

*weldtech*



OPERATING MANUAL FOR  
**WT 180**  
ELECTRONIC WELDING HELMETS

[www.weldtech.net.nz](http://www.weldtech.net.nz)

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## 1 / BEFORE YOU START – IMPORTANT INFORMATION

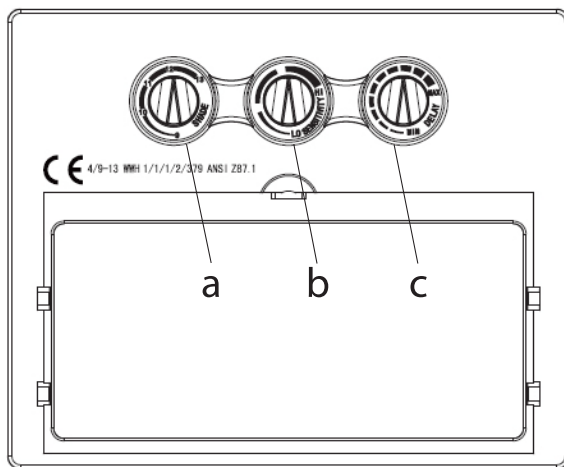
**Warning: Incorrect use of this product may cause serious injury.**

- a. All users of this helmet should read & understand this manual before using the product
- b. Use this helmet only for the intended application as described in this manual
- c. Each time the helmet is used, it should be checked for correct operation: Use a cigarette lighter or strong light source to check that the lens is activating correctly.
- d. Stop welding immediately if the helmet filter/lens fails to darken when the arc is struck. Do not continue use until the malfunction has been rectified. Read this manual for further information and if in doubt, return the helmet to your Weldtech distributor for further inspection.
- e. This welding helmet does NOT provide unlimited protection. All appropriate PPE and safety-wear must be worn, and safe work practices must be followed at all times, in accordance with applicable industry OH&S regulations. Arc rays can burn eyes and skin. Fumes and Gases can be hazardous. Noise can damage hearing. Flying particles can cause impact injury or death.
- f. **Never use the helmet without the outer & inner cover lenses correctly installed. Failure to do so will damage the Auto-darkening filter & void warranty.**  
Always keep clear cover lenses clean and replace them regularly. Dirty or scratched cover lenses may cause the auto-darkening filter to malfunction.

## 2 / SPECIFICATIONS

	<b>WT180</b>
Suitable Welding Processes	MIG & MMA (stick)
TIG Suitability	n/a
Suitable Applications	Occasional welding
Optical Class	1/1/1/2
Switching Speed	Conforms to & exceeds the requirements of AS/NZS1338.1 & EN379 Standards.
Sensors	2
Power Supply	Solar powered.
On / Off	Ready to weld at any time – no switching required
Low Battery Indicator	Red Light
Inactive Shade Level (Grind/Off)	4
Active Shade Level (Weld)	9-13
Sensitivity Adjustment	Low – High
Delay Adjustment	Min 0.15- Max 0.80 sec
Operating Temperature	-5°C to +55°C
Storage Temperature	-10°C to +65°C
Weight	460 g
Viewing Area	92 x 42 mm
Outer Cover Lens Dimensions	110 x 90 mm
Inner Cover Lens Dimensions	95.5 x 50.5 mm
ADF/Cassette Dimensions	110 x 90 x 10mm
Magnification Lens Holder	Internal – takes standard 108x51mm magnifications lenses
Standards Compliance - Shell	EN 175
Standards Compliance – Auto Darkening Filter/Lens	EN 379

### 3 / AUTO-DARKENING FILTER/LENS (ADF) CONTROLS & FEATURES



Note: ADF = Auto-Darkening Filter/Lens

#### a. SHADE ADJUSTMENT

The following chart shows recommended shade levels for different welding applications.

Welding Application	Arc Current in Amps	Protective Shade No.
Stick Electrode (MMA)	Less than 40	9
	40-80	10
	80-175	11
	175-300	12
	300-500	13
MIG	Less than 100	10
	100-175	11
	175-300	12
	300-500	13

#### b. SENSITIVITY CONTROL

This adjusts the sensitivity of the arc sensors to best suit the welding task & surrounding environment. Low sensitivity helps prevent the ADF reacting other nearby light sources. High sensitivity may be required if welding on low current &/or when TIG welding. Low to mid sensitivity is recommended for most welding applications.

#### c. DELAY ADJUSTMENT

This adjust the time the ADF takes to switch from dark back to light when welding stops.

Short delay time is best for tack welding and short welds. A longer delay may be required if welding heavier materials, where the weld pool emits bright light for a brief period.

