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PREDATOR GRINDER POLISHER

P32NDX – P32ND

OWNER'S MANUAL

www.BARTELLGLOBAL.com

Orig. Rel. – 09/2015
Curr Rev. - 00

BARTELL

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ORIGINAL OPERATING LANGUAGE MANUAL

FOR
P32NDX & P32ND GRINDER POLISHER

REV.	DATE	DESCRIPTION	APPROVED BY:

SAFETY PRECAUTIONS

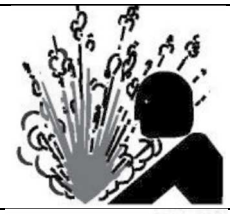
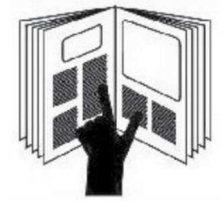
	**DANGER** **EXPLOSION HAZARD** Never operate the machine in an explosive atmosphere, near combustible materials, or where ventilation does not clear exhaust fumes.
	**WARNING** **BURN HAZARD** Never come into contact with the engine or muffler when engine is operating or shortly after it is turned off. Serious burns may occur.
	**CAUTION** **MOVING PARTS** Before starting the machine, ensure that all guards and safety devices are in place and functioning properly.
	**ATTENTION** **READ OWNER'S MANUAL** Read and understand owner's manual before using this machine. Failure to follow operating instructions could result in serious injury or death.

TABLE OF CONTENTS

INTRODUCTION

Innovatech Products and Equipment Company specializes in the manufacturing and distribution of surface preparation equipment and supplies. From our early origins as a flooring removal company, and a foundation based upon the success of our Terminator line of flooring removal machines, Innovatech has transformed itself into an industry leader over a twelve year period.

Our continued growth can be attributed to our pledge to offer only premium products, our commitment to stand behind what we sell, and a staff well known throughout the industry for their knowledge and commitment to our valued customers. Based on customer need, Innovatech has proudly diversified our offerings to include a complete line of surface preparation products including Shot Blasters, Scarifiers, Floor Grinders, Dust Collectors, Diamond Abrasives, and other products.

SPECIFICATIONS

	P32NDX	**P32ND**
Cutting Width	32" (812mm)	32" (812mm)
Dimensions (Operating Conditions)	82" x 34" x 52" (2083mm x 864mm x 1320mm)	82" x 34" x 52" (2083mm x 864mm x 1320mm)
Weight	1181lbs (536kg)	950lbs (431kg)
Tank Capacity	7 Gal (27L)	7 Gal (27L)
Cutter Heads/Tool Plates		
Diameter	10.5" (270mm)	10.5" (270mm)
RPM	0 – 1010rpm	0 – 1010rpm
Motor		
15hp (11kW)	-	0 – 1760rpm
20hp (15kW)	0 – 1760rpm	0 – 1760rpm
Power Source		
Phase	3 Phase	3 Phase
Voltage	414 – 504V	414 – 504V
Hz	60Hz	60Hz
Amps	29A	25A

WARRANTY INFORMATION

Innovatech warrants to original retail purchaser of the equipment:

A. LIMITED WARRANTY

The equipment, when first delivered, will conform to the specifications set forth in the Owner's Manual and will be without defect in material or workmanship. For a period of one (1) year after delivery to the original retail purchaser, or 300 clock hours of operation, whichever occurs first; or in the case of replacement parts other than belts, for a period of ninety (90) days after the part is installed or within the warranty period described above, whichever is later, if the original retail purchaser notifies Innovatech (either directly or through one of Innovatech's authorized dealers) of a defect in material or workmanship or of a non-conformity to the specifications, then, upon confirmation of the defect of non-conformity and confirmation that the defect or nonconformity is covered within these Limited Warranty conditions, Innovatech will, at it's election and at it's expense, either (i) repair or correct the defect and/or non-conformity, or (ii) replace the part.

B. LIMITATIONS

This Limited Warranty does not apply to damage caused by (i) misuse of the equipment including, with limitation, use of the wrong power source, striking an imbedded object such as a bolt, electrical outlet box, expansion joint or steel reinforcing rod; or (ii) unauthorized alteration, modification, repair or tampering; or (iii) use of replacement parts not supplied by Innovatech; or (iv) normal wear, discoloration, surface corrosion, deterioration of finishes or paint surfaces, or (v) other appearance deterioration caused primarily by use. Innovatech shall not be responsible and this Limited Warranty shall not apply to damage caused by improper maintenance or failure to inspect and maintain the equipment as recommended in the Owner's Manual.

C. BELTS

The Drive Belt is covered as set out at paragraph A., above, but for the period of six (6) months after delivery or 250 clock hours of operation, whichever occurs first.

D. TRANSPORTATION

Purchaser will pay the cost of transporting defective or non-conforming parts to Innovatech and the cost of returning repaired or replacement parts to purchaser. Each party will safely package the parts it sends to the other in accordance with good commercial practice. If purchaser requests and Innovatech agrees, Innovatech may perform covered warranty work where the equipment is located. If Innovatech performs the work at the location, purchaser will pay the cost of business class transportation and good quality meals and lodging for Innovatech's technicians.

E. ABUSE

Innovatech is not responsible for damage, defect, breakage, or malfunction of the equipment that is caused by abuse or by operation of the equipment in a manner which is not recommended or approved by Innovatech.

F. EXCLUSIVE WARRANTY

Except as is expressly set out in this limited warranty: (i) Innovatech makes no promise or warranty, expressed or implied, with respect to the equipment; (ii) Innovatech makes no promise or warranty that the equipment is fit for any particular purpose; (iii) Innovatech will have no obligation or liability to the purchaser or to any third party with for

any damage caused by the equipment or as a result or consequence of any claimed defect in the equipment, any failure to warn or notify, or any claimed non-conformity to the specifications; and (iv) Purchaser will have no other remedies in respect of such defect, non-conformity, damage or condition except those set out in this limited warranty.

Without limiting the foregoing, and regardless of the circumstances and even if a remedy fails, Innovatech will have no liability to the purchaser or to any third party for (i) loss of revenue or profits, or (ii) for incidental, consequential, or punitive damages.

