

## **RoboMIG** TBi Robot welding torches

Air and water cooled

Also for robots with integrated cable assemblies

Stable design for reliable



**1 YEAR ON TCP**



### ■ Engineering the details

As with all TBi products, also for our robot torches TBi RoboMIG the following holds true: The detail solution determines the functionality and quality of the whole product.

With the development of our robot torches, we have set ourselves a high goal. After a lot of testing, we succeeded in creating a product with extraordinary lifetime, good cooling and mechanical durability, finally reaching our design goals. Of course, while maintaining the excellent price / performance ratio that our clients are accustomed to.

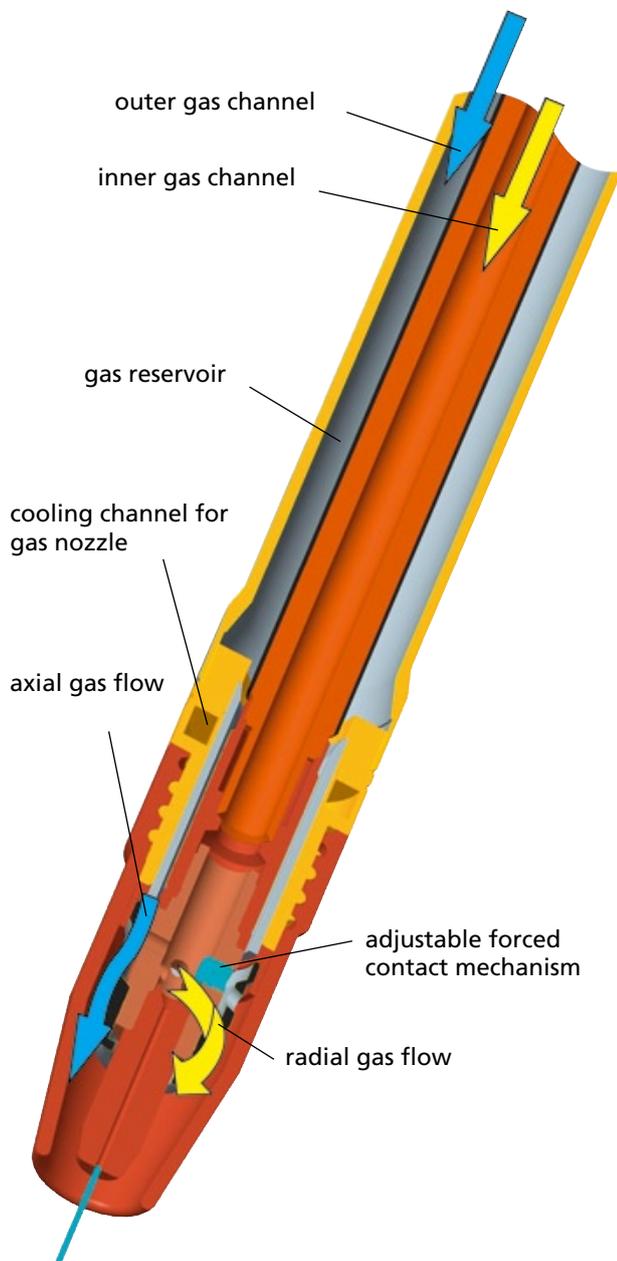
Let us give you a better insight into the unique advantages of the TBi RoboMIG torches:

- The TBi RoboMIG torches are positioned in the torch mount by a key (angular position) and the flange collar. Therefore, the TCP will be maintained even after changing the torch. Reteaching of the robot is not necessary.
- All torch necks are precisely set to exact tolerances in the factory. Due to the CrNi-monoblock design and optimised production processes, these tolerances will be kept even after many heat cycles of the welding process.
- Different torch geometries and compact design of the torch body and cable assembly allow for good accessibility of tight welding positions.



- High heat transfer in all critical areas by a 2-circuit water cooling (TBi RM 60W, TBi RM 80W) or a 2-channel air cooling (TBi RM 60G, TBi RM 70G). This design has definitely made its point in many comparative welding tests.
- Same dimensions and TCP positions for the torch series RM 60, RM 70, RM 80 and RM 90 allow the converting any existing RoboMIG installation to another torch model within a very short time.
- Aluminum welding with highest weld quality and very low gas consumption with the models RM 70G and RM 80W, due to the specially developed 2-channel gas flow.
- Each torch is submitted to a multistage quality and functional check before leaving our factory.

