known to be on site. If site product inventory is not available, the drum should be regarded as presenting the highest threat level.

▲ WARNING

Contents of drum may contain toxic chemicals or nuclear waste which could expose personnel and environment to significant risks of death or severe personal injury. This presents a risk of death or serious injury, including blindness from contact with substances released or upon drums. The contents of the drum should be determined and Material Safety Data Sheets associated with the contents should be reviewed to determine the hazards presented by the contents of the drum. Protective clothing and equipment should be worn to prevent exposure to hazardous products within a drum and unprotected contact with drum contents should be avoided. If the contents of a drum cannot be determined, it should be assumed that it contains the most dangerous products known to be on site. If site product inventory is not available, the drum should be regarded as presenting the highest threat level. If there is a possibility the drum may contain nuclear waste only personnel trained in the hazards associated with such waste should operate the PDRU.

▲ WARNING

The release of gases may cause a cloud of fine particulate matter to form in the air. The exposure of a fine particulate cloud to a spark or flame has been shown to cause an explosion and/or fire. This presents the risk of death or serious injury including burns or blast type injury from blast or thrown debris. Take care to insure the area has been cleared of accumulations of dust or fine particulate substances, flour, ash, unmixed concrete, etc. Take steps to prevent sparks or flame from being present when venting a drum.

▲ WARNING

The contents of a drum may conduct electric current and the release of such contents may cause an electrical field if it comes into contact with a power line or other source of electricity. Such an electric field could result in the drum, the PDRU, and any object capable of conducting electricity, such as a chain link fence, to become a charged electrical field. Touching that field may cause severe injury, burns, or death due to electric shock. This presents the risk of death or serious injury including burns from electrocution. Always make sure the drum or contents vented from the drum will not come into contact with live electrical wires, outlets or other sources of electrical current.

▲ WARNING

Contents of a drum that have been exposed to fire or extreme heat may still be hot even if the outside of the drum is cool to the touch. Such contents or hot gases released from such contents can cause death or serious injury if there is bodily contact with such materials or gases. This presents the risk of death or serious injury including burns and scalding. Until the temperature of contents of drum has been determined, treat all drums as though the contents are sufficiently heated to cause burns or injury.

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Non-Essential Personnel

⚠ WARNING

Insure that non-essential personnel are not in the vicinity of the work site and are removed to a safe distance from the work site and the hazards presented by the situation. This presents a risk of exposing unnecessary personnel to the risk of death or serious injury, may block access to entrances and exits for evacuation or admitting support backup personnel should a dangerous or hazardous situation develop or escalate; non-essential personnel increases the risk of introduction of unanticipated substances, actions, catalysts, distractions or pressure changes which change the site dynamic and create risks beyond those experienced in a controlled environment. Always maintain a controlled environment to the extent possible and exclude non-essential personnel.

Empty Drum Hazards

⚠ WARNING

Do not assume that a drum that appears to be empty or has small quantity of product inside of it is not dangerous. A drum with a head space between the liquid inside and the top of the drum can present a greater risk as the space allows for a greater volume of potentially volatile or hazardous gases to accumulate. Even a very small amount of head space can present the risk of a significant gas accumulation. A bulging drum indicates that the contents are likely under significant pressure. This presents a risk of death or serious injury from burn danger or injury from explosion blast or propelled objects, including drum shrapnel; exposure to dangerous gases, respiratory injury; eye injury; loss of consciousness or asphyxiation arising from release of the accumulated gases inside. This risk is compounded by inadequate ventilation. Always determine the contents of the bulging drum from reliable information. Do not assume a drum label accurately reflects the contents of the drum as the drum may have been refilled with a different product and the label information may not be accurate. Once the drum contents have been identified, obtain the Material Safety Data Sheet for the product inside the drum and such other products as may be in the vicinity of the object drum. Always work in a well ventilated area. Always have sufficient trained support personnel available to assist the operator in the event of any injury or impairment arising from exposure to substances inside the drum or present at the site. Take steps to insure no open flame, spark or other ignition source is near the work location.

Drum Content Verification

⚠ WARNING

PDRU personnel should always verify contents of all drums to be vented prior to using the PDRU and take appropriate precautions for the hazards presented by the contents of the drums. Failure to determine the contents of drum presents the risk of death or serious injury because flammability and explosive potential of contents cannot be determined, interactions with known substances present cannot be evaluated and the threat(s) presented by contents cannot be fully determined. Review the Material Safety Data Sheet associated with the known contents of the drum. If the contents of a drum cannot be determined, it should be assumed that it contains the most dangerous products known to be on site. If site product inventory is not available, the drum should be regarded as presenting the highest threat level.

