



MAGNETIC DEBURRING & POLISHING MACHINE

OPERATION MANUAL

Models

EHD-765, 750, 735, 728, 716



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CNC TOOLING SOLUTIONS
FROM SPINDLE TO WORKPIECE



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CAUTIONS AND WARNINGS

1. Read and understand all of the contents of the Operations Manual before operating this equipment.
2. Do not allow the strong magnetic field at the bottom of the well to come near large ferrous metal objects or magnets. This can create a pinch hazard and might damage the machine.
3. Disassembly of this machine will void the warranty.
4. Prevent deburring solution from spilling into the well of the machine. Clean and dry the well, immediately after a spill to prevent damage to the machine.
5. Make sure the power supply is correct before connecting the machine.
6. Keep a 4" clearance to the wall. Operate in a cool, well-ventilated area.
7. Do not move the machine, while it is in operation.
8. The diluted deburring solution should be replaced, before the temperature exceeds 50° C (122° F).
9. Always use the proper personal protection equipment when using this machine. Follow the necessary safety codes required by your local safety agency.
10. Do not sit, lay or apply any part of your body to the magnetized surface in the well of the machine.
11. Do not allow electronic devices (cell phones, watches, pacemakers...) or magnetic devices (credit cards, access cards...) to enter the well of the machine, to avoid damage to the device.
12. Refer to the appropriate deburring solution MSDS for health hazard information.
13. Do not mount on or near combustible materials.

BEFORE STARTING TO USE THE SPINNER

1. Before powering on the sPINner Magnetic Deburring Machine, thoroughly read this operation manual and familiarize yourself with all operations.
2. Make sure the power voltage is correct before plugging the machine in.
3. Keep a 4" clearance to the wall. Operate in a cool, well-ventilated area.
4. Prevent deburring solution from spilling into the well of the machine. Clean the well and keep it dry immediately after spilling to prevent damage to the machine.
5. A powerful magnetic field exists at the bottom of the well. Keep the machine clear of any strong magnetic fields.
6. Do not move the machine while operating.
7. Keep articles such as credit cards, watches, cellular phones, etc. which are prone to interference from magnetic fields away from the machine to avoid possible damage.
8. The temperature of the deburring solution rises during operation and may rise to 90°C (194°F) during continuous use. Handle with care to avoid injury.
9. The media is small and sharp. Handle with care to avoid injury.
10. Do not dismantle or remodel this machine. The manufacturer will accept no responsibility for injury or machine failure resulting from dismantling or remodeling the machine.
11. Operate with proper safety precautions (goggles, rubber gloves, etc.)



FUNCTIONS

This Magnetic Deburring machine is excellent for high precision grinding including deburring, chamfering, and polishing on products made of non-ferrous metal, light metal, and some ferrous materials.

FEATURES & APPLICATIONS

1. Excellent for deburring and chamfering.
2. Great for irregular parts, internal holes, blind angles, and clearance, etc.
3. No deformation of parts, no surface damage, no effect on accuracy of parts.
4. Works well on internal tubular surfaces or high precision parts with no deformation.
5. Long life cycle of media. Typical applications can result in 3-5 years of use.
6. Easy to use. The workpieces can be removed without interruption of the machine.

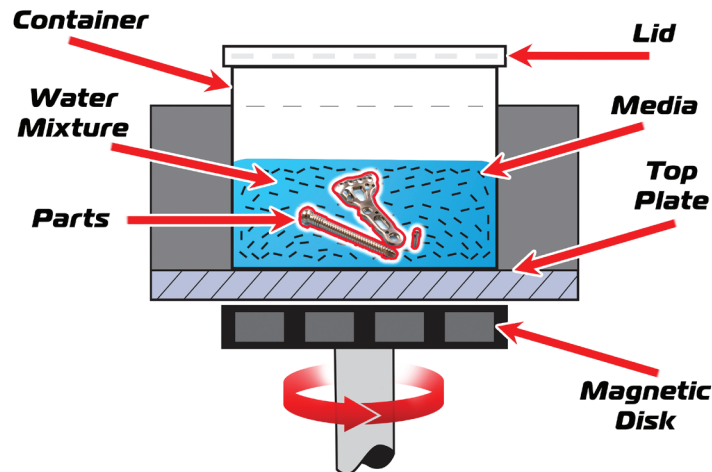


Other applications include:

- **Surface polishing**
- **Internal deburring**
- **Pre-electroplating processing**
- **Oxidized film cleaning**
- **Removing Heat Treat Scaling**
- **Removing rust**

PRINCIPLE OF SPINNER

The magnetized (stainless steel pins), the workpieces and the polishing fluid are put together in a container placed in the well of the machine. A powerful moving magnetic field is generated when powering on the machine. The result excites the media and causes the media to bounce off the workpieces to achieve deburring.



