

AUTO-DARKENING WELDING HELMET

Item Number W50057

OWNER'S MANUAL



Performance Tool®

WARNING!

READ, UNDERSTAND AND FOLLOW ALL INSTRUCTIONS AND WARNINGS BEFORE OPERATING THIS TOOL. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE AND WILL VOID WARRANTY.

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Performance Tool

SAFETY GUIDELINES / DEFINITIONS

This instruction manual is intended for your benefit. Please read and follow the safety, installation, maintenance and troubleshooting steps described within to ensure your safety and satisfaction. The contents of this instruction manual are based upon the latest product information available at the time of publication. The manufacturer reserves the right to make product changes at any time without notice.

▲ WARNING: Read and understand this entire instruction manual before attempting to assemble, install, operate or maintain this product. Failure to comply with the instructions may result in serious personal injury and/or property damage!

The following signal words are used to emphasize safety warnings that must be followed when using this product:

▲ DANGER Indicates an imminently hazardous situation that, if not avoided, WILL result in death or serious injury.

▲ CAUTION Indicates a potentially hazardous situation that, if not avoided, MAY result in minor or moderate injury.

▲ WARNING Indicates a potentially hazardous situation that, if not avoided, COULD result in death or serious injury.

▲ NOTICE Indicates important information, which if not followed, MAY cause damage to equipment.

UNPACKING AND INSPECTION

After opening the carton, unpack your new product and related parts & accessories. Please inspect it carefully for any damage that may have occurred during transit. Please check it against the photograph on carton. If any parts are missing, please call customer service at 1-800-426-1262 between 6 a.m. and 5 p.m. Pacific time.

▲ WARNING DO NOT operate this product if damaged during shipment, handling or misuse. Do not operate the product until the parts have been replaced or the fault rectified. Failure to do so may result in serious personal injury or property damage. All damaged parts must be repaired or replaced as needed prior to operating this product. Check to see that all nuts, bolts and fittings are secure before putting this product into service. If you have any questions, or require assistance with damaged or missing parts, please contact our factory customer service department at: 1-800-426-1262.

Please have the serial number, model number, and date of purchase available for reference when calling.

SPECIFICATIONS

Shade State	DIN9 – DIN13; Adjustable
Auto-Darkening Response Time	1/20,000s; Room temperature
Working Temperature	23 °F – 131 °F (-5°C - +55°C)
Sensitivity	Adjustable
Power Supply	Solar cell plus Lithium battery (4200 Hour life)
Weight	0.92 lb. (420g)
Viewing Area	3.86 in. x 1.57 in. (98mm x 40mm)
Rate of UV Transmittance	313-365nm<3.4x10-8%
Rate of IR Transmittance	780-1300nm<0.0027%
.....	1300-2000nm<0.0097%
Eye Protection	EN379 1/2/1

Specifications are subject to change without notice.

IMPORTANT SAFETY INFORMATION

▲ WARNING
READ, UNDERSTAND AND FOLLOW ALL INSTRUCTIONS AND WARNINGS BEFORE OPERATING THIS PRODUCT. FAILURE TO DO SO MAY RESULT IN FIRE, ELECTRICAL SHOCK, PERSONAL INJURY AND/OR PROPERTY DAMAGE AND WILL VOID WARRANTY.

1. Always use common sense and pay particular attention to all the DANGER, WARNING, CAUTION and NOTICE statements of this manual. The safety instructions provided are not intended to cover all possible conditions and practices that may occur when operating, maintaining and cleaning power tools.
2. Observe work area conditions. Do not use machines

or power tools in damp or wet locations. Don't expose to rain or snow. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids. Do not bring combustible materials near the tools. Power tools create sparks, which may ignite the dust or fumes. Do not immerse tool in liquids. Keep work area clean, well ventilated and well lit. Cluttered work areas invite accidents.