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⚠ WARNING

Contents of different drums when commingled may produce chemical reactions that transform inert substances into harmful gases or create the risk of explosion, flammability or other changes into more dangerous or toxic substances. This presents the risk of death or serious bodily injury arising from fire, explosion, or chemical reaction arising from chemical reaction when two or more substances are mixed. Care should be taken to prevent commingling of drum contents. Review the Material Safety Data Sheet associated with the known contents of the drum. If the contents of a drum cannot be determined, it should be assumed that it contains the most dangerous products known to be on site. If site product inventory is not available, the drum should be regarded as presenting the highest threat level. Insure that the drum does not have other chemicals or substances pooled on it, or in the vicinity of the drum, before the drum is vented.

⚠ WARNING

Even when the contents of a drum are known, exposure to extreme heat or cold may alter the properties of the drum's contents. Before venting the drum make every effort to verify contents of the drum and determine the state of the drum's contents. Review the Material Safety Data Sheet associated with the known contents of the drum. If the contents of a drum cannot be determined, it should be assumed that it contains the most dangerous products known to be on site. If site product inventory is not available, the drum should be regarded as presenting the highest threat level.

Spark and Static Hazards

⚠ WARNING

The operation of any mechanical device carries the risk of a spark. The presence of flammable or explosive gases and a spark could trigger a fire or explosion. This presents the risk of death or serious injury including burns or blast type injury from blast or thrown debris. Use the PDRU in a well ventilated area, insure that flammable or explosive substances are not on the surfaces prepared for use of the PDRU; avoid sudden strikes or blows that may cause a spark. Review the Material Safety Data Sheet associated with the known contents of the drum. If the contents of a drum cannot be determined, it should be assumed that it contains the most dangerous products known to be on site. If site product inventory is not available, the drum should be regarded as presenting the highest threat level. The presence of static electric sparks resulting in fires has been documented when filling portable gasoline containers placed on fiberglass, carpeted or plastic pick-up and sport utility beds. Such fires have been the cause of death or serious injuries. To avoid such hazards, drums suspected of containing flammable contents should not be opened while placed upon carpet, fiberglass or plastic or in other environments known to produce static electric sparks.

Projectile Hazards

⚠ WARNING

The release of gases or an explosion may cause debris to be thrown as a projectile. This presents the risk of death or serious injury including burns or blast type injury from blast or thrown debris. Care should be taken to remove potential projectiles from the vicinity of a drum prior to operation of the PDRU to reduce the risk of death, injury or property damage from flying objects.

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Evacuation Routes



Always insure the operator of the PDRU and all personnel present at the site have access to routes of evacuation and rescue that are free of obstructions and substances that pose a slip or trip hazard. Be aware that personnel movements can change airflow at the site and disperse gases in unanticipated directions. This presents a risk of death or serious injury if avenues of evacuation or rescue are blocked or dangerous to pass through or personnel are trapped or movement is necessary through or near the site of an unfolding reaction or hazard at the site. To the extent the site permits consider all alternate evacuation routes and insure those routes are clear before commencing operation of the PDRU. Pre-plan your evacuation routes and how rescue personnel will gain access to the PDRU operator should the need arise. Communicate evacuation plan in advance to avoid conflicting actions of personnel to the extent possible.

Training



The Pressurized Drum Release Unit (PDRU) should be used ONLY by trained and certified Hazardous Materials Technician Level personnel under 29 CFR 1910.120(q)(6)(iii), who are familiar and knowledgeable with the hazards of pressurized drums and the potentially hazardous substances contained within the drums.



The PDRU is intended as a tool for individuals who have been fully trained in hazardous material handling and the risks associated therewith, including the risks posed by the site location.

It is impossible to foresee all of the risks associated with venting pressurized drums. J&D Innovations is not responsible for improper use of the PDRU or use of this product by persons lacking training in current Hazmat protocols.

Drum Tipping Hazards



If the drum being vented is not adequately secured, the pull pressure exerted by the operation of the PDRU could cause the drum to move, tip over, roll or otherwise present hazards from a rolling, falling or tipping drum. This presents the risk of death or serious injury or property damage including crush injury from drums tipping over and rolling or falling against persons or objects. Always make sure the drum is properly and adequately secured before using the PDRU; and objects supported by the drum are either removed or provided with support independent from the object drum to prevent a movement of adjoining objects if the object drum is moved.



