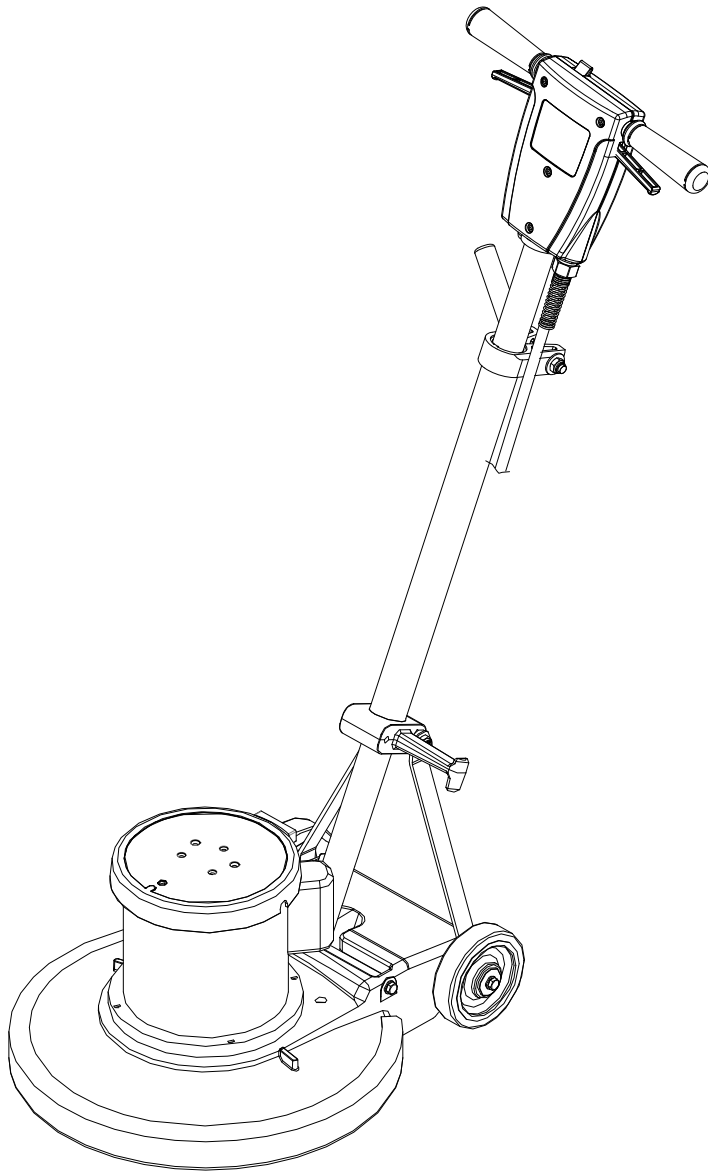


Floor Polisher



Floor Polisher

Operating instructions (ENG)

MODELS: **BP17X**
 1.009-082.0

U17X
 1.009-083.0

BP20X
 1.009-087.0

U20X
 1.009-088.0

BPD20X
 1.009-089.0

UDS20X
 1.009-090.0

BPD17X
 1.009-093.0

From Serial Number (Ref No1*)
*See Serial Number page in Spare
Parts List or call manufacturer



Machine Data Label

Model: _____

Date of Purchase: _____

Serial Number: _____

Dealer: _____

Address: _____

Phone Number: _____

Sales Representative: _____

Warranty Registration

Thank you for choosing our product. Warranty registration is quick and easy. Your registration will allow us to serve you better over the lifetime of the product.

To register your product go to:

<http://warranty.karcherna.com/warrantyregistration.aspx>

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How To Use This Manual

This manual contains the following sections:

- How to Use This Manual
- Safety
- Operations
- Maintenance
- Suggested Spare Parts

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering correct repair parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and machine serial number are important. Refer to the MACHINE DATA box which is filled out during the installation of your machine. The MACHINE DATA box is located on the inside of the front cover of this manual.

Model: _____
Date of Purchase: _____
Serial Number: _____
Dealer: _____
Address: _____
Phone Number: _____
Sales Representative: _____

The model and serial number of your machine is located on the back of the machine.

The SAFETY section contains important information regarding hazardous or unsafe practices of the machine. Levels of hazards are identified that could result in product damage, personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventive maintenance to keep the machine and its components in good working condition. They are listed in this general order:

- Maintenance
- Troubleshooting

NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.