IMPORTANT SAFETY INFORMATION

3. Use personal protective equipment. Wear ANSI approved safety goggles. Protective equipment such as dusk mask, non-skid safety shoes, hard hat, heavy duty work gloves or hearing protection used for appropriate conditions will reduce personal injuries.
 4. Keep bystanders, children and visitors away while operating this product. Distractions can cause you to lose control.
 5. Stay alert. Watch what you are doing, and use common sense when operating this tool. Do not use this product while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating this product may result in serious personal injury. Keep proper footing and balance at all times. Do not reach over or across running machines, hoses, cords, etc.
 6. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
 7. Work Safe. Operate tool a safe distance from yourself and others in the work area. Keep proper footing and balance at all times. Do not overreach, especially on ladders. Be certain ladders being used are sturdy, stable, on a firm surface and erected as safe working angles. Do not reach over or across running machines, hoses, cords, etc.
 8. Inspect tool before every use; do not use if parts are loose or damaged.
 9. Do not alter this product in any way.
 10. Use the right tool for the job. Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. Don't use a tool whose performance is not adequate for your work. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
 11. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
 - Avoid operating alone.
 - Do not use with power switch locked on.
 - Properly maintain and inspect to avoid electrical shock.
 - Any power cord must be properly grounded. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.
 12. Do not use the Welding Helmet if the shield is cracked, if the shield or sensors are dirty, or if the shield or front retaining frame is loose.
 13. ARC Rays can injure eyes and burn skin. Before welding, always inspect helmet and filter lens to be sure they are fitted properly, in good condition and not damaged. Check to see that the lens is clean and securely attached to the helmet. Always wear safety glasses or goggles and protective clothing to protect your skin from radiation, burns and spatter. Ensure that radiation from other welder's arcs in immediate area does not enter from behind the helmet and filter.
 14. FUMES AND GASSES can be dangerous to your health. Keep your head out of fumes. Use enough ventilation or exhaust at the arc or both to keep fumes and gases from your breathing zone and general area. Follow all MSDS warnings, as well as OSHA, PEL and ACGIH TLV limits for exhaust and ventilation. Additional precautions, such as respirators or welding outdoors, may be necessary. Additional precautions are also required when welding galvanized steel.
 15. This Auto-darkening Welding Helmet is not suitable for laser welding.
 16. This Auto-darkening Welding Helmet will not protect against severe impact hazards, including fragmenting grinding disks, and they must never be used for protection purpose.
 17. This Auto-darkening Welding Helmet will not protect against explosive devices or corrosive liquids.
 18. Never open or tamper with the Auto-darkening filter. Do not make any modifications to either the filter or helmet, other than those specified in this manual. Do not use any replacement parts other than those specified in this manual. Unauthorized modifications and replacement parts will void the warranty and expose the user to the risk of personal injury.
 19. Should the Auto-darkening Welding Helmets not darken upon striding an arc, stop welding immediately and contact your authorized technician.
 20. Do not place on hot surfaces.
 21. Never immerse the filter in water.
 22. Never use any solvents on filters' screen or helmet components.
 23. Use only at temperatures: 23 °F -131 °F (-5 °C - +55 °C)
 24. Storing temperature: -4 °F - 158 °F (-20 °C - +7 °C)
 25. Protect filter from liquid and dirt contact.
 26. Clean filters' surfaces regularly, do not use strong cleaning solutions. Always keep sensors and solar cells clean using a clean lint-free tissue/cloth.
 27. Regularly replace the cracked/scratched/pitted Front Cover Lens. Severe personal injury could occur if the user fails to follow the aforementioned warnings, and fails to follow the operating instructions.
- WARNING:** Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
- WARNING:** This product and its packaging contain a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

OPERATION

▲ WARNING ARC Rays can injure eyes and burn skin. Before welding, always inspect helmet and filter lens to be sure they are fitted properly, in good condition and not damaged. Check to see that the lens is clean and securely attached to the helmet. Always wear safety glasses or goggles and protective clothing to protect your skin from radiation, burns and spatter. Ensure that radiation from other welder's arcs in immediate area does not enter from behind the helmet and filter.

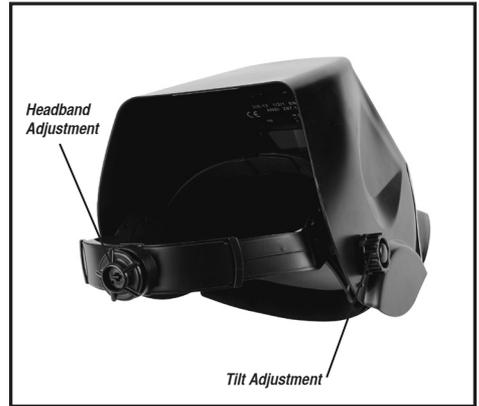
NOTE Auto-darkening filters in Performance Tool helmets are designed to

protect the user from harmful UV/IR, no matter what shade filter is present.

▲ WARNING FUMES AND GASSES can be dangerous to your health. Keep your head out of fumes. Use enough ventilation or exhaust at the arc or both to keep fumes and gases from your breathing zone and general area. Follow all MSDS warnings, as well as OSHA, PEL and ACGIH TLV limits for exhaust and ventilation. Additional precautions, such as respirators or welding outdoors, may be necessary. Additional precautions are also required when welding galvanized steel.

HELMET SIZE ADJUSTMENT

Headband tightness is adjusted by pressing and turning the ratcheting knob either clockwise or counter-clockwise to tighten or loosen adjustment. If the helmet cannot be made tight or loose enough with the knob, it is necessary to change the crown adjustment to the next set of holes to make it bigger or smaller. The tilt adjustment is on the right hand side of the helmet. Once the tilt adjustment is made, tilt tension can be adjusted by tightening or loosening the tilt knobs on both sides of the helmet.