SAFETY PRECAUTIONS

1. Only persons who have received training are permitted to operate or repair the grinder.
2. Use personal safety equipment such as steel toe shoes, safety glasses, and earplugs.
3. Do not use grinder in area where there is a risk of explosion or fire.
4. Do not start the machine with heads off the ground.
5. Make sure the splashguard is on before stating machine.
6. Before you start grinding, check the floor for bolts, large holes and uneven joints. Hitting these things can damage machine, tools, and cause personal injury.
7. Make sure all power supply is connected with the right voltage.
8. Use only cold water in water tank. Do not use chemicals in water tank.
9. When filling water tank, to avoid electrical hazards and injury, do not spill water onto the machine motor and electrical box.
10. Switch off the machine power before changing grinding tools.
11. Disconnect power supply before working or repairing machine.
12. Be very careful with rolling machine on any sloping floors or ramps. The machine can roll very quickly. Two people may be needed to handle and control the machine.
13. Use caution with removing the grinding tools after finished grinding. Tools can be very hot. Use gloves to remove the plates.
14. When grinding glues, epoxy paints, or coatings, leaving the machine down on floor could cause the head to stick to the floor. Always tip back machine as soon as the head comes to a complete stop.
15. Always store machine in a dry place.
16. Only use Innovatech recommended tooling.
17. The operator must never leave the machine unattended during operation.
18. When grinding dry, use a suitable vacuum to extract the dust.
19. Innovatech is not responsible for any off gassing of hazardous gas that is generated by grinding materials. It is the responsibility of the operator. Grinding floors containing asbestos is especially dangerous and can cause health problems. Contact your state or country for the proper way to handle it.

OPERATION INSTRUCTIONS

Before starting:

1. Check the floor carefully and remove all bolts, nails, as well as any loose material that could get caught in the machine.
2. Fit the appropriate tools to the machine.
3. Fit splash guard to the right height.
4. Connect the power supply. Make sure you have all the phases. May have to check with volt meter.
5. If you are grinding dry, connect the appropriate vacuum and start vacuum before starting the grinder.

NOTE: IF THE WRONG POWER IS SUPPLIED TO THE GRINDER, IT WILL DAMAGE THE ELECTRICAL COMPONENTS IN THE INVERTERS.

Starting machine:

1. Turn main power switch on side of power box to ON.
2. Turn forward or reverse switch left of right.
3. Turn manual speed pot up to get the heads turning for desired speed. (If heads do not move, you may have to lean on handle to reduce pressure on tools.
4. Always grip handle firmly when starting machine. The machine will always move from side to side with first start.
5. When finished with grinding, turn off machine and let the heads come to a complete stop before tilting back the machine.

Changing of Tools:

1. Before working on the grinder, bring the motor to a total stop and disconnect power.
2. Tilt machine back on floor.
3. Use caution! Tools can be very hot from grinding. Use gloves.
4. Use special tool supplied to turn center of tool holder to remove tool plate.
5. Replace with new tool plate and turn to lock in place.
6. Lower machine back down and re-adjust splash guard is necessary.

MAINTENANCE

Clean machine after every use. To clean machine, use a low pressure water hose or air pressure. Do not use a high PSI pressure washer. This could force water into areas of the machine unintentionally and damage parts. A regular inspection of machine for wear and damage should be done on a regular basis. If any parts have been damaged or have excessive wear, they should be replaced. If belt is in need of being replaced, please see separate instructions.

TROUBLESHOOTING

1. Check to see if main power supply is on.
2. Check to see if emergency stop is pushed down; if it is, pull up.
3. Check to see if manual speed pot is turned up past 1.
4. Check all cords ends for loose connection.
5. Check fuse in distribution box with test meter.
6. Check to see if all phase are with right voltage (check with volt meter).
7. Check the converter connector cable to motor.
8. Check for error message on display of the converter.

FAULTS WHICH CANNOT BE AUTOMATICALLY RESET

Faults which cannot be automatically reset are listed in the table below. To clear these faults:

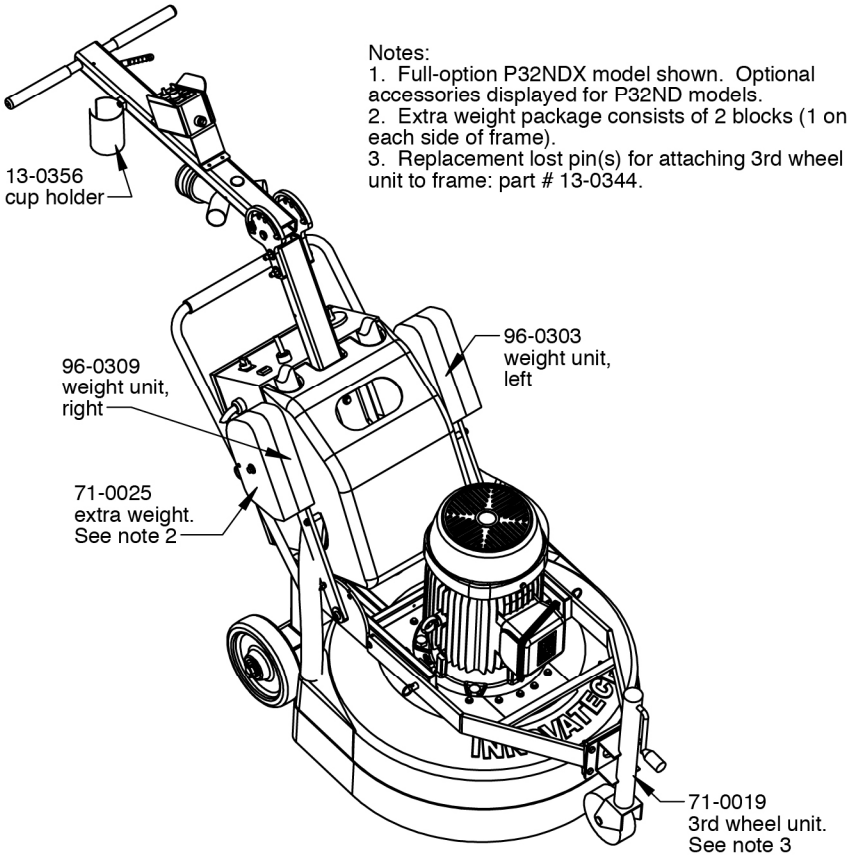
1. Remove power from the drive controller.
2. Wait for the display to go off completely.
3. Determine the cause of the fault and correct it.
4. Re-apply power.