NOTE: The manual part number is located on the lower right corner of the front cover.

IMPORTANT SAFETY INSTRUCTIONS

When using this machine, basic precaution must always be followed, including the following:
READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE.

WARNING:

To reduce the risk of fire, electric shock, or injury:

Use only indoors. Do not use outdoors or expose to rain.

Use only as described in this manual. Use only manufacturer's recommended components and attachments.

If the machine is **not working properly**, has been dropped, damaged, left outdoors, or dropped into water, return it to an authorized service center.

Do not operate the machine with any openings blocked. Keep openings free of debris that may reduce airflow.

Machine can cause a fire when operating near flammable vapors or materials. Do not operate this machine near flammable fluids, dust or vapors.

This machine is suitable for commercial use, for example in hotels, schools, hospitals, factories, shops and offices for more than normal housekeeping purposes.

Maintenance and repairs **must be done** by qualified personnel.

During operation, attention shall be paid to other persons, especially children.

The machine shall only be operated by instructed and authorized persons.

When leaving unattended, unplug the machine.

Do not handle the plug or machine with wet hands.

Do not unplug machine by pulling on cord. To unplug, grasp the plug, not the cord.

Do not use with damaged cord or plug. Follow all instructions in this manual concerning grounding the machine.

Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners.

Do not pull/run machine over cord. **Keep** cord away from heated surfaces.

Connect to a **properly** grounded outlet. See Grounding Instructions.

READ AND SAVE THESE INSTRUCTIONS

CONSIGNES DE SÉCURITÉ IMPORTANTES

Lors de l'utilisation de cette machine, des précautions de base doivent toujours être prises, y compris les précautions suivantes :
LIRE TOUTES LES INSTRUCTIONS AVANT D'UTILISER CETTE MACHINE.

⚠ AVERTISSEMENT: Pour réduire le risque d'incendie, d'électrocution ou de blessure :

Utilisez-le exclusivement dans des endroits fermés. Ne l'utilisez pas en plein air et ne le laissez pas sous la pluie.

Utilisez-le exclusivement de la manière décrite dans ce manuel. Utilisez exclusivement les composants et les fixations recommandés par le fabricant.

Si l'appareil **ne fonctionne pas correctement**, s'il est tombé par terre, s'il est endommagé, s'il a été laissé dehors ou s'il a été plongé dans l'eau, veuillez le renvoyer à un centre d'entretien agréé.

Ne faites pas fonctionner l'appareil si des ouvertures sont bouchées. Dégagez des ouvertures tous débris susceptibles d'entraver le passage de l'air.

L'appareil peut déclencher un incendie s'il se trouve à proximité de vapeurs ou de matériaux inflammables. Ne faites pas fonctionner cet appareil à proximité de fluides, de poussières ou de vapeurs inflammables.

Cet appareil est adapté à un usage commercial : par exemple dans les hôtels, les établissements scolaires, les hôpitaux, les usines, les magasins et les bureaux, à des fins plus étendues qu'un simple entretien de la maison.

Les travaux de maintenance et de réparation **doivent absolument être effectués** par du personnel qualifié.

Lorsque vous laissez la machine sans surveillance, débranchez-la.

Pendant le fonctionnement, il est nécessaire de faire attention aux autres personnes autour de soi, surtout aux enfants.

L'utilisation de l'appareil est exclusivement réservé à des personnes formées et autorisées.

Ne manipulez pas la fiche ou l'appareil les mains mouillées.

Ne débranchez pas l'appareil en tirant sur le cordon. Pour le débrancher, empoignez la fiche, non pas le cordon.

N'utilisez pas l'appareil si le cordon ou la fiche est endommagé(e). Observez toutes les consignes figurant dans ce manuel au sujet de la mise à la terre de l'appareil.

Ne tirez pas sur le cordon, ne portez pas l'appareil par le cordon, n'utilisez pas le cordon comme poignée, ne fermez pas une porte sur le cordon, ne tirez pas sur le cordon dans des angles ou des coins pointus.

Ne faites pas passer l'appareil par-dessus le cordon. **Maintenez** le cordon à l'écart de surfaces chauffées.

Raccordez l'appareil à une prise **adéquatement** reliée à la terre. Voir les Consignes de mise à la terre.