OPERATION

1. Put the magnetic media (stainless steel pins) in the container. The quantity of pins should be:

EHD-716:	½Kg
EHD-728:	1Kg
EHD-735:	3Kg's
EHD-750:	4Kg's
EHD-765:	6Kg's



2. Place a single layer of parts in the bottom of the container so they do not overlap.
3. Add enough water to just cover the parts. Add deburring solution to create a 50:1 water to solution. (Add more solution for brighter, shiny parts)
4. Place the lid on the container and place the container in the well of the machine.
5. Enter the cycle times in the digital timers on the control panel. (Note: cycle time, media size, and parts quantity will depend on the specific application.)
6. Press the green, start cycle button on the control panel.
7. Adjust the spin frequency with the spin frequency control knob on the control panel.

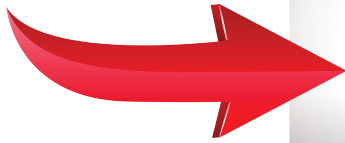


COMMENTS

1. Cycle times can vary between 2-30 minutes depending on the effect needed on the parts.
2. Demagnetizing ferrous materials: If the container is removed while the magnetic disc is rotating, the contents of the container will be demagnetized. We are simply changing the magnetic poles rapidly.

PARTS AND MEDIA SEPARATION PROCEDURE

Watch NOW!



1. Slowly pour off the water and solution leaving the parts and media. (Dispose of the fluid in a method consistent with regulations and company policy.) Avoid letting the media fall into your water disposal area. Now you are ready to place the media and parts into the separation container. Place the lid on the separation container.
2. Place the separation container in the well of the machine.
3. Turn the spin frequency to about 30 Hz. Turn on the machine for about 10 seconds.
4. Lift the separation container out of the well of the machine.
5. Stop the machine. The parts should be trapped in the top of the separation container. The pins will be pulled through the separation container to the bottom. (Do this until media and parts are fully separated.)

Note: Some pins may remain in the top of the Separation Container. Remove the parts and reclaim the pins for reuse. Also, some pins may fall off the parts after separation. Use the magnetic syringe to reclaim these pins for reuse.

The handling of work after deburring, such as rinsing and rust proofing, etc, should be subject to your normal procedures.

STAINLESS STEEL PINS: DEBURRING MEDIA

1. Sizes: We offer 36 different varieties of sizes ranging from .008 to 2mm.
2. The stainless steel pins are virtually permanent lasting 3-5 years in typical environments.
3. The stainless steel pins are very small. Handle with care.
4. Clear the tank if steel pins are dropped in to avoid damaging the machine.
5. Rinse the pins and keep them dry after finishing the work.
6. The stainless steel pins are restricted for use with the magnetic deburring machine. No other purpose is allowed.
7. The following are guidelines for pin sizes for different materials. Please note, these are only guidelines and each individual application may require different media and/or cycle times depending on the unique nature of the part and the desired effect.

MATERIAL	MEDIA SIZE	CYCLE TIME	SPEED
Brass	0.3, 0.5 mm	10 minutes	30-60 Hz
Copper	0.3, 0.5 mm	10 minutes	30-60 Hz
Aluminum	0.2, 0.3, 0.5	10 minutes	30-60 Hz
Stainless Steel	0.5, 0.7, 1.0	10 – 20 minutes	40-60 Hz
Tungsten Carbide	0.7, 1.0, 1.2	30 minutes	60 Hz

Also, here are some guidelines for the maximum weight of parts to be process in the different models of the sPINner:

MODEL	Brass, Copper, Gold, Platinum, Stainless (NONMAGNETIC)	Aluminum, Alloy, Pewter, Zinc, Silver	Steel, Iron, Stainless (MAGNETIC)
EHD-750CL	17 lbs	10.5 lbs	5.5 lbs
EHD-735	7 lbs	4.5 lbs	2.5 lbs
EHD-728	2.5 lbs	1.5 lbs	NR
EHD-716	0.5 lbs	0.25 lbs	NR

NR – Not recommended



CLEANING THE MEDIA

Occasionally the media will need cleaned to ensure the best possible results on the parts being processed. To clean the media simply run a 10-minute cycle with only the media, water and PFS-747 deburring compound mixed to 25:1 with the water. The action of the pins on themselves with the soap solution will clean the media. Rinse the media when complete and repeat if necessary.