FAULT	PROBABLE CAUSE	REMEDY
B L F Brake Sequence	• Brake release current not reached	• Check the drive controller and motor connections • Check the motor windings
C r F Precharge Circuit Fault	• Precharge circuit damaged	• Reset the drive controller • Replace the drive controller
I n F Internal Fault	• Internal fault • Internal connection fault	• Remove sources of electromagnetic interference • Replace the drive controller
O C F Over Current	• Incorrect parameter settings in the Set- and drC- menus • Acceleration too rapid • Drive controller and/or motor undersized for load • Mechanical blockage	• Clear the mechanical blockage
S C F Motor Short Circuit	• Short circuit or grounding at the drive controller output • Significant ground leakage current at the drive controller output if several motors are connected in parallel	• Check the cable connecting the drive controller to the motor and check the motor insulation • Reduce the switching frequency
S O F Over Speed	• Instability • Overhauling load	• Check the size of the motor, drive controller, and load
F n F Aut-Tuning Fault	• Motor or motor power not suitable for the drive controller • Motor not connected to the drive controller	• Check the presence of the motor during auto-tuning • If a downstream contractor is being used, close it during auto-tuning
E P F External Fault	• User defined	• User defined
L F F	• Loss of the 4-20 mA reference on input A13	• Check the connection on input A13 • Loss of 4-20 mA follower
O b F Over voltage during deceleration	• Braking too rapidly • Overhauling load	• Increase the deceleration time
O H F Drive Overload	• Drive controller or ambient temperature is too high • Continuous motor current load is too high	• Check the motor load, the drive controller ventilation, and the environment. Wait for the drive controller to cool before restarting
O L F Motor Overload	• Thermal trip due to prolonged motor overload • Motor power rating too low for the application	• Allow the motor to cool before restarting
O P F	• Loss of phase at drive controller	• Check the connections from the drive controller

Motor phase failure	output • Downstream contractor open • Motor not connected • Instability in the motor current • Drive controller oversized for motor	to the motor • Test the drive controller on a low power motor or without a motor: set OPL to nO
O S F Over voltage during steady state operation or during acceleration	• Line voltage too high • Line supply transients	• Check the line voltage. Compare with the drive controller nameplate rating • Reset the drive controller
P H F Input phase failure	• Input phase loss, blown fuse • Three-phase drive controller used on a single-phase line supply • Input phase imbalance • Transient phase fault *NOTE: This protection only operates with the drive controller running under load*	• Check the connections and the fuses • Verify that the input power is correct • Supply three-phase power if needed
C F F Configuration Fault	• The parameter configurations are not suited to the application	• Restore the factory settings or load the backup configuration, if it is valid
U S F Under Voltage	• Line supply too low • Transient voltage dip • Damaged precharge resistor	• Check the line voltage • Replace the drive controller