LIRE ET CONSERVER CES INSTRUCTIONS

The following symbols are used throughout this guide as indicated in their descriptions:

HAZARD INTENSITY LEVEL

There are three levels of hazard intensity identified by signal words -**WARNING** and **CAUTION** and **FOR SAFETY**. The level of hazard intensity is determined by the following definitions:



WARNING - Hazards or unsafe practices which COULD result in severe personal injury or death.



CAUTION - Hazards or unsafe practices which could result in minor personal injury or product or property damage.

FOR SAFETY: To Identify actions which must be followed for safe operation of equipment.

Report machine damage or faulty operation immediately. Do not use the machine if it is not in proper operating condition. Following is information that signals some potentially dangerous conditions to the operator or the equipment. Read this information carefully. Know when these conditions can exist. Locate all safety devices on the machine. Please take the necessary steps to train the machine operating personnel.

FOR SAFETY:

DO NOT OPERATE MACHINE:

Unless Trained and Authorized.

Unless Operation Guide is Read and understood.

In Flammable or Explosive areas.

In areas with possible falling objects

WHEN SERVICING MACHINE:

Avoid moving parts. Do not wear loose clothing; jackets, shirts, or sleeves when working on the machine. Use manufacturer approved replacement parts.

Safety

Les symboles suivants sont utilisés dans tout ce manuel, tels que décrits ici :

NIVEAU D'INTENSITÉ DU DANGER

Il existe trois niveaux d'intensité du danger, identifiés par des termes d'avertissement - **AVERTISSEMENT**, **ATTENTION** et **POUR VOTRE SÉCURITÉ**. Le niveau d'intensité du danger est déterminé par les définitions suivantes :

AVERTISSEMENT:

AVERTISSEMENT - Dangers ou méthodes dangereuses qui POURRAIENT provoquer de graves blessures ou entraîner la mort

ATTENTION:

ATTENTION - Dangers ou méthodes dangereuses qui pourraient provoquer des blessures légères ou une détérioration du produit ou des biens immobiliers.

POUR VOTRE SÉCURITÉ : ce signe permet d'identifier les mesures de précaution à prendre pour assurer un bon fonctionnement du matériel.

Rendre compte immédiatement d'une défaillance ou d'une détérioration de la machine. Ne pas utiliser la machine si celle-ci ne fonctionne pas correctement. Lire soigneusement les informations ci-dessous signalant certains dangers potentiels pour l'opérateur de la machine. L'opérateur doit être absolument au courant de ces dangers potentiels. Localiser tous les dispositifs de sécurité sur la machine. Il est conseillé de prendre les mesures nécessaires pour former le personnel opérateur.

POUR VOTRE SÉCURITÉ :

NE PAS MANOEUVRER LA MACHINE :

Lorsqu'on n'est pas expérimenté ou qualifié.

Lorsque le guide d'utilisation n'est pas été lu ou compris.

Dans des zones inflammables ou explosives.

Dans des zones où des objets peuvent tomber.

LORS DE L'ENTRETIEN DE LA MACHINE :