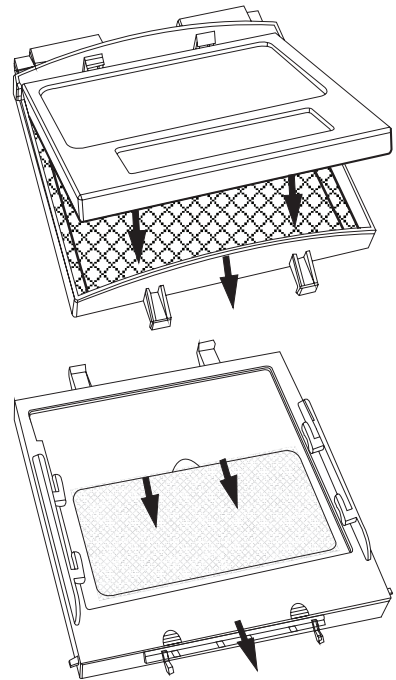
## 4 / REPLACING ACCESSORIES & MAKING ADJUSTMENTS

### a. REPLACING COVER LENSES

**Replacing Outer Cover Lens:** Unfasten the plastic clip on the bottom of the lens retainer frame & remove the ADF & frame. Remove the outer clear lens & replace. Reverse these steps to re-assemble the helmet.

**Replacing Inner Cover Lens:** Unfasten the clip on the bottom of the lens retainer frame & remove the ADF & frame. Remove the ADF from the frame. Remove the inner cover lens. Fit new cover lens & reverse these steps to re-assemble the helmet.

**IMPORTANT:** Use only original Weldtech cover lenses to ensure correct fit and conformance to safety standards.

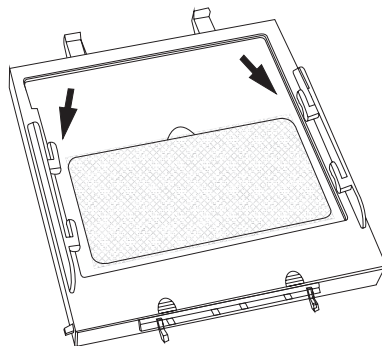


## 4 / REPLACING ACCESSORIES & MAKING ADJUSTMENTS – Cont'd

### b. INSTALLING A MAGNIFICATION LENS

Any standard 108x51mm magnification lens can be fitted by insert it into the retaining tabs on the inside of the lens retainer frame (6), in front of the viewing window.

Note: To prevent fogging, place the flat side of the magnification lens towards the ADF (auto-darkening filter/lens).



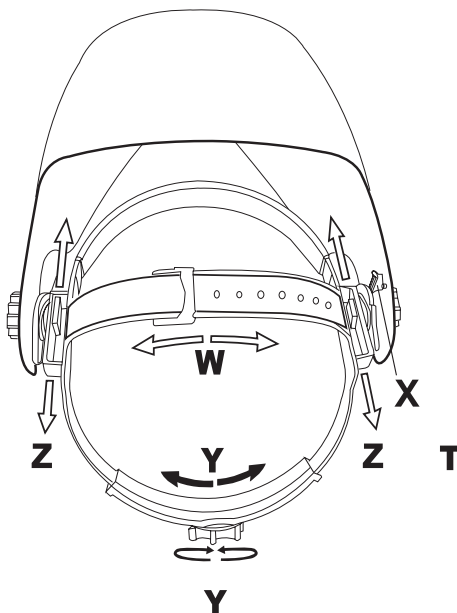
### c. HEADGEAR ADJUSTMENT

**Tightening Knob (Y):** Expands or contracts the main headband. Turn knob clockwise to tighten, and anti-clockwise to loosen.

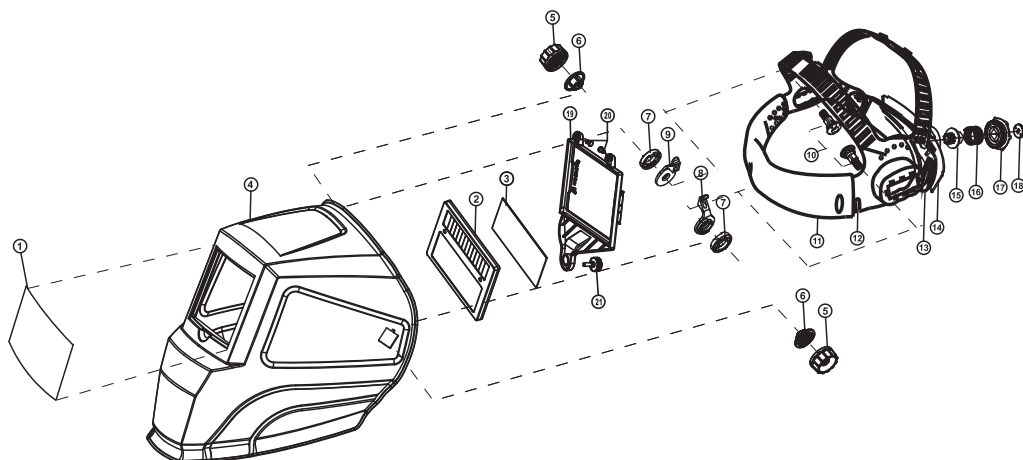
**Top Strap (W):** Adjust the strap buckle according to personal preference & head size.

**Tilt Angle (X):** The locating pin on the right side of the helmet can be moved to different positions to adjust the tilt angle of the helmet when it is resting in the lowered position.