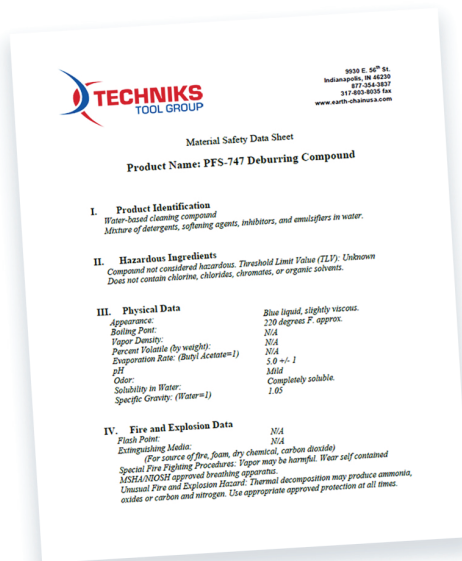
DEBURRING SOLUTION (PFS-747)

The fluid is restricted for use with the magnetic deburring machine. No other purpose is allowed. The fluid is concentrated and therefore different than the cleaning mixture ratio. Dilute in water 50:1.

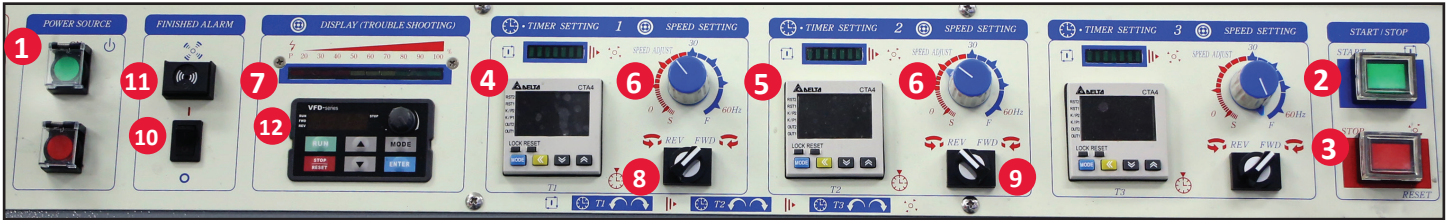
Caution: Do not eat/drink the fluid. If the fluid is accidentally consumed, drink large amounts of water and seek medical attention.

Caution: The temperature of the fluid in the container rises during operation. Do not allow the fluid temperature to rise above 50°C (122 °F).

DOWNLOAD MSDS SHEET HERE



CONTROL PANEL FOR EHD-765 (CONFIGURATION MAY VARY)



- 1 POWER SOURCE:** When turning power to ON position, the power is connected and the power indicator is illuminated.
- 2 START BUTTON:** Press start button to begin a cycle.
- 3 STOP BUTTON:** Press the stop button to end a cycle.
- 4 TIMER #1:** The unit of time is in minutes. Press the timer buttons for the desired time. (Ex. A value of 15 will run for 15 minutes in this direction). The number shown in the upper part is the completed time while running.
- 5 TIMER #2:** Setting instructions are the same for TIMER #1.

Timer preset and performance: After starting, TIMER #2 will first spin in a counter-clockwise direction. Timer stops when the preset time is reached and will automatically switch to TIMER #1. The magnets will rotate in a clockwise direction until the preset time is reached.

Total cycle time is the sum of both TIMER #1 and TIMER #2. After a cycle, the lamp will illuminate for 3 minutes. If a single direction of spin is desired, set the timer in the direction of spin desired to the appropriate time, set the other timer to "0".

- 6 SPEED ADJUST:** This knob controls the spin speed of the magnets. Turning the knob in a clockwise direction increases the spin speed, counter-clockwise decreases speed. A faster spin rate makes a more powerful deburring action. If a single direction of spin is desired, set the timer in the direction of spin desired to the appropriate time, set the other timer to "0".
- 7 SPEED DISPLAY:** This displays the speed of the magnets via 10 lamps, dividing the speed into percentages from 20-100%.
- 8/9 L/R/ FUNCTION:** These two switches control rotation direction for each timer.
- 10/11 FINISH ALARM:** When a cycle is complete, the lamp will illuminate for 3 minutes. If the switch (10) is ON, an end cycle buzzer will sound. To stop the lamp and/or the buzzer, press the STOP button (3).
- 12 FREQ, HZ DISPLAY:** This displays the frequency in Hz of the rotation of the magnets. When the frequency is higher the speed is faster. 60 Hz is the maximum setting. This display can also show some fault settings in the event of machine malfunction. Other buttons on this display are for programming machine performance parameters. Please do not press these buttons.



THE USAGE OF THE 3 TIMERS OF HD-765



There are THREE sections on the control panel of HD-765. In each section, the user can set the grinding time, speed and rotation direction independently.

The three sections will be executed SEQUENTIALLY. That is, after pressing the START button, the machine will activate the first timer and operate according to the setting on the first section. After the first timer is timeout, the machine will activate the second one and use the setting on the section, and so on so forth.



HOW TO SET ON THE TIMER

Press the Yellow button  ,you will see the first digit starts to blink.