When attaching the barrel stabilizer strap to prevent the barrel from tipping over or moving while using the PDRU; be careful to insure the object used to stabilize the drum will provide sufficient support to

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prevent the drum from moving or tipping over and will not result in a loss of structural support to the structure where the drum is located or cause objects to be pulled onto the object drum or present a puncture hazard for the object drum. This presents the risk of death or serious injury including crush injury from drums tipping over and rolling or falling against persons or objects. If a drum falls over and is punctured, it poses the risk of release of its contents and the dangers associated there with as explained in these instructions.

▲ WARNING

When attaching the PDRU or barrel stabilizer strap to the object drum be careful that the securing devices are not over tightened or they may result in a penetration of the drum or rupture of the drum skin that could cause an immediate release of pressure and/or contents from the drum resulting in death or serious injury. This presents the risk of death or serious injury from including crush injury from drums tipping over and rolling or falling against persons or objects. If a drum falls over and is punctured it poses the risk of release of its contents and the dangers associated there with as explained in these instructions.

Personal Protective Equipment

▲ WARNING

Any situation involving the release of contents under pressure presents a situation in which severe injury to the eyes, lungs or skin can occur. Always insure that adequate eye/face protection is worn when using the PDRU and access to an eyewash station is available in accordance with the hazards presented with the substances in the drums being vented. Protective clothing and devices should be used to protect the skin and body from hazards associated with exposure to the contents of the drum being vented. Protective breathing equipment should be used to protect against the risk of injury or death arising from exposure to the substance in the drum, gases and fumes from the substance or depletion of oxygen arising from the release of gases from a pressurized drum.

▲ CAUTION

Always make sure proper protective clothing and safety gear is in good condition and used in accordance with its manufacturer's instructions and in accordance with recognized Hazmat training.

▲ WARNING

The operator must always wear appropriate personal protective equipment, eye protection, face shields, protective clothing, shield, proper breathing apparatus or respirators and personnel protective barriers appropriate for the types of exposure presented by the contents of the drum and the risks presented by the object drum and site conditions as determined by personnel trained in hazardous material handling and the risks associated therewith.

Reading and Understanding the Instructions

▲ WARNING

The operator of the PDRU must read and understand the instructions thoroughly before using the PDRU. Failure to fully read and understand the instructions could result in personal injury or death to the operator, persons in the vicinity of the drum and/or damage to the PDRU or other property.

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⚠ CAUTION

Always keep instructions with the PDRU to prevent improper use and alert personnel to hazards.

Protective Barriers

⚠ WARNING

The PDRU is equipped with a cable release to permit the PDRU operator to vent the drum from a location physically removed from the drum. Care should be taken to take advantage of any protective barriers available. However, it is the responsibility of the PDRU operator to conduct a risk assessment of the conditions presented by any given situation taking into account the knowledge of the contents of the drum, environmental factors, nature of drum damage, presence of other risk factors in accordance with hazardous material clean-up and containment protocols. Failure to consider all hazards including nature of drum contents, chemicals present in the work site, proper ventilation and access to support personnel presents the risk of death or serious injury. Always follow these warnings, verify the contents of the product involved, review Material safety data sheets, and verify the operator is sufficiently outside the expected area of danger given the risk presented, including but not limited to anticipated blast range, fireball, gas cloud, fluid release; and use protective clothing, breathing apparatus, face shields, eye protection, protective barriers.

⚠ WARNING

Contents under pressure can be projected with great force and distance when released through a small opening. This presents the danger of death or serious injury arising from contact with the drum contents or pressurized streams of fluids or gases or cross contamination of other substances in the vicinity of the work site with resulting reactions and penetration of barriers by pressurized streams of fluids or gases.

⚠ WARNING

Always operate the PDRU from the maximum distance site conditions permit and use appropriate protective clothing, face shields, respirators, breathing apparatus, eye protection, physical barriers; maintain a controlled environment by removing other items and non-essential personnel subject to contamination; block avenues of fluid escape from the site to the extent practicable with the needs of adequate ventilation; use an appropriate inert material to drape over the drum to contain and restrict escaping fluids.