BEFORE WELDING

- Before using, read the manual carefully and make sure you know all what it has shown.
- Check to see if the auto-darkening welding helmet is suitable for the work you intend to do and make sure all parts and components are in proper order and ready for work.
- Make sure that the power supply or the auto-darkening welding helmet is correct and ready for work.
- Adjust the headgear according to your head size.
- Set dark shade state, according to Shade Guide Chart, to correct shade number following Dark Shade Setting. Make sure the shade number you select is correct and suitable for the job.

▲ WARNING Make sure that the power supply is correct and ready to work. If battery is low, replace with new one immediately.

OPERATION

▲ CAUTION Always check the front cover lens of the Auto-darkening filter, and make sure that they are clean and no dirt is covering the sensor on the front of the filter cartridge. And also check if the Auto-darkening welding filter is secured in place. Inspect all parts of the Auto-darkening

welding filter, replace if it is worn or damaged, scratched, cracked or pitted. Adjust shade state to fit the welding work by turning the knob (or setting button for digital display). Adjust the headgear or headband to fit your head size.

DARK SHADE SETTING

1. Carefully select shade number range according to the welding you want to do. The smaller the welding current, the lower the shade number, vice versa.
2. Accurate shade number is adjusted by the shade-adjusting Knob B outside the helmet. Turn knob B, the shade number can be set manually between 9 to 13.

▲ WARNING Make sure that the power supply is correct and ready to work. If battery is low, replace with new one immediately.

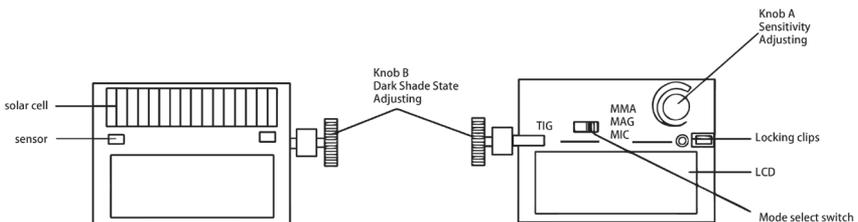


OPERATION INSTRUCTIONS

1. Taking up the welding helmet, the power will automatically switch on.
2. Put on the helmet. At this moment, you can see work piece and other things clearly.
3. Start your welding work and the view window will turn to the intended dark shade state you set immediately. If it fails, stop at once and check. Otherwise turn the shade-adjusting knob B to correct the shade state

accordingly. When everything is ok, you can continue your welding work.

- ▲ WARNING** Shade number shall be correctly set for particular welding.
4. When doing a TIG job, press the Mode select switch to left (TIG side) and adjust knob A to desired state for welding.
- ▲ WARNING** The knob A is only active when the mode select switch set to TIG.



▲WARNING: If the welding helmet is not used and/or stored, always keep the helmet with filter sensors downward. Failure to do this may cause earlier batteries exhaustion.

▲WARNING:

- This Auto-darkening Welding Helmet is not suitable for laser welding.
- This Auto-darkening Welding Helmet and the Auto-darkening filter shall never be placed on hot surfaces.
- Never open or tamper with the Auto-darkening filter.
- This Auto-darkening Welding Helmet will not protect against severe impact hazards, including fragmenting grinding disks, and they must never be used for protection purpose.
- This Auto-darkening Welding Helmet will not protect against explosive devices or corrosive liquids. Do not make any modifications to either the filter or helmet, other than those specified in this manual. Do not use any replacement parts other than those specified in this manual. Unauthorized modifications and replacement parts will

void the warranty and expose the user to the risk of personal injury.

- Should the Auto-darkening Welding Helmets not darken upon striding an arc, stop welding immediately and contact your authorized technician.
- Never immerse the filter in water.
- Never use any solvents on filters' screen or helmet components.
- Use only at temperatures: -5°C~+55°C(23°F-131°F)
- Storing temperature: -20°C~+77°C(-4°F-158°F)
- Protect filter from contacting liquid and/or dirt.
- Clean filters' surfaces regularly, do not use strong cleaning solutions. Always keep sensors and solar cells clean using a clean lint-free tissue/cloth.
- Regularly replace the cracked/scratched/pitted Front Cover Lens. Severe personal injury could occur if the user fails to follow the aforementioned warnings, and fails to follow the operating instructions.