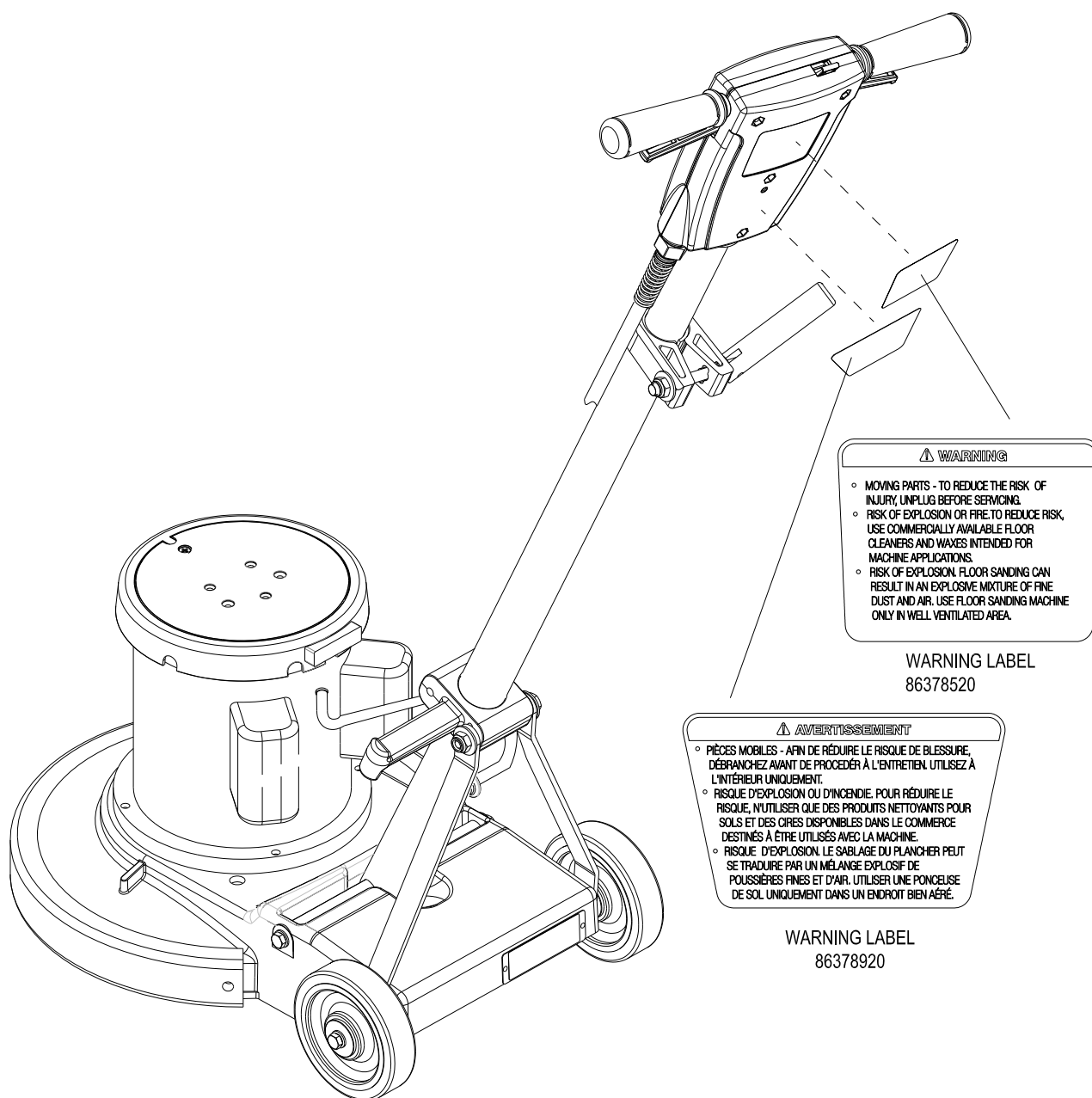
Éviter les parties amovibles. Ne pas porter de vêtements amples, tels que des vestes, des chemises ou des vêtements avec manches lors de l'utilisation de la machine. Utiliser les pièces détachées homologuées.

Safety Labels

NOTE: These drawings indicate the location of safety labels on the machine. If at any time the labels become illegible, promptly replace them.

Emplacement De L'étiquette De Sécurité

REMARQUE: Ces dessins indiquent l'emplacement des étiquettes de sécurité sur la machine. Si, à tout moment, les étiquettes deviennent illisibles, contactez votre représentant autorisé pour un remplacement rapide.



Safety

Grounding Instructions

THIS PRODUCT IS FOR COMMERCIAL USE ONLY.

Electrical:

In the USA this machine operates on a standard 15 amp 115V, 60 hz, A.C. power circuit. The amp, hertz, and voltage are listed on the data label found on each machine. Using voltages above or below those indicated on the data label will cause serious damage to the motors.

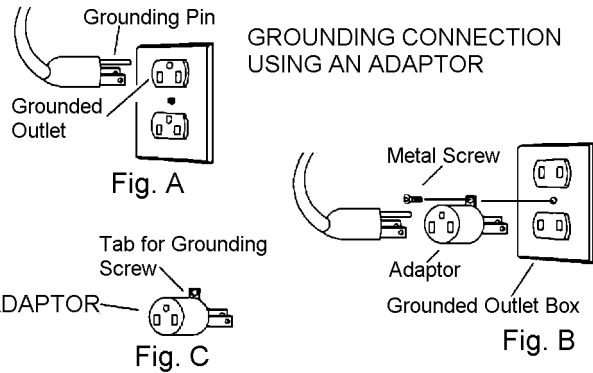
Extension Cords:

If an extension cord is used, the wire size must be at least one size larger than the power cord on the machine, and must be limited to 50 feet (15.5m) in length.