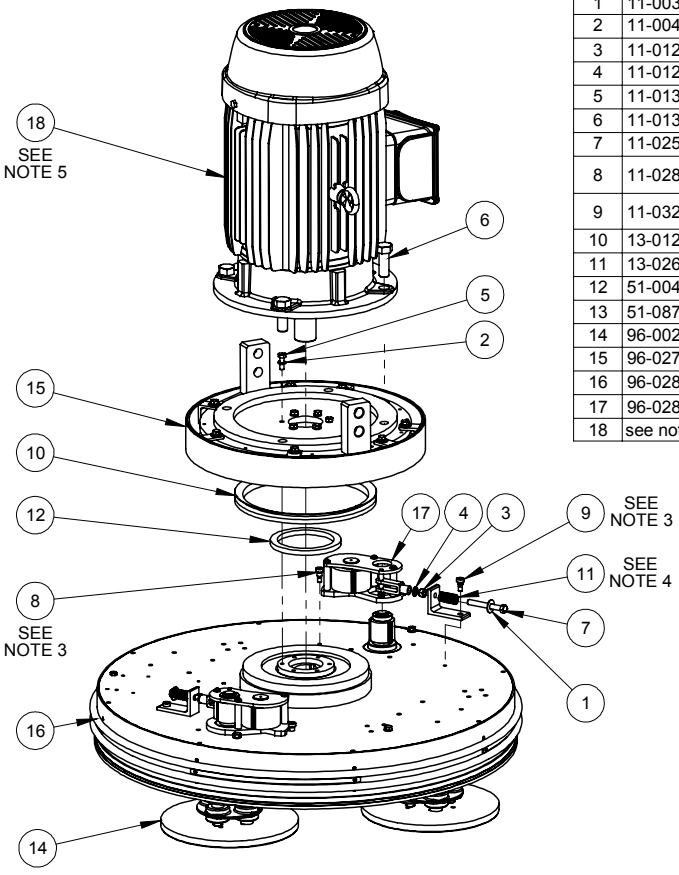
PARTS DRAWINGS & DIAGRAMS

PREDATOR GRINDERS - P32 "ND" SERIES

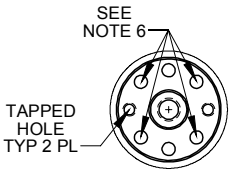


BELT TENSIONING GUIDE

GRINDER HEAD (WITHOUT SHROUD) - P32 "ND" SERIES



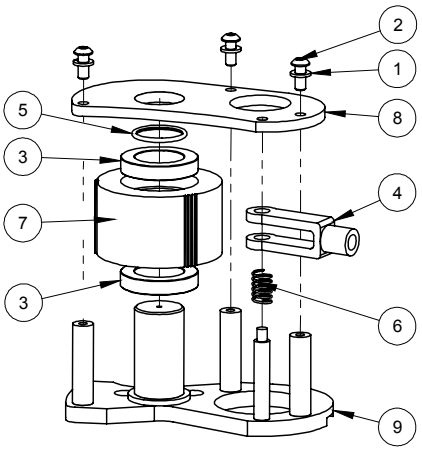
ITEM	PART #	DESCRIPTION	QTY
1	11-0035	Washer, 3/8"	2
2	11-0040	Split lock washer, 5/16"	6
3	11-0124	Nut, 3/8"-16	2
4	11-0129	Split lock washer, 3/8"	2
5	11-0132	Hex head cap screw, 5/16"-18 x 1"	6
6	11-0136	Hex head cap screw, 3/4"-10 x 2"	4
7	11-0256	Hex head cap screw, 3/8"-16 x 3"	2
8	11-0287	Shoulder screw, 3/8 dia. x 3/8 L shoulder, 5/16"-18 threads	2
9	11-0324	Shoulder screw, 3/8 dia x 1/4 L shoulder, 5/16"-18 threads	2
10	13-0125	V-ring seal, 225 ID x 15 W	1
11	13-0266	Spring	2
12	51-0048	Spacer ring	1
13	51-0875	Drum driver anchor	2
14	96-0027	Cutter head- Floating assy	4
15	96-0279	Motor base assy	1
16	96-0280	Drum assy	1
17	96-0283	Drum driver unit	2
18	see note	Electric motor	1



CUTTER HEAD PULLEY BOTTOM END

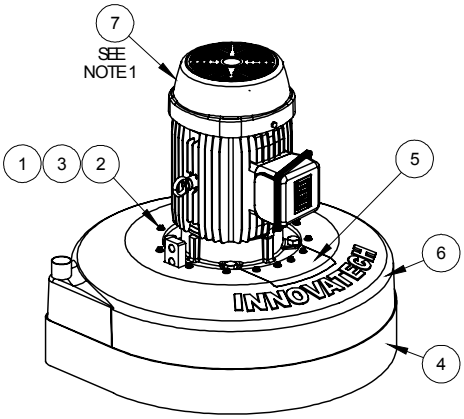
NOTES:
1. FOR ILLUSTRATION SIMPLICITY NOT ALL ITEMS ARE EXPLODED, BUT ARE REPRESENTED BY THEIR SAME-NATURE COUNTERPART.
2. SOME PARTS MAY BELONG TO ANOTHER COMPONENT GROUPING OR INSTALLATION SEQUENCE, BUT SHOWN HERE FOR DETAILED ASSEMBLY INFO.
3. ADD SHIM(S) [PART # 11-0325, QTY AS NEEDED] TO INDICATED SCREWS FOR PROPER CLEARANCE WITH MATING PART.
4. COMPRESSED SPRING SHOULD HAVE FINAL LENGTH OF APPROX. 1-1/16" (27mm).
5. MOTOR PART #: P32NDX: 23-0099 (20HP), P32ND: 23-0039 (15HP).
6. USE INDICATED SETS OF PIN HOLES FOR MOUNTING FLOATING HEAD TOOL PLATES. RESERVE REMAINING HOLES FOR RIGID HEADS.

DRUM DRIVER UNIT - P32 "ND" SERIES (#96-0283)



ITEM	PART #	DESCRIPTION	QTY
1	11-0069	Split lock washer, 1/4"	3
2	11-0349	Button head socket cap screw, 1/4"-20 x 5/8"	3
3	13-0207	Bearing (30 ID x 47 OD x 9 W)	2
4	13-0212	Yoke end, 3/8"-16 theads, 3/8 pin holes	1
5	13-0334	O-ring, 1.125 ID x .094 W	1
6	13-0335	Spring, .39 ID x .48 OD x .75 long	1
7	51-0846	Gear pulley	1
8	51-0864	Tensioner top plate	1
9	53-0302	Tensioner base build-up	1

GRINDER HEAD (WITH SHROUD) - P32 "ND" SERIES

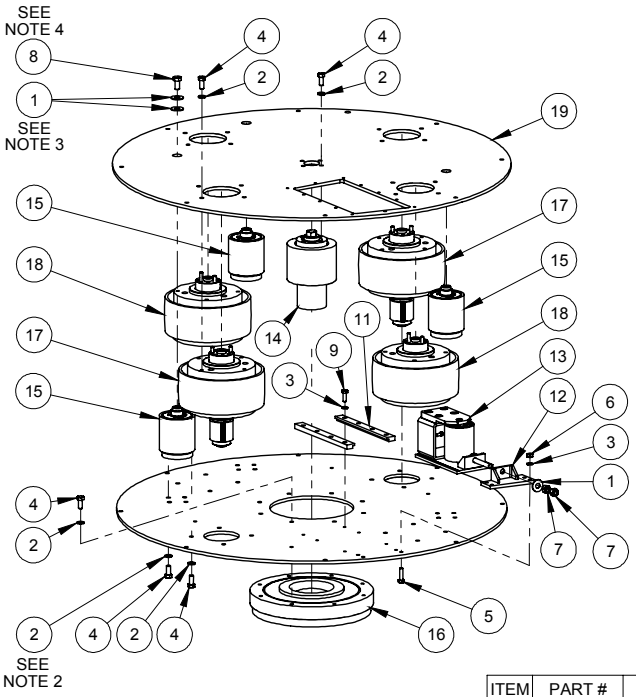


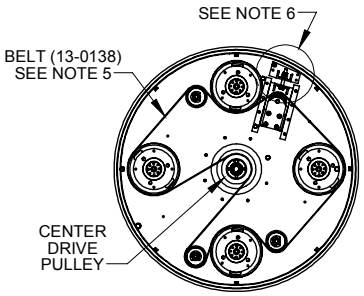
ITEM	PART #	DESCRIPTION	QTY
1	11-0069	Split lock washer, 1/4"	12
2	11-0234	Hex head cap screw, 1/4"-20 x 2"	12
3	11-0259	Flat washer, 1/4"	12
4	54-0027	Splash guard	1
5	54-0039	Shroud (cut-out panel)	1
6	96-0278	Shroud (main cover)	1
7	see note	Grinder head	1

NOTES:
1. GRINDER HEAD UNIT PART # :
P32NDX: 96-0277 (20 HP). P32ND: 96-0323 (15 HP).