Welding Process	Arc Current (Amperes)																				
	0.5	2.5	10	20	40	60	80	100	125	150	175	200	225	250	275	300	350	400	450	500	
SMAW					9	10			11				12					13			
MIG(heavy)								10	11				12					13			
MIG(light)								10	11			12			13						
TIG.GTAW				9	10		11		12				13								
MAG/CO2							10	11	12				13								
SAW									10	11	12	13									
PAC									11			12						13			
PAW			8	9	10	11	12			13											

NOTE:

- SMAW- Shielded Metal Arc Welding
- MIG(heavy) - MIG on heavy metals
- MIG(light) - MIG on light alloys

- TIG. GTAW- Gas Tungsten Arc Welding (GTAW)(TIG)
- SAW- Shielded Semi - Automatic Arc Welding
- PAC- Plasma Arc Cutting • PAW- Plasma Arc Welding

CARE & MAINTENANCE

▲ WARNING: Replacement of any components and/or parts shall be original from the manufacturer. Don't immerse the lens in water or any other liquid. Never use abrasives, solvents or oil based cleaners. Don't try to open the

Auto-darkening Welding Filter. Store helmet and the auto-darkening welding filter in dry and well-ventilated place. Do not expose to direct sunshine.

TROUBLESHOOTING

1. Irregular Darkening or Dimming

- a) Headband has been set unevenly on both sides of helmet (unequal distances from the eyes to filter's lens).
- b) Reset Headband to reduce difference in distances to filter, if necessary.

2. Auto-Darkening Filter Does Not Darken Or Flickers

- a) Front Cover Lens is soiled or damaged (change the cover lens).
- b) Sensors are soiled (clean surface of the b. sensors).
- c) Welding current is too low (turn Dark to Clear Adjustment switch to the "SLOW" position, if necessary).

3. Slow Response

- a) Operating temperature is too low (do not use at temperatures below 23° F).

4. Poor Vision

- a) Front/Inside Cover Lens and/or filter soiled (change it).
- b) Insufficient ambient light.
- c) Shade number is incorrectly set (reset shade number).

5. Welding Helmet Slips

- a) Headband is not adjusted properly (must be lowered).

Replace the Front Lens Shield if it is damaged (cracked, scratched, soiled or pitted).

1. Lift up on the tab at the bottom of the outer frame to unsnap the frame and access the lens cover. Pull out the lens cover.
2. Remove the protection film from both sides of the new Lens if it comes with a film covering.
3. Place the new Lens into place and snap the frame securely to hold the Lens in place.

1 YEAR LIMITED WARRANTY

PERFORMANCE TOOL® extends only the following warranties, and only to original retail purchasers. These warranties give specific legal rights. Except where prohibited by local law, the law of the State of Washington governs all warranties and all exclusions and limitations of warranties and remedies. There may be other rights which vary from state to state.

PERFORMANCE TOOL® warrants the product to be free from defects in materials and workmanship under normal use and service. A defective product may be returned for a free replacement within 90 days from the date of purchase, provided that product is returned to place of purchase immediately after discovery of defect. After 90 days and up to one year from date of purchase, PERFORMANCE TOOL® will replace at no charge any parts which our examination shall disclose to be defective and under warranty. These warranties shall be valid only when a sales receipt showing the date of purchase accompanies the defective product or defective part(s) being returned. For part(s) after 90 days, please remit your request, postage prepaid to:

PERFORMANCE TOOL, P.O. Box 88259 Tukwila, WA 98138

These warranties exclude blades, bits, punches, dies, bulbs, fuses, hoses, and other consumables which must be replaced under normal use and service. These warranties shall not apply to any product or part which is used for a purpose for which it is not designed, or which has been repaired or altered in any way so as to affect adversely its performance or reliability, nor shall these warranties apply to any product or part which has been subject to misuse, neglect, accident or wear and tear incident to normal use and service.

PERFORMANCE TOOL® does not authorize any other person to make any warranty or to assume any liability in connection with its products.

Except for warranties of title and the limited express warranties set forth above, PERFORMANCE TOOL® makes no express or implied warranties of any kind with respect to its products. In particular, PERFORMANCE TOOL® makes no implied warranty of merchantability and no implied warranty of fitness for any particular purpose, except that for goods purchased primarily for personal, family or household use and not for commercial or business use, PERFORMANCE TOOL® makes an implied warranty of merchantability (and, if otherwise applicable, an implied warranty of fitness for a particular purpose), but only for the particular qualities or characteristics, and for the duration, expressly warranted above. The laws on limitation of implied warranties may differ from state to state, so the above limitations may not apply in all cases.

PERFORMANCE TOOL® shall not be liable for consequential, incidental or special damages resulting from or in any manner related to any product, or to the design, use, or any inability to use the product. The sole and exclusive remedy for a defective product or part shall be the repair, or replacement thereof as provided above. The laws on limitation of remedies or on consequential, incidental or special damages may vary from state to state, so the above limitations may not apply in all cases.