Grounding Instructions:

This appliance must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

This appliance is for use on a nominal 120-volt circuit, and has a grounded plug that looks like the plug in "Fig. A". A temporary adaptor that looks like the adaptor in "Fig. C" may be used to connect this plug to a 2-pole receptacle as shown in "Fig. B", if a properly grounded outlet is not available. The temporary adaptor should be used only until a properly grounded outlet (Fig. A) can be installed by a qualified electrician. The green colored rigid ear, lug, or the like extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by a metal screw.



Note: Adaptors are not allowed in Canada.

! WARNING:

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician. Use only GFCI protected receptacles.

! AVERTISSEMENT:

Une connexion non conforme du conducteur de mise à la terre de l'appareil peut provoquer une décharge électrique. Consulter un électricien qualifié ou une personne du service après vente si vous suspectez que la prise de courant n'est pas correctement mise à la terre. Ne pas modifier la fiche fournie avec l'appareil - si elle ne rentre pas dans la prise, faites installer une prise appropriée par un électricien qualifié. Utilisez-le uniquement sur des réceptacles protégés GFCI.

Grounding Instructions-230v

THIS PRODUCT IS FOR COMMERCIAL USE ONLY.

Electrical:

The amp, hertz, and voltage are listed on the data label found on each machine. Using voltages above or below those indicated on the data label will cause serious damage to the motors.

Extension Cords:

If an extension cord is used, the wire size must be at least one size larger than the power cord on the machine, and must be limited to 50 feet (15.5m) in length.

Grounding Instructions:

This appliance must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

⚠ WARNING:

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

⚠ AVERTISSEMENT:

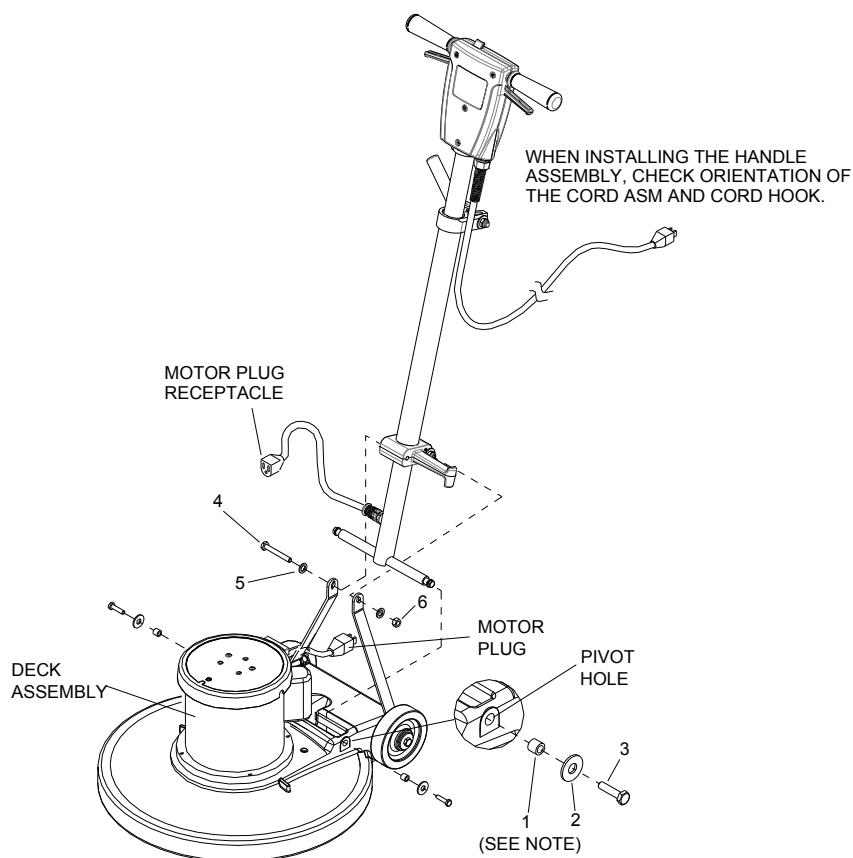
Le raccordement incorrect du conducteur de terre d'équipement peut entraîner des risques d'électrocution. Vérifiez auprès d'un électricien qualifié ou d'un responsable de l'entretien si vous avez quelque doute que ce soit quant au raccordement à la terre de votre prise murale. Ne modifiez pas la fiche fournie avec l'appareil : si elle ne correspond pas à la prise murale, faites installer une prise adéquate par un électricien qualifié.