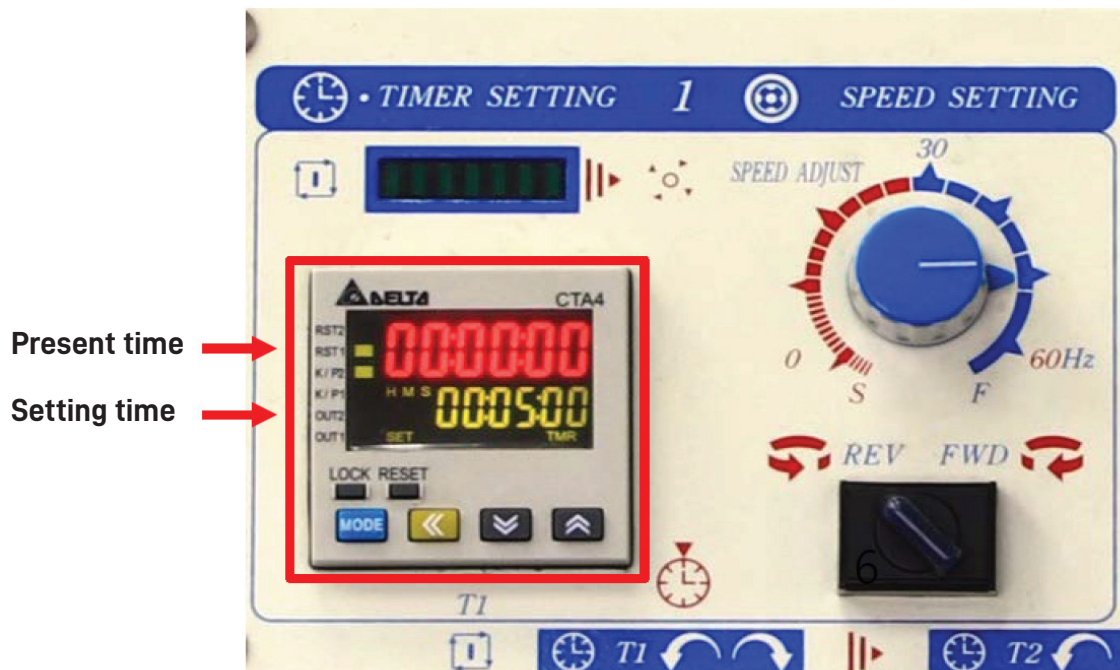
Press the Gray buttons   to increase or decrease the digit

Press the Yellow button  again to adjust the next digit.

Repeat the above operation until the wanted time is set.

Press MODE  button to finish.

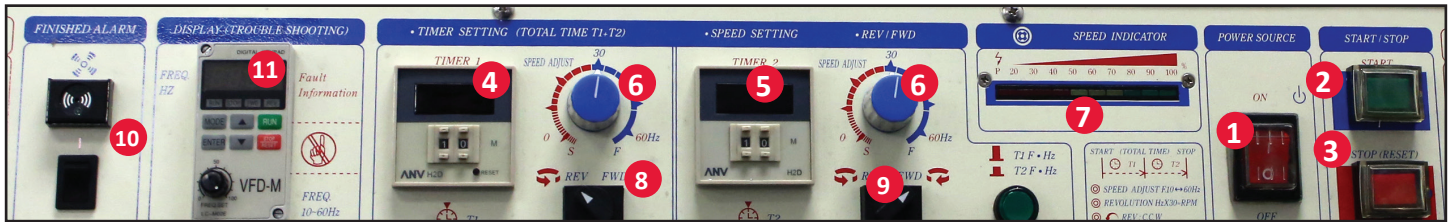
***The format of time display is HH:MM:SS.**



The following are some typical parameter settings examples for different materials. These parameters are only for reference. The users can adjust the parameter according to their needs.

	(DEBURRING)	(DEBURRING)	(FINISHING)
Stainless Steel Parts (Wet Grinding)	Forward 50Hz 6 mins	Reverse 50Hz 6 mins	Forward 30Hz 3 mins
Aluminum Parts (Wet Grinding)	Forward 40Hz 4 mins	Reverse 40Hz 4 mins	Forward 25Hz 2 mins
Brass / Copper Parts (Wet Grinding)	Forward 40Hz 4 mins	Reverse 40Hz 4 mins	Forward 25Hz 2 mins
Zinc Die Casting Parts (Dry Grinding)	Forward 60Hz 2 mins	Reverse 60Hz 2 mins	Forward 60Hz 1 mins

CONTROL PANEL FOR EHD-750



1 POWER SOURCE: When turning power to ON position, the power is connected and the power indicator is illuminated.

2 START BUTTON: Press start button to begin a cycle.

3 STOP BUTTON: Press the stop button to end a cycle.

4 TIMER #1: The unit of time is in minutes. Press the timer buttons for the desired time. (Ex. A value of 15 will run for 15 minutes in this direction). The number shown in the upper part is the completed time while running.

