T-LINK® System is the new technology granting total eye protection for the welding operator.
The innovative T-LINK® system represents a new frontier for the safety of the welder and is the only commercially available auto-darkening system that guarantees total eye protection during welding.

**With T-LINK the filter is activated prior to the welding arc.**

The T-LINK® system is based on the continuous dialogue between the welding torch and the auto-darkening mask, which is handled with Bluetooth® technology.

When the torch button is pressed, a Bluetooth® signal is sent to the LCD screen filter, which responds by getting dark a moment before the arc is activated.

**EC CERTIFICATION**

The T-LINK system complies with European directives

2014/30/EU : ELECTROMAGNETIC COMPATIBILITY

2014/35/EU : LOW VOLTAGE

2014/53/EU : RADIO EQUIPMENT

and complies with DIN EN 379:2009 regulation
The T-LINK protection takes a few moments.

**THE FILTER IS INACTIVE**

**THE OPERATOR PRESSES THE TORCH BUTTON**

**THE T-LINK DEVICE CONTROLS THE FILTER TO DARKEN**

**OK**

**THE FILTER BECOMES DARK AND COMMUNICATES IT TO THE T-LINK DEVICE**

**THE WELDING ARC IS STILL INACTIVE**

**ONLY WHEN THE FILTER IS ALREADY DARK DOES THE WELDING ARC ACTIVATE**

**THE ARC EXPOSURE TIME IS NULL**
SAFETY IN ALL CONDITIONS

In carpentry or shipyard welding, it may occur that a structure element inadvertently covers the filter sensors. This causes the filter opening and the resulting irradiation in the operator’s eyes.

With the T-LINK system, on the contrary, during welding the filter remains obscured to guarantee total safety for the welder.
MAXIMUM EFFICIENCY IN TIG LOW AMPERAGE WELDING

A frequent critical condition is that of low amperage TIG welding where the arc is so small that the standard optical sensors don’t detect it easily. The typical consequence is the classic filter flicker, which makes the operation very difficult.

The T-LINK system also solves this problem because the filter, which is sensitive to the passage of current in the welding circuit, always remains active.

CUSTOMIZED MANAGEMENT OF THE “STANDBY TIME”

The “STANDBY TIME” is a feature that allows the T-LINK system to adapt perfectly to the different MIG / MAG and TIG welding modes, 2 and 4 stroke and in general, to all the parameters set on the generator, such as the ascent ramp time, pregas time and all other settings that may delay the passage of current.

Thanks to this feature, once the torch button is pressed, the filter becomes obscured and remains obscured for the set standby time, regardless of the current passage.

DYNAMIC OPENING DELAY

To efficiently handle LCD delay time, i.e. its transition from dark to light, Trafimet Group has introduced a feature that automatically determines the opening time of the filter, depending on whether the operator is making a short (spot welding) or a long welding.

The T-LINK system thus guarantees the maximum eye protection and an excellent operating speed in any working condition.
The reaction time of standard filters, however fast, still exposes the eye to artificial optical radiation. In spot welding, this “microflash” multiplies for hundreds or thousands of times a day.

Artificial optical radiation exposure time comparison between T-LINK Filter and Standard Filters during an 8-Hour spot-welding Shift, considering a work hypothesis with 400 spot welds per hour.

