

SHADE SELECTING CHART

Process	Current A																										
	1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600						
Covered electrodes					8			9			10			11			12			13			14				
MAG					8			9			10			11			12			13			14				
TIG					8			9			10			11			12			13							
MIG with heavy metals								9			10			11			12			13			14				
MIG with light alloys											10			11			12			13			14				
Air-arc gouging											10			11			12			13			14		15		
Plasma jet cutting											9			10			11			12			13				
Microplasma arc welding	4		5		6		7		8		9		10		11		12										
	1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600						

Note: The term "heavy metals" applies to steels copper and its alloys. etc.
Start with shade that is too dark to see the weld zone, then go to a lighter shade that offers a sufficient vision and never go below the minimum.



ISO 16321-2:2021
ISO 16321-1:2021
CSA Z94.3
ANSI Z87.1
AS/NZS 1338.1
AS/NZS 1337.1
EN 175:1997
EN 166:2002
EN 379:2003

PPE Regulation (EU) 2016/425
Directive 2001/95/EC

The welding helmets are tested by the following notified body:

ECS GmbH
Notified Body 1883
Huettfeldstrasse 50
73430 AALEN
Germany
DIN CERTCO
Notified Body: 0196
Alboinstrasse 56
12103 Berlin Germany
TÜV Rheinland UK LTD
Friars Gate (Third Floor),
1011 Stratford Road,
Shirley, Solihull, B90 4BN,
United Kingdom
Approved body number 2571

Diesella WELDING HELMET

FURY

VIPER

PANO

Operating
Manual

Revision Date: 2024.06

! WARNING !

Auto-Darkening welding helmet is designed to protect the welders' eyes from harmful radiation including visible light, ultraviolet radiation (UV) and infra-red radiation (IR) resulting from certain arc and gas welding processes when used in accordance with user instructions. Ensure that helmet comes properly assembled. However, before it can be used, it must be adjusted to your personal preferences. Set it up for delay time, sensitivity, and shade number for your application. (See the table with recommended shade levels)

PRECAUTIONS

- Never place the helmet or the ADF on hot surface.
- Use only at temperature: -5°C to +55°C (23°F-131°F).
- Do not immerse the filter in water and protect it from contact with liquid and dirt.
- The material which may contact the wearer's skin can cause allergic reaction. Any welding helmet worn over standard ophthalmic spectacles may transmit impact, thus creating a hazard to the wearers in some circumstances.
- This product cannot be used for overhead welding or cutting. If this product is used for overhead welding or cutting operation, the molten metal drop may burn through helmet and welder will get injured.
- Eye protector shall only be used against high-speed particles at room temperature.
- Automatic welding filter shall always be used with a backing ocular.
- Unauthorized modifications and replacement parts will void the warranty and expose the operator to the risk of personal injury.
- If the auto-darkening filter does not darken when the arc ignites, stop welding immediately and inspect the ADF and its power supply. Change if necessary.
- Do not use any solvents or abrasive cleaning detergent on the filter screen or helmet components.
- We recommend a usage period of 4 years. The period depends on various factors such as way of use, cleaning, storage, and maintenance. Frequent inspections and replacement in case of damage are recommended.
- Always wear safety glasses or goggles under the welding helmet and protection clothing to protect your skin from radiation, burns and spatters.
- Not suitable for driving and road use
- Protectors that have been subject to impact shall not be used and shall be discarded and replaced.
- A visual inspection is necessary before every use.
- If the impact level symbols are not equal on both the lens/filter and the frame, then it is the lower level that shall be assigned to the complete protector.
- The protection marked in accordance with this standard is only provided when all lens and retention components are installed according to the list or other manufacturer's instructions.
- This device does not protect against physical or chemical hazards.
- If the helmet, or the filter or the cover plate is in any way damaged, they must be immediately replaced.
- Replace the device after a mechanical impact.