5 TIMER #2: Setting instructions are the same for TIMER #1.

Timer preset and performance: After starting, TIMER #2 will first spin in a counter-clockwise direction. Timer stops when the preset time is reached and will automatically switch to TIMER #1. The magnets will rotate in a clockwise direction until the preset time is reached.

Total cycle time is the sum of both TIMER #1 and TIMER #2. After a cycle, the lamp will illuminate for 3 minutes. If a single direction of spin is desired, set the timer in the direction of spin desired to the appropriate time, set the other timer to "0".

6 SPEED ADJUST: This knob controls the spin speed of the magnets. Turning the knob in a clockwise direction increases the spin speed, counter-clockwise decreases speed. A faster spin rate makes a more powerful deburring action. If a single direction of spin is desired, set the timer in the direction of spin desired to the appropriate time, set the other timer to "0".

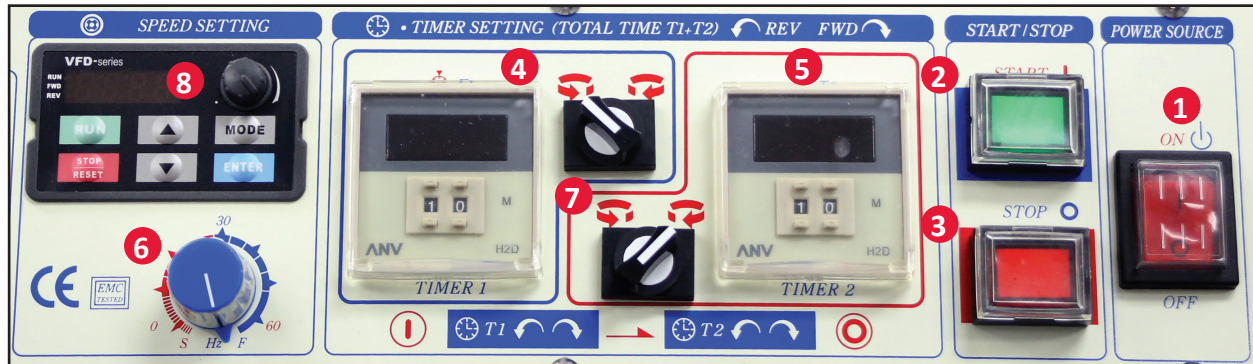
7 SPEED DISPLAY: This displays the speed of the magnets via 10 lamps, dividing the speed into percentages from 20-100%.

8/9 L/R/ FUNCTION: These two switches control rotation direction for each timer.

10 FINISH ALARM: When a cycle is complete, the lamp will illuminate for 3 minutes. If the switch (10) is ON, an end cycle buzzer will sound. To stop the lamp and/or the buzzer, press the STOP button (3).

11 FREQ. HZ DISPLAY: This displays the frequency in Hz of the rotation of the magnets. When the frequency is higher the speed is faster. 60 Hz is the maximum setting. This display can also show some fault settings in the event of machine malfunction. Other buttons on this display are for programming machine performance parameters. Please do not press these buttons.

CONTROL PANEL FOR EHD-735



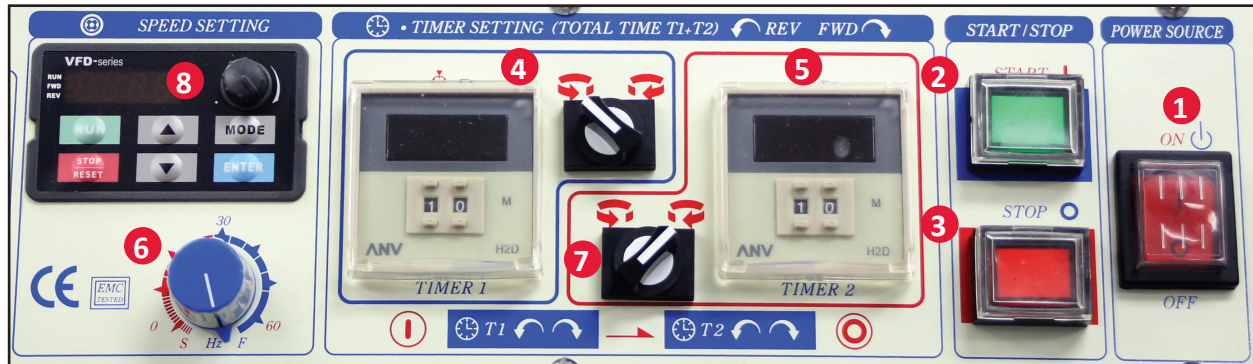
- 1 POWER SOURCE:** When turning power to ON position, the power is connected and the power indicator is illuminated.
- 2 START SWITCH:** Press start switch to begin a cycle.
- 3 STOP SWITCH:** Press the stop switch to end a cycle.
- 4 TIMER #1:** The unit of time is in minutes. Press the timer buttons for the desired time. (Ex. A value of 15 will run for 15 minutes in this direction). The number shown in the upper part is the completed time while running.
- 5 TIMER #2:** Setting instructions are the same for TIMER #1.