Operations

Technical Specifications

ITEM	DIMENSION/CAPACITY/MODEL
CONSTRUCTION	Heavy-duty die cast aluminum deck with heavy-duty rubber bumper, tubular steel adjustable handle with die cast aluminum handle housing
MOTOR	
1.5HP 115V induction	U17X, U20X, BP17X, BP20X
1.75 HP 115V 175/300RPM	BPD20X, UDS20X
1.75 HP 230V 175/300RPM	BPD17X
BRUSH/PAD SPEED	
175 rpm	U17X, U20X, BP17X, BP20X
175/300 rpm	UDS20X, BPD20X, BPD17X
ELECTRICAL SYSTEM	
115 volts, 60 Hz	U17X, BP17X, BP20X, BPD20X, USD20X
230 volts, 50Hz	BPD17X
CABLE	
50' (15 m), 14/3, built in cord wrap	BP17X, BP20X, BPD20X, UDS20X
75' (22.9) 1.5mm ³ , built in cord wrap	BPD17X
SWITCHES	Dual levers with safety lock
WHEELS	Two 5" (12.7 cm) dia., 1.25" (3 cm) wide, non-marking tread
HANDLE	1.5" (4 cm) tubular steel, adjustable, easy to use thumb activated safety lock
DIMENSIONS (L X W X H)	
17" (43 cm) model	23.0" (58 cm) x 18" (46 cm) x 47" (119 cm)
20" (51 cm) model	24.5" (62 cm) x 21" (53 cm) x 47" (119 cm)

Handle Installation



⚠ WARNING:

The handle must be installed by qualified personnel. Read all instructions thoroughly. The machine is shipped with handle unassembled.

⚠ AVERTISSEMENT:

La poignée doit être installée par du personnel qualifié. Lisez toutes les instructions attentivement. La machine est livrée avec la poignée démontée.

The machine is shipped with handle unassembled.

Follow these steps for installation:

1. Remove handle and deck assembly from carton.
2. Attach handle assembly to base using hardware kit **(86219680)** (attached to handle in a plastic bag) items 1, 2, and 3.

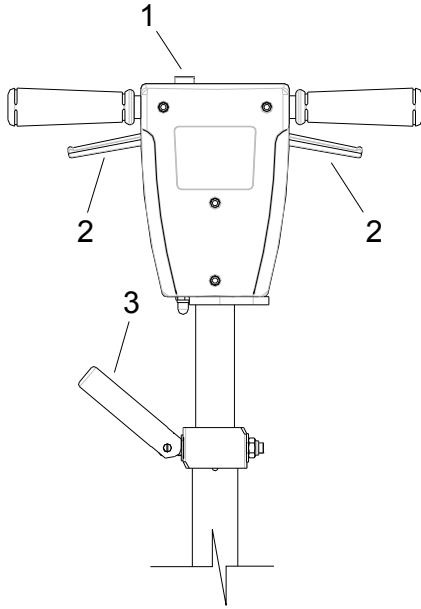
NOTE: The spacers (items 1) are required for the correct operation of the handle. The spacers are positioned completely inside the pivot holes in the casting, and are held in place by tightening the bolts and washers (items 2 and 3) against the spacer.

3. Remove bolt, nut and washers (items 4, 5 and 6) from lower block on handle assembly. Attach links as shown. Tighten bolt and nut securely, then back off 1/4 to 1/2 turn.
4. Check handle for movement up and down.
5. Plug motor cord into handle cord receptacle.