STORAGE

When not in use helmet should be stored in a dry place within the temperature from -20°C to +70°C. Remove the battery or turn off the ADF before long-time storage. It is recommended to keep the solar cells of the auto darkening welding filter in the dark or not exposed to light during storage to maintain power down mode. Welding helmets should not be dropped and do not place any heavy items or tools on or inside the helmet, which may damage the electro-optical filter.

MAINTENANCE & CLEANING & TRANSPORTING

Cleaning can be done with a soft tissue or cloth soaked in mild detergent (or alcohol). Never use aggressive solvents such as acetone. The user must make daily regular checks to ensure no damage is evident. Outer and inner

visors are worn parts and must be replaced regularly with genuine certified universal spare parts.

Transport the equipment with original packing box and away from direct sunlight.

OPERATING INSTRUCTION

Before Using

- ▶ Make sure to remove any additional protection foil from both sides of the PC lens.
- ▶ Make sure there is no dust on any sensor.
- ▶ Set the exact mode that you need.

Testing Function

- ▶ Hold press  , ADF will Self-Test or Insert battery, ADF will Self-Test

POWER



If the battery icon is flashing, please change the battery, otherwise operation will not perform well.

SET THE MODES

The ADF got 4 MODES, **CUT**; **WELD**; **GRIND**; **DARK**. Kindly check Grind mode: Hold press 1.0 with external **GRIND** button on the helmet shell, it can switch to **GRIND** mode quickly.

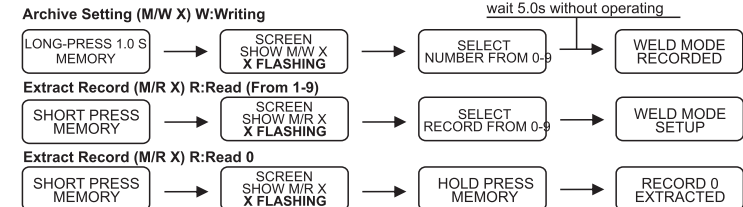
Warning: Do not weld in GRIND mode.

EXTERNAL CONTROL BUTTON

	Short press	Easy selecting the mode from WELD , CUT , DARK .
	Hold press with 1.0s	Switching to Grind mode
	Twist the knob	ADF's shade will be adjusted
	Hold press MODE	Automatic shade function is on
	Short press silicon button	Welding mode will be saved in record 0 quickly.
	Hold press silicon button	Switching to Grind mode
	Twist the knob	Manual mode, shade will be adjust by ± 0.5 Auto Shade mode, shade deviation ± 0.1

MEMORY MODE

Checking the operating panel, using MEMORY and $\blacktriangle/\blacktriangledown$ buttons. (See Fig. 14, 15, 16, 17, 18, 19)



For VIPER & PANO

Function	Operating-UI Panel	Usage
Sensitivity (SENSI.)	Press and ▲&▼	Level 9: For special welding which needs super sensitivity. Level 8: For most applications but especially for low current welding work. Level 0: Only in some specific surrounding lighting conditions in order to avoid unwanted triggering
	Hold Press	Recommend a set accord to environment light
Delay	Press and ▲&▼	Level 9: 2.0s is suitable for most applications, especially for high amps current application and longer welding interval Level 1&2, suitable for spot welding Level 0: Tack mode
	Hold Press	Delay is automatically adjusted with deviation ±9(0.04-2.0S)
Shade	Press and ▲&▼	Adjusting the shade by your experience or according to chart recommended
	Hold Press	Shade is automatically adjusted with deviation ±2
	Press ▲&▼ at one time, main window locked	Shade locked, you can lock the shade in any level that you need
	Hold press , side window locked	
MIX	Press or	Offering a comfortable recovery from dark to light (Not suitable for tack mode and spot mode)

For FURY

Function	Operating-UI Panel	Usage
Sensitivity (SENSI.)	Press , go cycle.	High/Max for most applications
Delay	Press , go cycle.	Max for most applications Min for spot welding Tack: Tack welding
Shade	Press , go cycle.	Adjusting the shade by your experience or according to chart recommended
	Hold Press	Shade locked, you can adjust the shade in any level that you need
MIX	Hold press	Offering a more comfortable recovery from dark to light (Not suitable for tack welding and spot welding)

NOTE: If there are two different colors on one button for two operations, hold press with 1.0s, the second function is on.