Timer preset and performance: After starting, TIMER #2 will first spin in a counter-clockwise direction. Timer stops when the preset time is reached and will automatically switch to TIMER #1. The magnets will rotate in a clockwise direction until the preset time is reached.

 Total cycle time is the sum of both TIMER #1 and TIMER #2. After a cycle, the lamp will illuminate for 3 minutes. If a single direction of spin is desired, set the timer in the direction of spin desired to the appropriate time, set the other timer to "0".
- 6 SPEED ADJUST:** This knob controls the spin speed of the magnets. Turning the knob in a clockwise direction increases the spin speed, counter-clockwise decreases speed. A faster spin rate makes a more powerful deburring action. If a single direction of spin is desired, set the timer in the direction of spin desired to the appropriate time, set the other timer to "0".
- 7 L/R/ FUNCTION:** These two switches control rotation direction for each timer.
- 8 FREQ, HZ DISPLAY:** This displays the frequency in Hz of the rotation of the magnets. When the frequency is higher the speed is faster. 60 Hz is the maximum setting. This display can also show some fault settings in the event of machine malfunction. Other buttons on this display are for programming machine performance parameters. Please do not press these buttons.



CONTROL PANEL FOR EHD-728



- 1 POWER SOURCE:** When turning power to ON position, the power is connected and the power indicator is illuminated.
- 2 START SWITCH:** Press start switch to begin a cycle.
- 3 STOP SWITCH:** Press the stop switch to end a cycle.
- 4 TIMER #1:** The unit of time is in minutes. Press the timer buttons for the desired time.
(Ex. A value of 15 will run for 15 minutes in this direction). The number shown in the upper part is the completed time while running.
- 5 TIMER #2:** Setting instructions are the same for TIMER #1.

Timer preset and performance: After starting, TIMER #2 will first spin in a counter-clockwise direction. Timer stops when the preset time is reached and will automatically switch to TIMER #1.
 The magnets will rotate in a clockwise direction until the preset time is reached.

 Total cycle time is the sum of both TIMER #1 and TIMER #2. After a cycle, the lamp will illuminate for 3 minutes.
 If a single direction of spin is desired, set the timer in the direction of spin desired to the appropriate time, set the other timer to "0".
- 6 SPEED ADJUST:** This knob controls the spin speed of the magnets. Turning the knob in a clockwise direction increases the spin speed, counter-clockwise decreases speed. A faster spin rate makes a more powerful deburring action.
 If a single direction of spin is desired, set the timer in the direction of spin desired to the appropriate time, set the other timer to "0".
- 7 L/R/ FUNCTION:** These two switches control rotation direction for each timer.
- 8 FREQ, HZ DISPLAY:** This displays the frequency in Hz of the rotation of the magnets. When the frequency is higher the speed is faster. 60 Hz is the maximum setting. This display can also show some fault settings in the event of machine malfunction. Other buttons on this display are for programming machine performance parameters.
 Please do not press these buttons.

CONTROL PANEL FOR EHD-716



- 1 POWER SOURCE (Start & Stop Switch):** When the power is ON, the power is connected.
- 2 60 MINUTE TIMER:** Turn this knob to select the cycle time. Turning the knob to the right increases the cycle time. When a cycle is complete a tone will sound and the machine will stop.

TROUBLESHOOTING AND FAULT INFORMATION FOR EHD-765, 750, 735, & 728

The AC motor drive has a comprehensive fault diagnosis system that includes more than 20 different alarms and fault messages. Once a fault is detected, the corresponding protective functions will be activated to shut down the AC motor drive output. The different AC motor drive failures may be classified as follows:

Over Voltage/Lower Voltage

Heat-Sink Over Temperature

Motor Overload

AC Motor Drive Overload

Motor Stalled

Microprocessor System Failure



FAULT CODE INFORMATION AND MAINTENANCE

Common troubleshooting of the sPINner:

FAULT DESCRIPTION	POSSIBLE CAUSE	CORRECTIVE ACTIONS
After powering on the machine, the displays of the timers and controller do not turn on.	The fuse is blown.	Check the fuse (HD-750 or lower) or the circuit breaker (HD-765 or higher) at the rear of the machine.
The machine is turned on, but the timer does not start timing, or it stops before the set time, or other abnormal conditions.	The timer has failed due to water intake or has reached the end of its service life.	Replace the timer.
The machine is turn on, and the timer counts normally after pressing the START button. But the machine does not operate.	1. Press the start button too soon after powering up.	Reboot and wait for five seconds before pressing Start.
	2. The machine is overweighting. The inverter will display "OL" (Overloading).	<p>1. Remove the workpiece, leaving only the rated amount of PINs and water (depending on the size of the container).</p> <p>2. Check whether the machine is operating normally.</p> <p>3. If it can work normally, you need to reduce the amount of grinding workpieces.</p>
	3. The speed adjustment knob is set to 0.	Reboot and wait for five seconds before pressing Start.