BELT ROUTING PATH

DRUM ASSEMBLY - P32 "ND" SERIES (#96-0280)





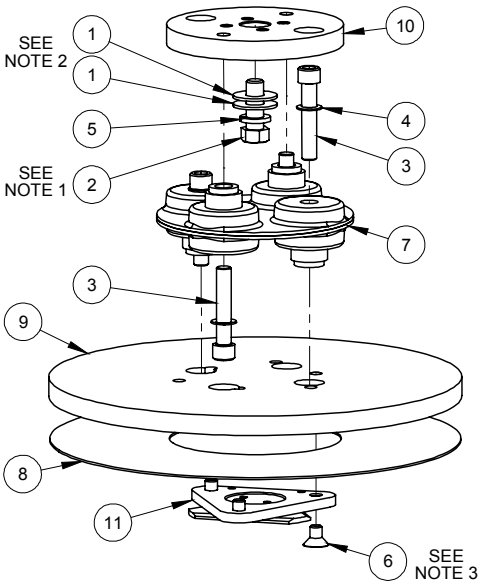
BELT ROUTING

NOTES:
1. DRUM TOP AND BOTTOM PLATES ARE COMPONENTS OF DRUM ENVELOPE. FOR ILLUSTRATION CLARITY OF HOW PARTS FIT TOGETHER, NOT ALL OF DRUM ENVELOPE'S PARTS ARE SHOWN.
2. INDICATED WASHER FOR IDLER INSTALLATION IS MANDATORY TO ENSURE SCREW END'S CLEARANCE WITH NEARBY ROTATING BEARINGS.
3. STACKING OF INDICATED WASHERS REQ'D FOR STRENGTH.
4. SECURE INDICATED SCREW WITH MEDIUM STRENGTH THREAD LOCKING COMPOUND.
5. DRIVE BELT NOT SHOWN IN EXPLODED VIEW FOR ILLUSTRATION SIMPLICITY. BELT'S ROUGH (GRAY COLORED) SIDE TO FACE / CONTACT CENTER DRIVE PULLEY.
6. TIGHTEN/TENSION BELT UNTIL CLEARANCE BETWEEN END OF TENSION SCREW AND DRUM SIDE WALL IS APPROX. 1/16" (1 - 2mm).

ITEM	PART #	DESCRIPTION	QTY
1	11-0035	Washer, 3/8"	7
2	11-0040	Split lock washer, 5/16"	72
3	11-0069	Split lock washer, 1/4"	2
4	11-0118	Hex head cap screw, 5/16"-18 x 3/4"	5
5	11-0121	Hex head cap screw, 1/4"-20 x 1"	4
6	11-0123	Nut, 1/4"-20	4
7	11-0124	Nut, 3/8"-16	2
8	11-0130	Hex head cap screw, 3/8"-16 x 3/4"	3
9	11-0279-12	Hex head cap screw, 1/4"-20 x 3/4", Gr.8	6
10	13-0138	Belt	1
11	51-0014	Tensioner sliding track	2
12	53-0017	Tensioner anchor	1
13	96-0012	Tensioner Sliding Unit	1
14	96-0018	Pulley (center drive) assy	1
15	96-0019	Idler (main drive) assy	3
16	96-0022	Bearing assy (motor base / drum connection)	1
17	96-0281	Cutter head pulley assy (with top pulley)	2
18	96-0282	Cutter head pulley assy (without top pulley)	2
19	96-0285	Drum envelope	1

CUTTER HEAD UNITS

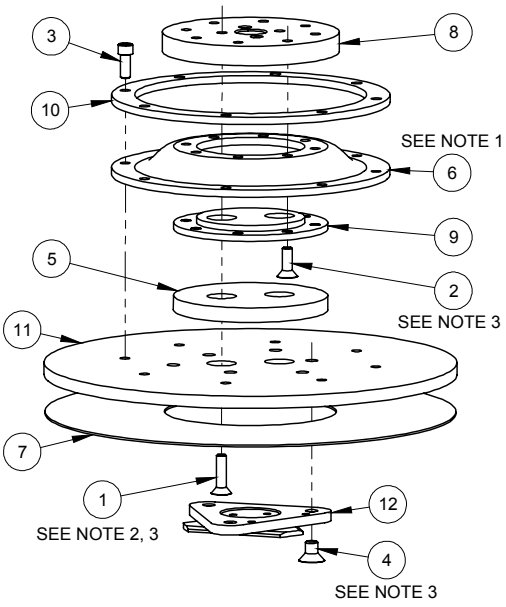
FLOATING HEAD ASSEMBLY (PART # 96-0027)



ITEM	PART #	DESCRIPTION	QTY
1	11-0036	Washer, 7/16"	2
2	11-0079	Hex head cap screw, 7/16"-14 x 1-1/4"	1
3	11-0147	Socket head cap screw, 3/8"-24 x 2"	4
4	11-0162	Washer (Belleville, serrated), 3/8" (.413 ID x .630 OD)	4
5	11-0320	Washer (split-lock), 7/16"	1
6	11-0348	Flat head socket screw, 5/16-18 x 1/2	3
7	13-0056	Flexible coupling	1
8	13-0186	Velcro mat	1
9	51-0139	Cutter head floating head bottom plate	1
10	51-0140	Cutter head floating head top plate	1
11	96-0025	Cutter head triangle holder assy	1

NOTES:
1. INDICATED SCREW TO BE USED FOR ATTACHING ASSEMBLY TO CUTTER HEAD PULLEY'S SHAFT.
2. WASHERS DOUBLED UP FOR STRENGTH.
3. SECURE INDICATED SCREW(S) WITH MEDIUM STRENGTH THREAD LOCKING COMPOUND (E.G. LOCTITE 242). TYP 3 PL.