TACK MODE: ADF will recommend a interval shade according to welder's habit, interval shade is not fixed.

TROUBLE SHOOTING

FAULT	CAUSE	REMEDY
Irregular Darkening Dimming	Headgear has been set unevenly so there is an uneven distance from the eyes to the filter lens.	Reset the headband to reduce the difference to the filter
The Filter not Darken or Flichers	Front cover lens is soiled or damaged	Please change the cover lens

FAULT	CAUSE	REMEDY
The Filter not Darken or Flichers	Sensors are soiled/blocked or solar panel is blocked	Clean the sensors surface to make sure you are not blocking the sensors or solar panel with your arm or other obstacle while welding
	Sensitivity is set too low or delay time is set too short	Adjust to required level
	Make sure proper shade is selected	Not Grind mode
The Filter Darkening Without Arc Being Struck	Sensitivity is set too high	Adjust Sensitivity to a required level
The Filter Remains Dark After Completing A Weld	Delay time is set too long	Adjust Delay time to a required level
Slow Response	Operating temperature is too low	Do not use at temperatures below-10°C or 14°F
Welding Helmet Slips	Headgear is not properly adjusted.	Re-adjust the headgear.

SPECIFICATION DATA

Filters Model	P31MAXI-AMS+	D43MAXI-AMS+	768L-S+
CE Classification	V1		V2
Viewing Area	116*81mm(14.6in²)MAXI Series		100*53mm(8.22in²)
ADF Light State	Shade 3		
Variable Shade	4-8/9-13	4-8/9-14	4-8/9-13
Sensitivity	0-9 Levels		Internal Variable
Delay	0-9 Levels(0.04-2.0S)		0.04-2.0s, Internal
Memory Mode	10 Records		NO
Sensor	4 + 1(Ambient Light)		4
Power Supply	Solar Cell * 2* lithium Batteries		
External Fine Tuning	Yes		\
Auto Shade	Shade 7<13	Shade 7<14	\
Auto Sensitivity	Yes		\
Auto Delay	Yes		\
Auto Shade Deviation	±2		\

HELMET ADJUST MENTS

HEADGEAR ASSEMBLY

Insert the headgear into helmet shell, as the installation order is in Fig.1 & Fig.2.

Adjust the headgear to make it more comfortable and put shield in the correct position according to individual preference(See Fig.3-Fig.6).

NOTE: Make sure both sides are equally positioned for proper operation.

NOTE: The distance from the eye to the filter, closer is better.

REPLACING AUTO DARKENING WELDING FILTER

1.Remove the front protection plate and put the helmet face down, and press both taps in the top of the filter and push the ADF out(See Fig.8 & Fig.9).

REPLACING PROTECTION PLATES

1.If protection plates are in any way damaged, they must be immediately replaced (See Fig.7 & Fig.8).

BATTERY REPLACEMENT

Remove the ADF cassette. Pull out the battery tray, and correct battery operation as indicated on the battery tray(See Fig.10 & Fig.11).

MARKING EXPLANATION

Auto Darkening Filter Marking

16321 YXE W3/4-8/9-13 V2 **CE**

3=Light State Scale Number

4-8/9-13=Protection Shade Numbers in Dark State

YXE= Manufacture Identification

V2=Angle of Dependence Classification

V1=Angle of Dependence Classification

Helmet Marking

16321 YXE W14 E 1-M CE UKCA

W = Welding protector

14 = Maximum filter shade number

E= Impact Resistance Level 120m/s

C= Impact Resistance Level 45m/s

W3/7<14 M YXE V1

M=Manual offset(optional)