If the machine cannot be operated after Power on, and the inverter display an error message. Please refer to the attached error message code table for details.

COMMON PROBLEMS AND SOLUTIONS (MODEL:HD-765.HD-745.HD-728.HD-7200)

FAULT NAME	FAULT DESCRIPTIONS	CORRECTIVE ACTIONS
OC	Over current Abnormal increase in current.	<ol style="list-style-type: none"> 1. Check if motor power corresponds with the AC motor drive output power. 2. Check the wiring connections to U/T1, V/T2, W/T3 for possible short circuits. 3. Check the wiring connections between the AC motor drive and motor for possible short circuits, as to ground. 4. Check for loose contacts between AC motor drive and motor. 5. Increase the Acceleration Time. 6. Check for possible excessive loading conditions at the motor. 7. If there are still any abnormal conditions when operating the AC motor drive after a shortcircuit is removed and the other points above are checked, it should be sent back to manufacturer.
OU	Over voltage The DC bus voltage has exceeded its maximum allowable value.	<ol style="list-style-type: none"> 1. Check if the input voltage falls within the rated AC motor drive input voltage range. 2. Check for possible voltage transients. 3. DC-bus over-voltage may also be caused by motor regeneration. Either increase the Decel. Time or add an optional brake resistor (and brake unit). 4. Check whether the required braking power is within the specified limits.



COMMON PROBLEMS AND SOLUTIONS (MODEL:HD-765.HD-745.HD-728.HD-7200)

FAULT NAME	FAULT DESCRIPTIONS	CORRECTIVE ACTIONS
OH 1 OH 2	Overheating Heat sink temperature too high	<ol style="list-style-type: none"> 1. Ensure that the ambient temperatures falls within the specified temperature range. 2. Make sure that the ventilation holes are not obstructed. 3. Remove any foreign objects from the heatsinks and check for possible dirty heat sink fins. 4. Check the fan and clean it.
LV	Low voltage The AC motor drive detects that the DC bus voltage has fallen below its minimum value.	<ol style="list-style-type: none"> 1. Check whether the input voltage falls within the AC motor drive rated input voltage range. 2. Check for abnormal load in motor. 3. Check for correct wiring of input power to R-S-T (for 3-phase models) without phase loss.
OL	Overload The AC motor drive detects excessive drive output current. Note: The AC motor drive can withstand up to 150% of the rated current for a maximum of 60 seconds.	<ol style="list-style-type: none"> 1. Check whether the motor overloaded. 2. Reduce torque compensation setting in Pr.07.02. 3. Use the next higher power AC motor drive model.
OL 1	Overload 1 Internal electronic overload trip.	<ol style="list-style-type: none"> 1. Check for possible motor overload. 2. Check electronic thermal overload setting. 3. Use a higher power motor. 4. Reduce the current level so that the drive output current does not exceed the value set by the Motor Rated Current Pr.07.00.
OL 2	Overload 2 Motor Overload.	<ol style="list-style-type: none"> 1. Reduce the motor load. 2. Adjust the over-torque detection setting to an appropriate setting (Pr.06.03 to Pr.06.05).
CPF 1	CC (Current clamp)	Return to the factory.

COMMON PROBLEMS AND SOLUTIONS (MODEL:HD-765.HD-745.HD-728.HD-7200)

FAULT NAME	FAULT DESCRIPTIONS	CORRECTIVE ACTIONS
HPF 1	CC (Current clamp)	Return to the factory.
HPF 2	OV Hardware error	Return to the factory.
HPF 3	GFF Hardware error	Return to the factory.
HPF 4	OC Hardware error	Return to the factory.
bb	External Base Block. (Refer to Pr. 08.77)	<ol style="list-style-type: none"> 1. When the external input terminal (B.B) is active, the AC motor drive output will be turned off. 2. Deactivate the external input terminal (B.B) to operate the AC motor drive again.
ocR	Over-current during acceleration	<ol style="list-style-type: none"> 1. Short-circuit at motor output: Check for possible poor insulation at the output lines. 2. Torque boost too high: Decrease the torque compensation setting in Pr.07.02 3. Acceleration Time too short: Increase the Acceleration Time. 4. AC motor drive output power is too small: Replace the AC motor drive with the next higher power model.
ocd	Over-current during acceleration	<ol style="list-style-type: none"> 1. Short-circuit at motor output: Check for possible poor insulation at the output line. 2. Deceleration Time too short: Increase the Deceleration Time. 3. AC motor drive output power is too small: Replace the AC motor drive with the next higher power model.
ocn	Over-current during constant speed operation	<ol style="list-style-type: none"> 1. Short-circuit at motor output: Check for possible poor insulation at the output line. 2. Sudden increase in motor loading: Check for possible motor stall. 3. AC motor drive output power is too small: Replace the AC motor drive with the next higher power model.