## ■ 5 time-proven reasons for production experts



### 1. Higher productivity

Less downtime due to our collision resistant design. You will not need alignment tools.

### 2. Reliable ignition

Better process control due to forced contact of the wire, even with straight necks

### 3. Reduced maintenance

- Blow-out capability included
- Very high lifetime of the consumables, the neck and the cable assembly
- Resetting of the neck or retooling of the robot is generally not necessary

### 4. The complete system from one source

All components are perfectly matched and designed for heavy duty industrial use.

### 5. Daily cost savings

Protective gas consumption from approx. 6-8 l/min depending on torch type and process allow for distinctive gas savings in comparison to other systems.

**!** We also manufacture custom-designed torches for your application or according to your specification. Ask us for a solution!

**!** The fitting of the TBi RoboMIG system pays for itself within a few months!

## RoboMIG

air cooled



### TBi RM 50G

60% (10 min.)  
Mix: 8.8 kW (250-280 A)  
Ø 0.8-1.2 mm  
Gas flow: from 8 l/min  
1 channel for protective  
or blow-out gas

### TBi 60G

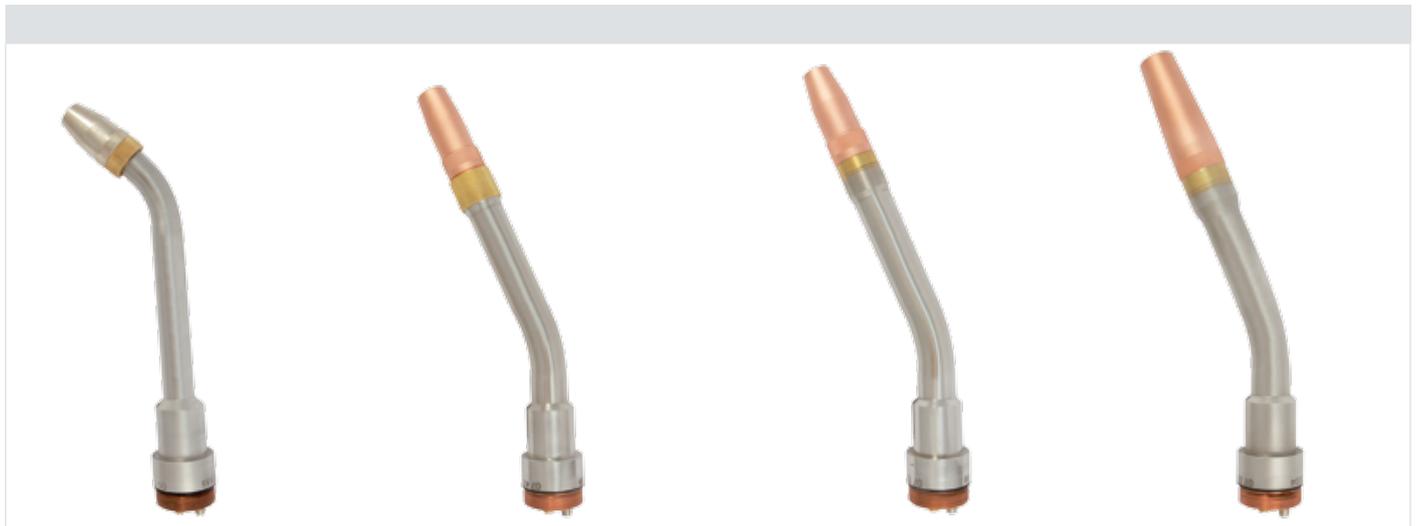
60% (10 min.)  
Mix: 10.5 kW (300-320 A)  
Ø 0.8-1.6 mm  
Gas flow: from 8 l/min  
1 channel for protective  
or blow-out gas

### TBi 70G

80% (10 min.)  
Mix: 15.0 kW (350-400 A)  
Ø 0.8-1.6 mm  
Gas flow: from 6 l/min  
2 channels for protective  
or blow-out gas