16321 = EN ISO Standard

Cover Plate Marking

YXE 1 E CE YXE 1 E CE UKCA

1 =Enhanced Optical Performance

E= Impact Level 120m/s

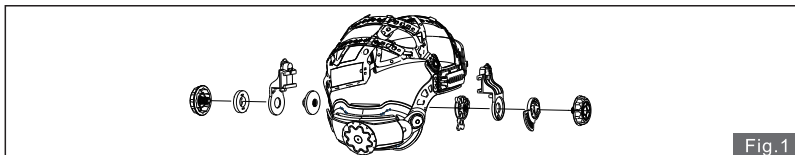


Fig.1

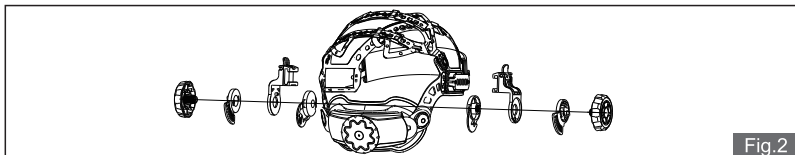


Fig.2

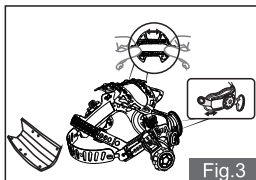


Fig.3

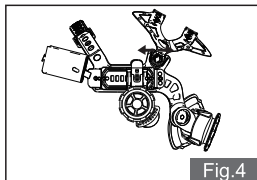


Fig.4

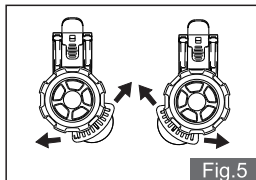


Fig.5

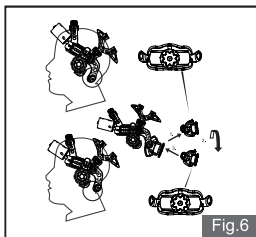


Fig.6

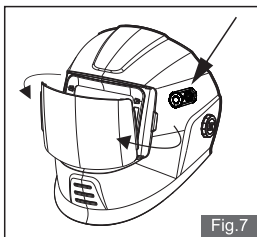


Fig.7

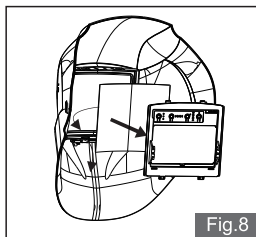


Fig.8

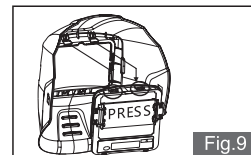


Fig.9

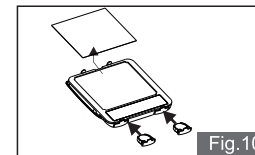


Fig.10

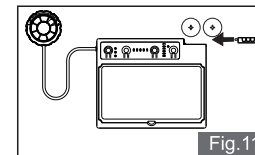
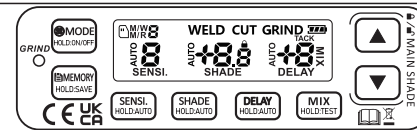


Fig.11



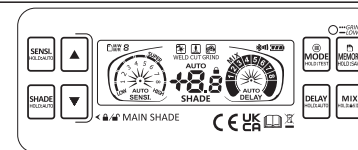
FURY

Fig.14



VIPER

Fig.12



PANO

Fig.13

INSTALLATION SAMPLE - VIPER

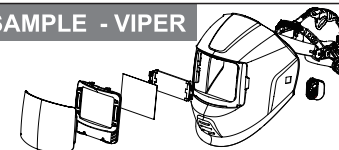


Fig.15

INSTALLATION SAMPLE - PANO

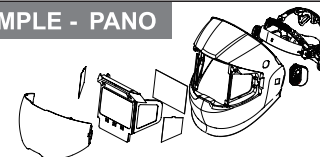


Fig.16

INSTALLATION SAMPLE - FURY

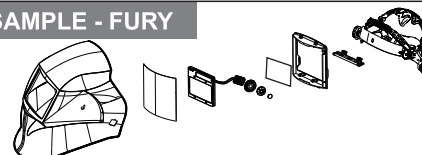


Fig.16