Operations

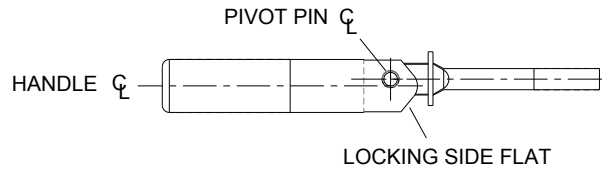
Controls

1. **Safety Lock** – Prevents unintended operation of the machine.
2. **Switch Levers** – Turns machine on/off.
3. **Adjustment Handle** – Allows the handle to be adjusted to a comfortable operating position



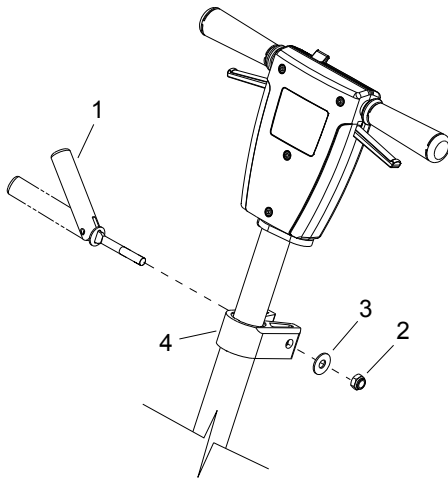
NOTE: It is incorrect to make it lock opposite from the way it was assembled by applying more force to the nut.

The pivot pin is off center in relationship to the axis of the handle. To adjust handle, tighten nut on handle while in the locked position. The handle is locked when the screw is to the outside of the machine and the flat on the opposite side of the handle is flush to the bracket.



Handle Height Adjustment

NOTE: The handle is in the up, locked position from the factory.



The handle adjust bar (1) for the polishers are individually preset at the factory for optimum locking efficiency and minimum effort of engaging. It should not be necessary to adjust the handle adjust bar unless the handle adjustment bar (1) the washer (3) and nut (2) have been disturbed.

Machine Operation

CAUTION:

For Indoor use only.

ATTENTION:

Pour utilisation à l'intérieur seulement.

CAUTION:

When using the pad, always keep the machine moving when in contact with the floor.

ATTENTION:

Lorsque vous utilisez le coussin protecteur, gardez toujours la machine en mouvement lorsqu'elle est en contact avec le sol.

WARNING:

High starting torque. Hold machine firmly with both hands.

AVERTISSEMENT:

Couple de démarrage élevé. Tenez la machine fermement à deux mains.

1. Ensure that the pad driver is in good shape. Install or change pad if necessary.
2. Plug the machine into a wall outlet as described in the grounding instructions.
3. Lower the handle by unlocking the adjustment handle and moving the handle into position. Relock the handle when it is in a comfortable position.

WARNING:

Insure that handle is locked in position before starting machine.

AVERTISSEMENT:

Assurez-vous que la poignée est bloquée en position avant de démarrer la machine.

4. Push the safety lock forward, unlocking the switch levers.

5. With the safety lock forward, squeeze one or both of the switch levers, turning the machine on. (These levers can be operated independently of each other). The safety lock will not re-engage until both levers are released.
6. To stop the machine, release the switch levers.
7. Do not let machine rest on pad. When finished with the machine, return handle to the storage position.

NOTE: The machine is equipped with a circuit breaker to protect the motor in the event an overload condition occurs. The circuit breaker is located on the handle. Push the reset button to restart the machine. If the breaker trips again, correct the cause of overloading before proceeding.

Daily Maintenance

1. Inspect power cord for wear. To prevent electrical shock replace cords with frayed or cracked insulation immediately.
2. Place machine in the storage position.
3. Check pad condition. Change if soiled or torn.

Pad Driver/ Brush Installation

1. Lay machine back, exposing the under side.
2. Place pad driver on the motor lug and rotate counter-clockwise until engaged. To remove, turn clockwise.

Maintenance

Scrub Brushes

NOTE: All original equipment brushes are equipped with "Perform AlertÓ". This feature will tell the operator when it is time to replace the scrub brushes. "Perform AlertÓ" brushes have pre-trimmed bright yellow tufts to indicate the length of a worn out brush. When the tufts in the scrub brush wear to a length equal to the yellow tufts, the scrub brushes should be replaced.

There are five different types of brushes available to cover applications from cleaning heavily soiled floors to polishing. A pad driver is also available to take advantage of the many cleaning pads on the market and further add to the flexibility of the machine.

Please refer to the following to assist in selecting the proper brush or pad for the work at hand.

Uncoated Floors

Aggressive Grit is a nylon fiber impregnated with silicone carbide grit. It grinds away stain, soil, and removes surface material.

Mild Grit is a less aggressive silicone carbide grit suitable for cleaning medium soil conditions. Advantages are faster ground speed than nylon bristles on light solid applications.

Nylon is a general-purpose scrub brush with stiff bristles. Polypropylene works well for maintaining concrete, wood and tile floors.