COMMON PROBLEMS AND SOLUTIONS (MODEL:HD-765.HD-745.HD-728.HD-7200)

FAULT NAME	FAULT DESCRIPTIONS	CORRECTIVE ACTIONS
EF	External Fault	<ol style="list-style-type: none"> 1. When multi-function input terminals (MI3-MI9) are set to external fault, the AC motor drive stops output U, V and W. 2. Give RESET command after fault has been cleared.
cF 10	Internal EEPROM can not be programmed.	Return to the factory.
cF 11	Internal EEPROM can not be programmed.	Return to the factory.
cF 20	Internal EEPROM can not be programmed.	<ol style="list-style-type: none"> 1. Press RESET key to set all parameters to factory setting. 2. Return to the factory.
cF 21	Internal EEPROM can not be programmed.	<ol style="list-style-type: none"> 1. Press RESET key to set all parameters to factory setting. 2. Return to the factory.
cF 30	U-phase error	Return to the factory.
cF 31	V-phase error	Return to the factory.
cF 32	W-phase error	Return to the factory.
cF 33	OV or LV	Return to the factory.
cF 34 cF 35	Temperature sensor error	Return to the factory.

COMMON PROBLEMS AND SOLUTIONS (MODEL:HD-765.HD-745.HD-728.HD-7200)

FAULT NAME	FAULT DESCRIPTIONS	CORRECTIVE ACTIONS
GFF	Ground fault	<p>When (one of) the output terminal(s) is grounded, short circuit current is more than 50% of AC motor drive rated current, the AC motor drive power module may be damaged.</p> <p>NOTE: The short circuit protection is provided for AC motor drive protection, not for protection of the user.</p> <ol style="list-style-type: none"> 1. Check whether the IGBT power module is damaged. 2. Check for possible poor insulation at the output line.
cFR	Auto accel/decel failure	<ol style="list-style-type: none"> 1. Check if the motor is suitable for operation by AC motor drive. 2. Check if the regenerative energy is too large. 3. Load may have changed suddenly.
cE--	Communication Error	<ol style="list-style-type: none"> 1. Check the RS485 connection between the AC motor drive and RS485 master for loose wires and wiring to correct pins. 2. Check if the communication protocol, address, transmission speed, etc. are properly set. 3. Use the correct checksum calculation. 4. Please refer to group 9 in the chapter 5 for detail information.
codE	Software protection failure	Return to the factory.
RErr	Analog signal error	Check the wiring of ACI.
FbE	PID feedback signal error	<ol style="list-style-type: none"> 1. Check parameter settings (Pr.10.01) and AVI/ACI wiring. 2. Check for possible fault between system response time and the PID feedback signal detection time (Pr.10.08)



COMMON PROBLEMS AND SOLUTIONS (MODEL:HD-765.HD-745.HD-728.HD-7200)

FAULT NAME	FAULT DESCRIPTIONS	CORRECTIVE ACTIONS
PHL	Phase Loss	Check input phase wiring for loose contacts.
RVF	Auto Tuning Error	<ol style="list-style-type: none"> 1. Check cabling between drive and motor. 2. Retry again.
CP 10	Communication time-out error on the control board or power board	<ol style="list-style-type: none"> 1. Press RESET key to set all parameters to factory setting. 2. Return to the factory.
Ptc1 Ptc2	Motor overheat protection	<ol style="list-style-type: none"> 1. Check if the motor is overheat 2. Check Pr.07.12 to Pr.07.17 settings
PGEr	PG signal error	<ol style="list-style-type: none"> 1. Check the wiring of PG card 2. Try another PG card.

POWER REQUIREMENTS

EHD-765: 208-240V 3-Phase / 30A: comes with NEMA # L1530-P plug, requires NEMA # L1530-R receptacle (not included)

EHD-750: 220V Single Phase / 15A: comes with NEMA # L630-P plug, requires NEMA # L630-R receptacle (not included)

EHD-735: 220V Single Phase / 10A: comes with NEMA # L615-P plug, requires NEMA # L615-R receptacle (not included)

EHD-728: 220V Single Phase / 5A: comes with NEMA # L615-P plug, requires NEMA # L615-R receptacle (not included)

EHD-716/715: 120V / 3A: comes with NEMA # 5-15 plug, standard 120V outlet

Please note: the machine should be placed on a dedicated circuit and be protected with a surge protector to insure maximum protection for the machine. Failure to place the machines on a dedicated circuit will void the warranty as power fluctuations from other equipment can cause malfunction or damage to the machine.

SERVICE INFORMATION



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