<table>
<thead>
<tr>
<th>400 spot welds per hour</th>
<th>T-LINK FILTER (0,00 ms)</th>
<th>HIGH QUALITY FILTERS (0,15 ms)</th>
<th>MEDIUM QUALITY FILTERS (0,25 ms)</th>
<th>LOW QUALITY FILTERS (0,40 ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 h</td>
<td>0,00 s</td>
<td>0,08 s</td>
<td>0,13 s</td>
<td>0,20 s</td>
</tr>
<tr>
<td>2 h</td>
<td>0,00 s</td>
<td>0,12 s</td>
<td>0,20 s</td>
<td>0,32 s</td>
</tr>
<tr>
<td>3 h</td>
<td>0,00 s</td>
<td>0,18 s</td>
<td>0,30 s</td>
<td>0,48 s</td>
</tr>
<tr>
<td>4 h</td>
<td>0,00 s</td>
<td>0,24 s</td>
<td>0,40 s</td>
<td>0,64 s</td>
</tr>
<tr>
<td>5 h</td>
<td>0,00 s</td>
<td>0,30 s</td>
<td>0,50 s</td>
<td>0,80 s</td>
</tr>
<tr>
<td>6 h</td>
<td>0,00 s</td>
<td>0,36 s</td>
<td>0,60 s</td>
<td>0,96 s</td>
</tr>
<tr>
<td>7 h</td>
<td>0,00 s</td>
<td>0,42 s</td>
<td>0,70 s</td>
<td>1,12 s</td>
</tr>
<tr>
<td>8 h</td>
<td>0,00 s</td>
<td>0,48 s</td>
<td>0,80 s</td>
<td>1,28 s</td>
</tr>
</tbody>
</table>

RISKS FOR THE OPERATOR

... chronic conjunctivitis is the most common affection; the agents in question are primarily UV radiation in arc welding...
... some studies report the appearance of retinal degeneration and maculopathy in subjects that perform arc welding...
... a recent revision of literature reveals an increased risk of developing ocular melanoma in electrical arc welding (Dixon and Dixon, 2004) ...

Ing. Federica Riva
intervention at the seminar:
The assessment of the risk of artificial optical radiation.

Taken from the article:
Artificial optical radiations Risks for welders from the newspaper Puntosicuro.

HEALTHIER IS STRONGER

Protecting workers against hazards due to exposure to artificial optical radiations.

The workers good health is the most precious thing for a company. This is also required by the main directives and guidelines on safety and health at work. Each country fulfills the same principals through their own detailed regulations.

The safety of the welding operator, therefore, is no longer just a responsible choice of the employer, but a clear legal obligation.
The T-LINK system is offered in 4 different configurations to provide total safety for all welding operators.

1. Configuration with MIG/MAG torch adaptor
The universal T-LINK MIG/MAG torch system consists of a torch adaptor with EURO connection and the T-LINK filter.

2. Configuration with TIG torch adaptor
The universal T-LINK system for TIG torches consists of a torch adaptor with TSK50 connection and the T-LINK filter.

3. Configuration with Trafimet MIG/MAG T-LINK® torches
The T-LINK system applied to Trafimet MIG/MAG torches consists of a torch with integrated T-LINK-EURO connection and T-LINK filter.

4. Configuration with Trafimet TIG T-LINK® torches
The T-LINK system applied to Trafimet TIG torches consists of a torch with integrated T-LINK - TSK50 adaptor and T-LINK filter.
Configuration with MIG/MAG torch adaptor

This configuration is designed for those who want to upgrade their equipment to the T-LINK system for greater safety at work.

The special T-LINK adaptor can be used with any MIG/MAG torch with EURO connection.

Adapting a standard torch to the T-LINK system is easy! To weld safely, simply connect the T-LINK adaptor between the generator and the torch in use and combine it with the T-LINK filter on the mask.

**Configurations**

<table>
<thead>
<tr>
<th>EURO MIG/MAG T-LINK ADAPTOR</th>
<th>T-LINK MASK</th>
<th>T-LINK FILTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM0200</td>
<td>MSC000306</td>
<td>SPL000440</td>
</tr>
</tbody>
</table>

The package includes the adaptor and the adaptor charger. Any extensions are excluded, which can be purchased as an optional.

**Optional**

The T-LINK adaptor increases the distance between the torch rear connection and the generator of about 20 cm.

If necessary, extension pipes are available to ensure connection to all generator models with water cooled torches.

Kit with a couple of extensions for water hoses in BLUE and RED color with quick connection.

MT0278
Configuration with TIG torch adaptor

This configuration is designed for those who want to upgrade their equipment to the T-LINK system for greater safety at work.

The special T-LINK adaptor can be used with one button TIG torches with TSK50 joint.

Adapting a standard torch to the T-LINK system is easy! To weld safely, simply connect the T-LINK adaptor between the generator and the torch in use and combine it with the T-LINK filter on the mask.