**Horizontal Position (Z):** Adjusts the distance of the helmet from the operators face. Loosen the headgear retaining nut to change position (front, centre or rear). The same position should be selected on both sides.



## 5 / HELMET BREAKDOWN



- |                                      |                    |
|--------------------------------------|--------------------|
| 1 - Front protection plate           | 12 - Head gear set |
| 2 - Auto Darkening lens assembly     | 13 - Under cover   |
| 3 - Rease protection plate           | 14 - Top cover     |
| 4 - Helmet Shell                     | 15 - Gear          |
| 5 - Headband adjusting nut           | 16 - Spring        |
| 6 - Outside square washer            | 17 - Adjust knob   |
| 7 - Inside square washer             | 18 - Locker washer |
| 8 - Left adjustable angle regulator  | 19 - Press frame   |
| 9 - Right adjustable angle regulator | 20 - Nuts          |
| 10 - Angle adjusting shaft           | 21 - Locking Screw |
| 11 - Sweat band                      |                    |

## 6 / MAINTENANCE

The helmet and ADF must be checked regularly. Defective equipment should not be used. Parts that are broken, missing, worn, distorted or contaminated, should be replaced immediately.

- a. Inspect lenses frequently. Immediately replace any scratched, cracked, or pitted lenses as they may impair visibility and reduce protection.
- b. Inspect Helmet Shell and Harness Assembly frequently. Replace any damaged or worn components immediately.
- c. Keep the Sensors and the Solar Panel clean at all times. When cleaning the Welding Helmet or Filter Lens do not use solvents or abrasive cleaning agents. Clean with a soft cloth after use.

## 7 / TROUBLESHOOTING

FAULT	POSSIBLE CAUSES	POSSIBLE REMEDY
The Filter Lens does not activate at all (fails to darken)	Weld/Grind switch is switched to 'Grind'	Switch to 'Weld'
	Battery or terminals are dirty	Inspect & clean battery/terminals
The Filter Lens flickers or intermittently fails to darken	Front Cover Lens is dirty or scratched & is obstructing the sensors	Replace cover lens
	Sensors are dirty	Clean the Sensors with a soft cloth
	Sensitivity too low	Increase sensitivity level
	Momentary disruption to sensing of the arc	Increase delay time adjustment (will help compensate for momentary disruptions)
Filter lens is dark when no arc is present or stays dark after the weld is extinguished	Ambient light level is too bright	Reduce the ambient light level in the area
	Sensitivity too high	Reduce sensitivity level
Batteries discharge very quickly	Lens is being activated by other light sources when not in use.	Switch to 'Grind' when not in use.



## 8 / WARRANTY

Warranty period;  
WT180 Auto-Darkening Filter (ADF): 1 Year

The Weldtech WT180 helmets are warranted against faulty components and manufacturing defects in the auto-darkening filter (ADF) for the warranty periods shown above. The warranty period begins on the date of purchase. It is the sole responsibility of the owner of the helmet to retain proof of purchase (i.e. a copy of the invoice made out by the distributor or reseller to the owner of the helmet clearly showing the purchase date). Proof of purchase must be provided in the event of any warranty claim.

a. Warranty Includes and Covers:

1. The ADF
2. Manufacturing faults that do not allow the ADF to perform the functions for which it was designed.

b. Warranty Excludes / Does Not Cover:

1. Helmet parts other than the ADF, including: shell and headgear
2. Warranty claims made without proof of purchase, or warranty claims made with proof of purchase that is deemed by Weldtech Welding Products to be false, misleading, incomplete or insufficient.
3. Defects or damage resulting from: misuse, accidents, neglect, improper maintenance, alteration/modification, use of the helmet contrary to the applications for which it was designed, or failure to heed any of the instructions, warnings or guidelines issued with the helmet, spare parts or accessories that are not genuine Weldtech.
4. Filters that have been used without cover lenses or have spatter damage or are scratched or cracked.
5. Damage incurred in transport
6. Operator error, misunderstanding or use contrary to the intended purpose
7. Warranty claims made where the owner/operator of the helmet is not willing or not able to provide any information required by Weldtech Welding Products to process the warranty claim.
8. The cost of freight involved in transporting parts in the event of a warranty claim.

This is a repair and/or replacement warranty only and does not allow for a refund. Weldtech reserves the right to replace faulty units covered under warranty with alternative / equivalent units should the original unit become obsolete or unavailable. No other warranty is expressed or implied. This warranty is exclusive and in lieu of all others, including, but not limited to any warranty of merchantability or fitness for any particular purpose. Weldtech shall not under any circumstances be liable for special, indirect or consequential damages. No employee, agent, representative, distributor or agent of Weldtech is authorised to change this warranty in any way or grant any other warranty. Notwithstanding the foregoing, in no event shall the warranty period extend more than the stated warranty period plus 6 months from the date Weldtech delivered the product to the authorised distributor. Warranty is always dated from original date of purchase - if warranty repairs are made or if warranty replacements are given this does not extend the warranty period.