Finished Floors

Nylon Polish is the softest brush. It will gently clean finished tile or terrazzo floors without removing floor finish or floor material. Used for washing highly polished or burnished floors.

Nylon bristles are used in a variety of applications on coated or uncoated surfaces.

White Pads (Polishing) are used for dry polishing to achieve a high-gloss appearance, or surface washing on highly polished or burnished floors.

Red Pads (Buffing) are used for light-duty scrubbing. When used with a mild detergent they will provide surface cleaning without removing the finish.

Blue Pads (Scrubbing) are used for heavy-duty scrubbing and light stripping. The blue pads remove less finish than brown stripping pads, yet will remove black marks, stains and dirt.

Brown Pads (Stripping) are used for easy and complete removal of old floor waxes/finishes. They will quickly remove ground in dirt, black heel marks, and spills. When used with the proper stripper, this pad leaves the floor clean and ready for finishing.

The scrub brushes should be checked before each days work for wire, string, wear and damage. The scrub brushes should be replaced if brush bristles are missing or if yellow Perform Alert © indicates minimum brush length.

Service Schedule

MAINTENANCE	DAILY	MONTHLY
Check pad wear to prevent buildup of chemicals	*	
Check pad driver system for damage	*	
Check handles, switches, and knobs for damage	*	
Store with pad off the floor	*	
Check all bearings for noise		*
Check skirt/bumpers for damage and replace as necessary		*
Check overall performance of machine		*

Machine Troubleshooting

PROBLEM	CAUSE	SOLUTION
Machine will not run	Circuit breaker tripped in building.	Check and reset.
	Power switch failure	Test switch for continuity and replace if necessary.
	Tripped circuit breaker	Reset.
	Faulty power cord	Replace.
	Fuse in motor blown (Dual speed only)	Replace CAUTION: To reduce the risk of electrical shock, unplug the machine before opening fuse holder. Fuse will only open under extreme conditions. Investigate cause before replacing.
Electrical shock	Equipment not grounded	Follow grounding instructions exactly.
	Receptacle not grounded	Have an electrician inspect building's wiring.
	Internal wiring problem	Ensure that the machine wiring matches the appropriate wiring diagram. Replace any wires or components that are short circuiting.
Repeated circuit breaker tripping	Mechanical problem	Higher amp draws indicate a mechanical problem. Find the problem before using the machine.
	Faulty circuit breaker	Test circuit for continuity. Replace circuit breaker if necessary.
Excessive vibration	Pad not centered	Re-center pad.
	Damaged or unevenly worn pad	Replace pad. Do not rest machine on pad when not in use.
	Damaged pad driver	Replace.
Pad does not turn but motor is running	Sheer coupling has failed	Replace coupling.

Suggested Spare Parts

PART NO.	DESCRIPTION	SERIAL NO. FROM	NOTES:
86225710	WASHER, BEARING (HANDLE ADJ)		
86224740	SPRING, EXT .5 OD X 3.5L		
86224750	SPRING, COMP .48 OD X .91 L		
86215130	BAR, HANDLE ADJ		
86222560	PIN, PIVOT, HANDLE ADJ		
86223550	ROD, HANDLE ADJ		
86003660	FUSE		UDS20X, BPD20X
86003670	FUSE HOLDER		UDS20X, BPD20X
86377960	COUPLING, SHEAR		BP17X, U17X, BP20X, U20X
86000120	PAD DRIVER, 17" POLISHER		
86284290	PAD DRIVER, 19" HS		
86284300	PAD DRIVER, 20" POLISHER		
86000140	BRUSH, 17" NYL. POL. W/CLT.PLT		
86283800	BRUSH, 17" NYL.SCRUB W/CLT.PLT		
86000130	BRUSH, 17" MILD GRIT W/CLT.PLT		
86283710	BRUSH, 17" AGG. MALGRIT W/C.P		
86000110	BRUSH, 17" POLYPRO W/CLT. PLT		
86283790	BRUSH, 20" NYL.POL.W/CLT.PLT.SFT		
86283770	BRUSH, 20" NYL.SCRUB W/CLT.PLT		
86283780	BRUSH, 20" MILD GRIT W/CLT.PLT		
86283690	BRUSH, 20" AGG. MALGRIT W/C.P.		
86283700	BRUSH, 18" POLYPRO W/CLT. PLT		