Configurations

<table>
<thead>
<tr>
<th>TSK50 TIG T-LINK ADAPTOR</th>
<th>T-LINK MASK</th>
<th>T-LINK FILTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT0200</td>
<td>MSC000306</td>
<td>SPL000440</td>
</tr>
</tbody>
</table>

The package includes the adaptor and the adaptor charger. Any extensions are excluded, which can be purchased as an optional.

Connection KIT

To connect the TIG T-LINK adaptor to your generator and to your TIG torch, a specific Connection KIT is available, supplied separately.

To configure your Connection KIT see page 14.
Configuration with Trafimet **MIG/MAG T-LINK®** torches

This configuration meets the needs of professionals who prefer the T-LINK system directly integrated into the torch.

The solution is realized through the T-LINK range of Trafimet torches for MIG/MAG welding. These torches integrate the device and communicate directly with the T-LINK filter, combining maximum eye protection with the best welding results.

**Configurations**

<table>
<thead>
<tr>
<th>ERGOPLUS TORCH</th>
<th>TMAX TORCH</th>
<th>T-LINK MASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify the model</td>
<td>Specify the model</td>
<td>MSC000306</td>
</tr>
<tr>
<td>ERGOPLUS torch for MIG/MAG welding with integrated T-LINK.</td>
<td>TMAX torch for MIG/MAG welding with integrated T-LINK.</td>
<td>The package includes the complete mask with headgear and T-LINK filter.</td>
</tr>
</tbody>
</table>
Configuration with Trafimet **TIG T-LINK®** torches

This configuration meets the needs of professionals who prefer the T-LINK system directly integrated into the torch.

The solution is realized through the T-LINK range of Trafimet TIG torches. These torches integrate the device and communicate directly with the T-LINK filter, combining maximum eye protection with a torch constructed with the highest care in the selection of materials, components and finishes.

Configurations

**TPRO TORCH**  
TPRO torch for TIG welding with integrated T-LINK.

**T-LINK MASK**  
The package includes the complete mask with headgear and T-LINK filter.

**IMPORTANT**  
Specify in the order the model and brand of the machine and/or the connection number (see SPECIFIC CONNECTIONS section of the catalog TORCHES AND SPARE PARTS CATALOG 2017-2018).

The torch will be produced custom made, with all the specific connections required.

**ATTENTION**  
Only connections 1 button + TSK50
T-LINK® system
Functions, technical features and application ranges

T-LINK FILTER FUNCTIONS

1. Power button ON.
2. UP button to increase the DIN filter dimming degree.
3. DOWN button to decrease the DIN filter darkening degree.
4. Multifunction display for signaling system status and set parameters:
   - Battery charge status LED.
   - LED activation of the photodiodes following the light emitted by the welding arc.
   - LED for Bluetooth® connection status between BASE and FILTER.
   - Numeric display with the DIN level degree set using the UP and DOWN buttons.
5. External power supply jack for BX1440 battery charger.
   CAUTION: never connect the charger to the filter during operation.
6. LCD filter
   In the inactive state the filter DIN degree is 4.
   In working conditions it can be set from a minimum of 9 to a maximum of 13 DIN.
7. Photodiodes
   Allow the filter to work in standard mode if the T-LINK system battery is low.

Technical characteristics of the T-LINK filter

<table>
<thead>
<tr>
<th>FILTER SIZE</th>
<th>VISIBLE AREA</th>
<th>CLARITY DEGREE</th>
<th>DARKENING DEGREE</th>
<th>UV/IR PROTECTION</th>
<th>REACTION TIME</th>
<th>OPTICAL CLASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>110x90x8</td>
<td>100x80</td>
<td>DIN 4</td>
<td>DIN 5-13</td>
<td>DIN 16</td>
<td>0,00 ms</td>
<td>1/1/1/2</td>
</tr>
</tbody>
</table>

STANDARD = low battery.