Proper Use of the PDRU

⚠ WARNING

The PDRU is to be used for the purpose of venting drums with a bung cap or bolt retaining ring by trained personnel only in accordance with the manufacturer's instructions. The PDRU is not to be used as a hammer, percussive device, lever or pry bar.

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Magnet Safety

⚠ CAUTION

The PDRU has neodymium magnets which are extremely strong, and must be handled with care to avoid personal injury and damage to the magnets. Fingers can get severely pinched between two attracting magnets. Neodymium magnets are brittle, and can peel, crack or shatter if allowed to slam together. Eye protection should be worn when handling these magnets, because shattering magnets can launch pieces at great speed.

⚠ CAUTION

The strong magnetic fields of these magnets can damage magnetic media such as floppy disks, credit cards, magnetic I.D. cards, cassette tapes, video tapes and similar items. They can also damage televisions, VCRs, computer monitors and other CRT electronics. Never bring neodymium magnets near any of these items.

⚠ WARNING

Children should not be allowed to handle neodymium magnets as they can be dangerous. Small magnets pose a choking hazard and should never be swallowed or inserted into any part of the body.

⚠ WARNING

Never allow neodymium magnets near a person with a pacemaker or similar medical device. The strong magnetic fields of the magnet can affect the operation of such devices.

⚠ CAUTION

Neodymium magnets are brittle and prone to chipping and cracking. They do not take kindly to machining. Neodymium magnets will lose their magnetic properties if heated above 175° F (80°C). Neodymium magnets should never be burned, as burning will create toxic fumes.

⚠ CAUTION

The ratchet socket of the PDRU is equipped with a strong magnet. When using or handling the magnet great care should be taken to make sure the operators fingers or skin are not caught between the magnet and any metal object or other magnet.

⚠ WARNING

The pull of a magnet may make it more difficult to prevent the ratchet socket of the PDRU from coming into quick contact with metal surfaces thereby causing a spark. This presents the risk of death or serious injury including burns or blast type injury from blast or thrown debris.

⚠ WARNING

The operator should not use the PDRU if flammable or explosive chemicals or vapors are present which may be ignited from a spark caused by contact of the PDRU with a metal object until the flammable or explosive chemicals or vapors have been eliminated or neutralized by appropriate methods.

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Warranty and Replacement Parts

The warranty for replacement of defective products shall be effective for one (1) year. Normal wear and tear on the PDRU is not covered under the warranty, nor is damage resulting from misuse of the product or exposure of the product to toxic or caustic substances, or damaging forces. Use of replacement parts not provided by this manufacturer shall cause this warranty to become void.



Use of replacement parts not provided by this manufacturer may create risks of injury or death and J&D Innovations assumes no liability for any injury or loss arising from the use of replacement parts not provided by this manufacturer.

Always register your purchase with the manufacturer in accordance with the product registration information included with the product. This allows the manufacturer to communicate with you regarding changes to the product.



Modification of a PDRU may significantly alter the risk of death, injury or loss.

Modification of the PDRU will void this manufacturer's warranty. The operator should not modify the PDRU unless specifically instructed to do so in writing by this manufacturer. J&D Innovations shall not be liable for any injury or loss arising from a PDRU that has been modified. If the PDRU or its component parts are frayed or otherwise damaged, do not use the PDRU until replacement parts have been obtained from the manufacturer.

J&D Innovations, LLC is only responsible for the replacement costs of the PDRU if it is found defective in material and/or workmanship. J&D Innovations, LLC shall not be liable for any incidental or consequential damages arising from the use or misuse of the PDRU, including but not limited to damages for personal injury, death, property damage, hazardous waste release or expenses related thereto, business interruption, loss of income or services, or any other consequential damages. Certain states limit or prohibit waiver of liability for consequential damages, however, this waiver shall apply to the full extent permitted by law. Use of the PDRU operates as consent to bring any and all disputes with J&D Innovations, LLC to hearing with the Courts situated in Pierce County, Washington as the exclusive forum for dispute resolutions. Use of the PDRU further establishes consent to arbitrate all disputes and issues related thereto if request for arbitration is made by J&D Innovations. The arbitrator shall be one agreed to by the parties, if the parties cannot agree to an arbitrator either party may petition the Courts situated in Pierce County to appoint an arbitrator who shall be a licensed attorney with a practice established in Pierce County, Washington. The arbitrator shall have sole and exclusive authority to address all issues related to the dispute, including nature and scope of discovery, damages, fees and cost

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