## RoboMIG

water cooled



### TBi RM 50W

100% (10 min.)  
Mix: 9.5 kW (270-300 A)  
Ø 0.8-1.2 mm  
Gas flow: from 8 l/min  
1 channel for protective  
or blow-out gas

### TBi RM 60W

100% (10 min.)  
Mix: 13.0 kW (350-370 A)  
Ø 0.8-1.6 mm  
Gas flow: from 8 l/min  
1 channel for protective  
or blow-out gas  
2-circuit water cooling

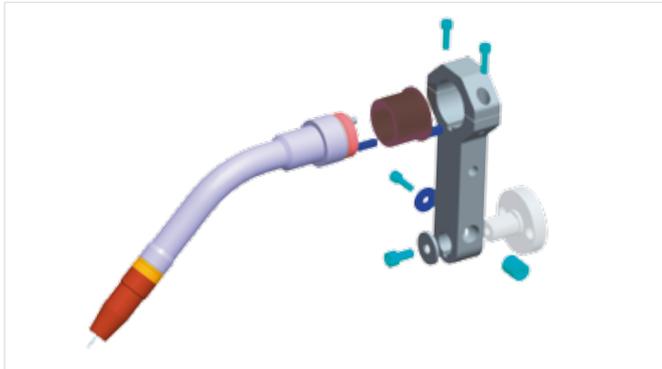
### TBi RM 80W

100% (10 min.)  
Mix: 17.5 kW (370-500 A)  
Ø 0.8-1.6 mm  
Gas flow: from 6 l/min  
2 channels for protective  
or blow-out gas  
2-circuit water cooling

### TBi 90W

100% (10 min.)  
Mix: 19.0 kW (500-550 A)  
Ø 0.8-1.6 mm  
Gas flow: from 8 l/min  
1 channel for protective  
or blow-out gas  
2-circuit water cooling

## ■ Components of the TBi RoboMIG system



### Torch mount

The RoboMIG torch mount is a precision part, fixing the torch in an exactly defined position. It is extremely stable and available in different geometries.

Versions for our quick-change adaptor are also available.



### Safety-off mechanism TBi KS-1

This high precision spring loaded unit is suitable for conventional welding robots and reaches a high reset precision. In case of a crash, the safety-off circuit will be activated while the torch is elastically deflected. The TBi KS-1 is used for MIG/MAG, TIG, plasma and tandem welding torches.



### Safety-off mechanism TBi KS-C

This modern safety-off mechanism was developed especially for robots with integrated welding cable assemblies. The cable assembly passes through the center of the safety-off unit, the torch is fixed directly at the front. The spring loaded elastic mount and the safety-off circuit are also integrated.



### Cable assemblies

Since many years, the TBi cable assemblies have proven their value in industrial production. Their robustness and long lifetime are outstanding. Besides the standard versions, the product line also includes numerous options for the best possible adaptation to the requirements of different welding tasks.

■ The modules at a glance

**TBi intermediary wire feeder**  
The reliable Push-Pull system. May be placed directly behind the torch neck.

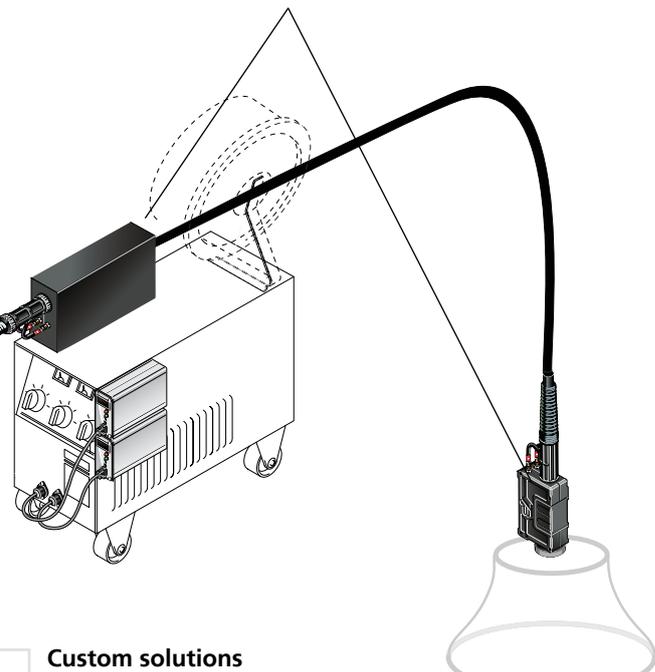
**TBi safety-off mechanism**  
- compact  
- reliable  
- precise