Degree of darkening recommended according to regulation DIN EN 379

| Welding process | 0,5 | 1  | 2,5 | 5  | 10 | 20 | 30 | 40 | 60 | 80 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 | 400 | 450 | 500 | 550 |
|-----------------|-----|----|-----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Covered electrodes | 9   | 10 | 11  | 12 | 13 | 14 |
| MIG (steel)      | 10  | 11 | 12  | 13 | 14 |
| MIG (light alloys)| 10  | 11 | 12  | 13 | 14 | 15 |
| TIG WIG          | 9   | 10 | 11  | 12 | 13 | 14 |
| MAG              | 10  | 11 | 12  | 13 | 14 | 15 |
| Plasma welding   | 5   | 6  | 7   | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 |
| Plasma cutting   |     |    |     |    |    |    |    |    |    |    | 11  | 12  | 13  |
T-LINK ADAPTER FUNCTIONS

1. **ON/OFF ignition switch.**
2. **Bluetooth® connection button** to establish the association between BASE and FILTER.
3. **UP button** to increase the waiting time.
4. **DOWN button** to decrease the waiting time.
5. **Multifunction display** for signaling system status and set parameters:
   - battery charge status LED,
   - led for presence of welding current in the torch,
   - led for Bluetooth® connection status between BASE and FILTER,
   - numeric display with the value of the waiting time set by the UP and DOWN buttons.
6. **External power** supply jack for BX1440 charger.
   **CAUTION:** never connect the charger to the device during operation.

**Long lasting batteries**

The adapter battery lasts for 40 hours continuous.
To reduce battery consumption, the filter and the T-LINK® adapter come into stand-by mode after 30 minutes of no use.
In the case of low battery, dimming of the mask will occur with standard sensors.

**Application Range of T-LINK Adapters**

T-LINK MIG/MAG and T-LINK TIG connectors can be used within the following parameters.

<table>
<thead>
<tr>
<th>Duty Cycle</th>
<th>Maximum Amperage</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>350A</td>
</tr>
<tr>
<td>60%</td>
<td>400A</td>
</tr>
<tr>
<td>35%</td>
<td>500A</td>
</tr>
</tbody>
</table>

**Bluetooth® T-LINK transmission characteristics**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission power</td>
<td>+3 dBm</td>
</tr>
<tr>
<td>Range of action</td>
<td>10 m</td>
</tr>
<tr>
<td>Filter power supply</td>
<td>2 rechargeable Ni-Mh batteries</td>
</tr>
<tr>
<td>Adapter power supply</td>
<td>2 rechargeable Ni-Mh batteries</td>
</tr>
</tbody>
</table>
T-LINK® system
TIG T-LINK Adapter Configuration with Connection KIT

The TIG T-LINK adapter connects to any generator and TIG torch through a Connection KIT, supplied separately.

The connection KIT is realized ad hoc on the specific connections of your generator and your TIG torch.

COMPOSITION OF CONNECTION KIT

To configure your Connection KIT, please let us know your generator’s brand and model and possibly complete the following code:

**TT0215**

by entering the specific connection number in the box, chosen from the list of our available connections. See SPECIFIC CONNECTIONS section of the catalog TORCHES AND SPARE PARTS CATALOG 2017-2018.

**CAUTION**
Only connections 1 button + TSK50

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**ADDITIONAL CONTROL CABLES**
**CONNECTION DIAGRAM**

---

**Example of Connection KIT encoding**

**TT0215-071**
Connection KIT to connect the TIG T-LINK adapter to the XXX generator.

The kit includes:
- 2 extensions for control cables with ELECTRIC PLUG male / female 3 PINs for generator XXX.
- 1 extension for the gas tube BLACK color and 1/4 G connection (FE1283).
- 2 extensions for water pipes, BLUE and RED, with quick coupling (MT0278).

---

**2 additional control cables**, with a specific connection, to be connected to the standard Trafimet connectors of the TIG T-LINK adapter.

**1 extension for the gas hose**, BLACK color, with specific connection.

**2 extensions for cooling water hoses**, BLUE and RED, with specific connection.

Extensions for gas and water hoses are needed to compensate for the increase in the distance of about 20 cm between the torch and the generator.
T-LINK® A COMPLETE SHIELD THAT PROTECTS THE EYES

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