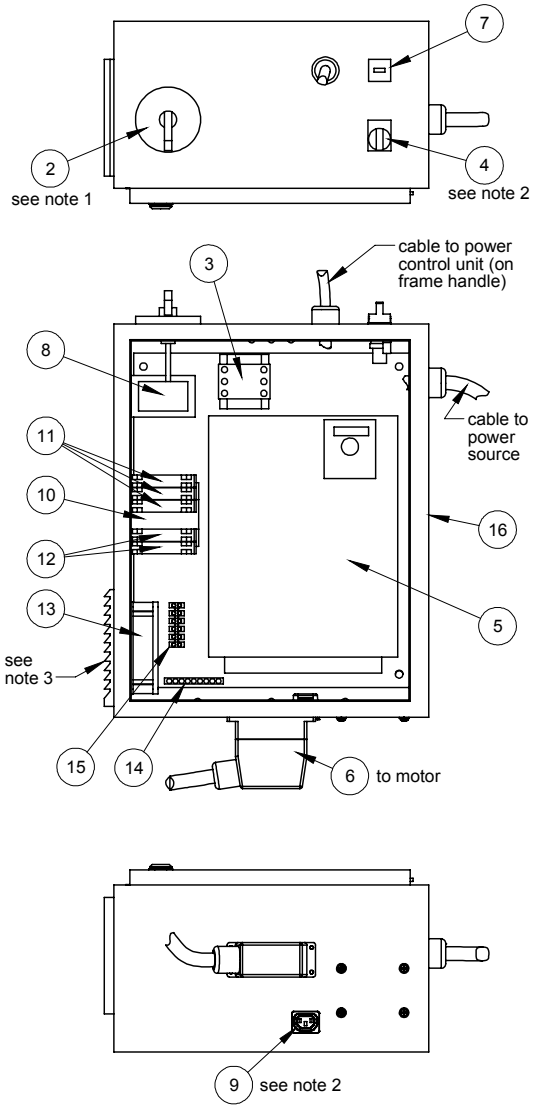
RIGID HEAD ASSEMBLY (PART # 96-0028)



ITEM	PART #	DESCRIPTION	QTY
1	11-0120	Flat head socket screw, 1/4"-20 x 1"	2
2	11-0140	Flat head socket screw, 1/4"-20 x 1"	8
3	11-0141	Socket head cap screw, 1/4"-20 x 5/8"	8
4	11-0348	Flat head socket screw, 5/16-18 x 1/2	3
5	13-0116	Cutter head rigid head rubber spring disc	1
6	13-0118	Cutter head polycord	1
7	13-0186	Velcro mat	1
8	51-0143	Cutter head rigid head top plate	1
9	51-0144	Cutter head rigid head polycord hub	1
10	51-0145	Cutter head rigid head polycord ring	1
11	51-0146	Cutter head rigid head bottom plate	1
12	96-0025	Cutter head triangle holder assy	1

NOTES:
1. INDICATED ITEM CONSISTS OF BUILD-UP OF 3 LAYERS OF POLYCORD DISCS AS FOLLOWED: 1 PIECE OF PART # 13-0117 (.043" THICK) STACKED ON TOP OF 2 PIECES OF PART # 13-0118 (.073" THICK). INSTALLATION REF: DISCS TO BE INSTALLED WITH THINNER DISC'S BLACK COATED SIDE ORIENTED TOWARD ASSEMBLY'S TOP PLATE.
2. INDICATED SCREWS TO BE USED FOR ATTACHING ASSEMBLY TO CUTTER HEAD SHAFT.
3. SECURE INDICATED SCREWS WITH A MEDIUM STRENGTH THREAD LOCKING COMPOUND (E.G. LOCTITE 242).

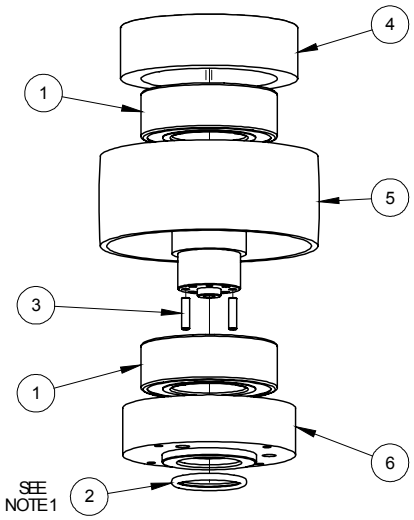
INVERTER BOX - P32 "ND" SERIES



ITEM	PART #	DESCRIPTION	QTY
2	22-0019	Switch (circuit breaker rotary handle)	1
3	22-0050	Contactor (32A, 3 pole, 24V coil)	1
4	22-0060	Switch (on/off)	1
5	23-0055	VFD (20HP, 480VAC, 3 phase)	1
6	23-0056	Quick-disconnect wiring connector	1
7	23-0061	Hour meter	1
8	23-0077	Circuit breaker base (with linkage mechanism 23-0076)	1
9	23-0145	Power Receptical, IEC Appliance Outlet, Snap-In	1
10	23-0146	Transformer, 150VA dual voltage output	1
11	23-0147	Fuse (1A, 250 VAC, time delay)	3
12	23-0148	Fuse (1.5A, 600 VAC)	2
13	25-0151	Fan	1
14	25-0153	Ground bar	1
15	25-0154	Terminal block	1
16	96-0307	Inverter enclosure (assembled shell)	1

Notes:
1. Power on/off switch.
2. Power provision for water mister pump.
3. Replacement filters for vents: 81-0364.