**TBi robot cable assembly**  
A vital component for the reliability of the whole system.

**Wire feed systems**  
No matter if used as an intermediary feeder or master feeder, our TBi PowerPull-box is the reliable solution for soft wires and highly dynamical wire feeding.  
**New: reversing-mode!**

**TBi RoboMIG torch mount**  
A perfect fit for the TBi RoboMIG system.

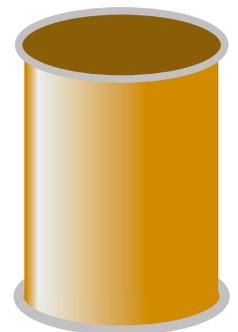
**TBi RoboMIG torch**  
Will bring the power to the welding seam, day after day. Different models available.



**TBi JetStream J2**  
**Torch cleaning station**  
The particle stream cleans the whole torch head, even the parts which are normally hard to reach! The therewith resulting increase in productivity of the robot cell guarantees a quick amortization of the system.



**Custom solutions**  
Special requirements call for special solutions. We will advise you and are able to develop special torches and modules in a short time.



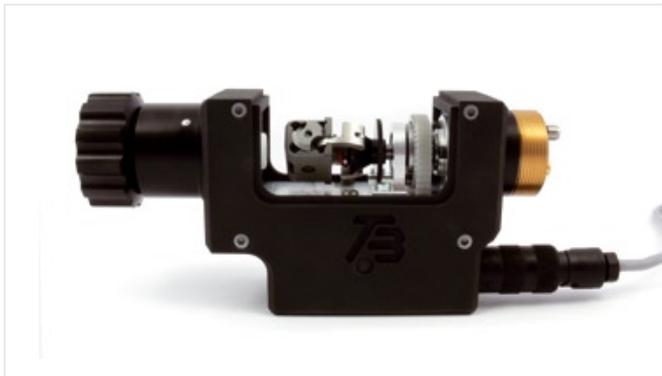
**Barrel feeder**  
At TBi you will find the complete wire feeding system from one source. Specially for soft and difficult to handle wires we provide a reliable solution with our power-pull system.

## ■ The TBi PowerPull system

### TBi PowerPull - our Push-Pull system

- Perfect results under difficult conditions
- The TBi PowerPull-box can be integrated easily into the RoboMIG torch system
- No change of the wire feed rolls for different wire diameters
- Many different mounts for the box and the TBi RoboMIG torches are available
- The system supports state-of-the-art welding processes with wire reversing (pull-back)
- Compact and lightweight design

The optimal configuration will be determined according to the welding task.



### TBi PowerPull-Box - our compact wire feeder

Our system has unique advantages:

- Precise ignition and constant arc due to the permanent contact of the wire with the contact tip
- Feeding of soft wires without deformation
- Smooth and constant wire transport
- Highly dynamical reversing mode, dependant on the control electronics
- Automatic wire run-in in the cable assembly
- Remarkably extended lifetime of the contact tips

The devices are available in different configurations.

### TBi Syntronic

Synchronises the TBi PowerPull planetary wire feeder to any other wire feeder, e.g. the feeder of the power source. Reliable and stable parallel feeding of both drives in a master/slave setup.



**New: reversing-mode!**

# Ready for Tomorrow.

## Car industry

Torch TBi RM 70G, air cooled

Part Rear axle

Process MIG, 300 A,  
80% DC, (60 Sec.)

Wire Ø 1.2 mm

Gas flow 10 l/min



## Car industry

Torch TBi RM 70G, air cooled

Part Rear suspension

Process MIG, 350 A,  
80% DC, (64 Sec.)

Wire Ø 1.2 mm

Gas flow 10 l/min



## Shelving industry

Torch TBi RM 60W, water cooled

Part 3 m length of steel profile

Process MIG, 200 A,  
100% DC, (3 min.)

Wire Ø 1.0 mm

Gas flow 10 l/min