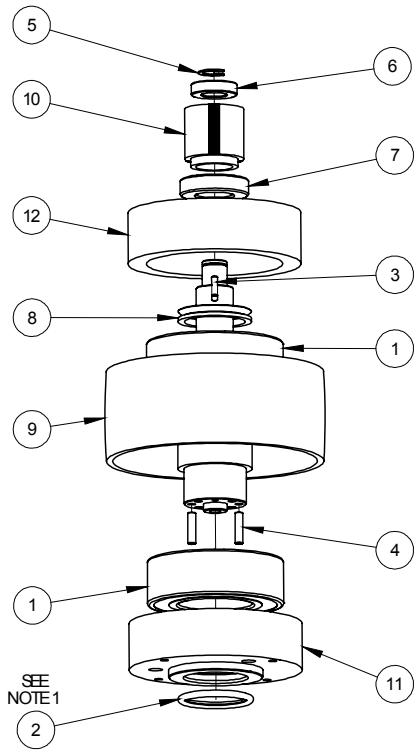
CUTTER HEAD PULLEY (WITHOUT TOP PULLEY) - P32 "ND" SERIES (#96-0282)



ITEM	PART #	DESCRIPTION	QTY
1	13-0120	Bearing (60x110x36.5)	2
2	13-0131	O-ring (2" ID x 2-3/8" OD x 3/16" W)	1
3	13-0134	Dowel pin, 1/4" dia. x 1" long	2
4	51-0002	Bearing housing (cutter head, top)	1
5	51-0191-6	Cutter head pulley	1
6	51-0867	Bearing housing (cutter head, bottom)	1

NOTE:
1 O-RING RESIDES INSIDE BEARING HOUSING'S GROOVED OPENING.

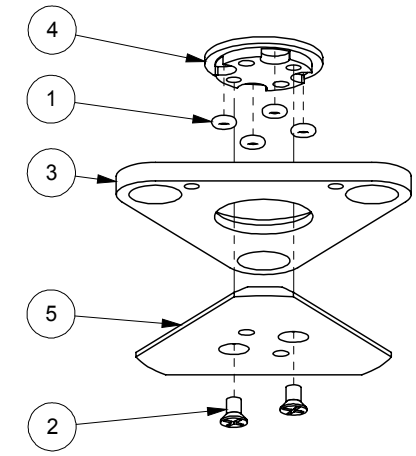
CUTTER HEAD PULLEY (WITH TOP PULLEY) - P32 "ND" SERIES (#96-0281)



ITEM	PART #	DESCRIPTION	QTY
1	13-0120	Bearing (60x110x36.5)	2
2	13-0131	O-ring (2" ID x 2-3/8" OD x 3/16" W)	1
3	13-0133	Dowel pin, 3/16" dia. x 5/8"	1
4	13-0134	Dowel pin, 1/4" dia. x 1" long	2
5	13-0144	Retaining ring (E-style)- for 3/4" shaft	1
6	13-0208	Bearing (20 ID x 37 OD x 9 W)	1
7	13-0327	Bearing, 30 ID x 55 OD x 13 W	1
8	13-0330	V-ring seal (1.93 ID x 2.33 OD x .35 H)	1
9	51-0191-5	Cutter head pulley (with top shaft)	1
10	51-0845	Gear pulley	1
11	51-0867	Bearing housing (cutter head, bottom)	1
12	51-0868	Bearing housing (cutter head, top)	1

NOTE:
1. O-RING RESIDES INSIDE BEARING HOUSING'S GROOVED OPENING.

CUTTER HEAD TRIANGLE HOLDER ASSEMBLY
(PART # 96-0025)



SEE NOTE 1

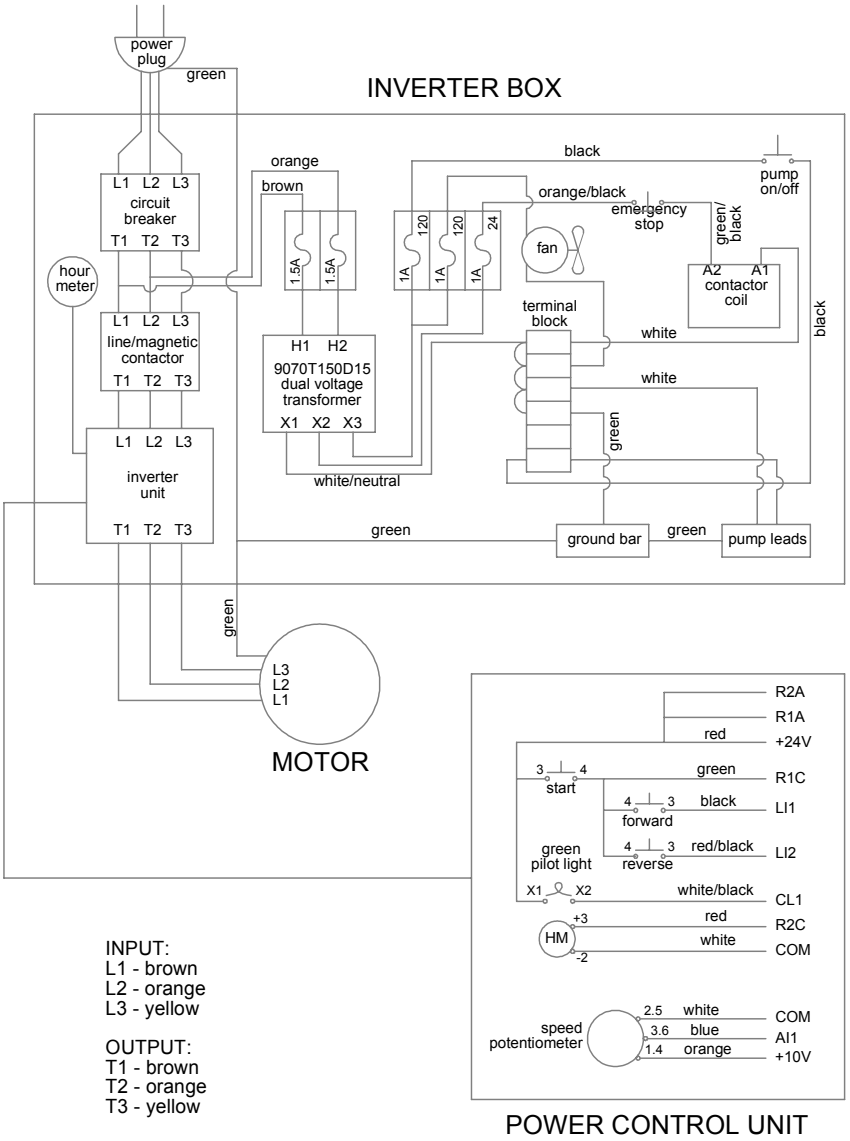
ITEM	DESCRIPTION	PART #	QTY
1	O-ring, 1/8 ID x 5/16 OD x 3/32" width	13-0142	4
2	Screw (flat head, Phillips) #10 - 24 x 5/16	11-0142	2
3	Triangle holder base	51-0138	1
4	Triangle holder center rotator	51-0110	1
5	Triangle holder hold-down	51-0132	1

REV A

NOTES:

1. SCREW(S) HAVE AN "UNDERCUT" HEAD FEATURE TO AVOID POSSIBLE PARTS FITTING INTERFERENCE PROBLEMS. ATTACH INDICATED SCREWS TO CENTER ROTATOR USING A HIGH STRENGTH THREAD LOCKING COMPOUND (IE. LOCTITE 271).

WIRING SCHEMATIC
(P32N, P32ND, P32NDX)



INPUT:
L1 - brown
L2 - orange
L3 - yellow

OUTPUT:
T1 - brown
T2 - orange
T3 - yellow

DECLARATION OF CONFORMITY

CERTIFICAT DE CONFORMITÉ / GELIJKVORMIGHEIDS CERTIFICAAT / DECLARACIÓN DE CONFORMIDAD / DECLARAÇÃO DE CONFORMIDADE / DICHIARAZIONE DI CONFORMITA

We:

Innovatech Products
832 80th St SW
Everett, Washington, USA
98203
Tel: (425) 405-9100
Toll Free: (800) 267-6682
Fax: (425) 405-9108

Declare under our sole responsibility that the product to which this declaration relates is in conformity with the following standard(s) or other normative documents.
Déclarons sous notre responsabilité que le produit cette déclaration est conforme aux normes suivantes ou d'autres documents habituels.
Verklaren onder onze verantwoordelijkheid dat het product naar welke de verklaring verwijst conform de volgende standaards of anders gebruikelijke documenten is.
Declaramos bajo nuestra única responsabilidad que el producto en lo que esta declaración concierne, es conforme con la siguiente normativa u otros documentos.
Declara sob sua responsabilidade que o produto a quem esta declaração interessar, está em comformidade com os seguintes documentos legais ou normas directivas.
Dichiariamo sotto la ns. unica responsibilita che il prodotto al quale questa dichiarazione si riferisce, è fabbricato in conformità ai seguenti standard e documenti di normative.

EN 349:1993	Safety of Machinery - Minimum gaps to avoid crushing of parts of the human body.
EN 418:1993	Safety of Machinery - Emergency stop equipment, functional aspects - Principles for design
EN 12100-1:2003	Safety of Machinery - Basic Concepts, general principles for design - Part 1: Basic Terminology, methodology
EN 12100-2:2003	Safety of Machinery - Basic Concepts, general principles for design - Part 2: Technical Principles
EN ISO 4872:1978	Acoustics - Measurement of Airborne noise emitted by construction equipment intended for outdoor use - Method for determining compliance with noise limits.
EN ISO 5349-1:2001	Mechanical vibration. Measurement and evaluation of human exposure to hand-transmitted vibration. General requirements
EN ISO 5349-2:2001	Mechanical vibration. Measurement and assessment of human exposure to hand-transmitted vibration. Practical guidance for measurement at the workplace.

Following the provisions of Directive(s):
Suivant les directive(s) déterminées:
Volgens de vastgestelde richtlijnen:
Siguiendo las directiva(s):
No sequimento das clausulas da Directiva(s):
Seguendo quanto indicato dalla Direttiva(s):

98/37/EC	Machinery Directive
2000/14/EC	Noise Directive
2001/95/EC	General Product Safety Directive
2002/95/EC	Reduction of Hazardous Waste Directive

Technical Characteristics:
Caractéristiques techniques:

Technisch gegevens:
Características Técnicas:
Caracteristicas Técnicas:
Qualitàs di tecnico:

Model Modéle Type Modelo Modelo Modello	MachineSerial Number Numéro de Série machine Serienummer machine Máquina número de série Numero de serie da maquina Numero di seria la macchina	Engine Serial Number Numéro de Série moteur Serienummer motor Motor número de série Numero de serie do motor Numero di seria la motore	Weight Masse Gewicht Masa Massa Massa
			Lbs (kg)

Noise Level Puissance acoustique Geluidniveau Nivel Sonoro Nivel del Ruido	Pressure level Pression acoustique Geluidsdrukniveau Nivel Acustico Pressão Acústica	Vibration level Niveau de vibration Vibratieniveau Nivel de Vibracion Nivel de Vibração
Lwa (dB)	Lpa (Db)	ahv (m/s^2)
98	99	1.5

The Technical Construction file is maintained at:
Les fiches techniques de construction sont gardées à:
Het technische constructie document wordt bewaard te:
El archivo técnico de construcción se mantiene en:
O arquivo técnico de construção é mantido no (a):
L'originale dossier tecnico di construzione è conservato presso:
The authorized representative is:
Le représentant autorisé est:
Gemachtigd vertegenwoordiger is:
La representación autorizada es:
O representante autorizado é:
Il rappresentate autorizzato:
Signature of Authorized Person:
Signature de la personne autorisée:
Handtekening van gemachtigd persoon:
Firma de la persona autorizada:
Assinatura de pessoa autorizada:
Firma della persona autorizzata:
Typed name of Authorized Person:
Nom dactlyographié de la personne autorisée:
Getypte naam van gemachtigd persoon:
Nombre de la persona autorizada:
Nome datilografado da pessoa autorizada:
Nome della persona autorizzata:
Title of Authorized Person:
Titre de la personne autorisée:
Functie van gemachtigd persoon:
Cargo de la persona autorizada:
Titulo da pessoa autorizada:
Posizione della persona autorizzata:
Date and place of issue:
Date et place d'émission:
Datum en plaats van afgifte:
Fecha y lugar de emision:
Data e lugar de emissão:
Data e luogo di emissione:

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2015-04-27

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