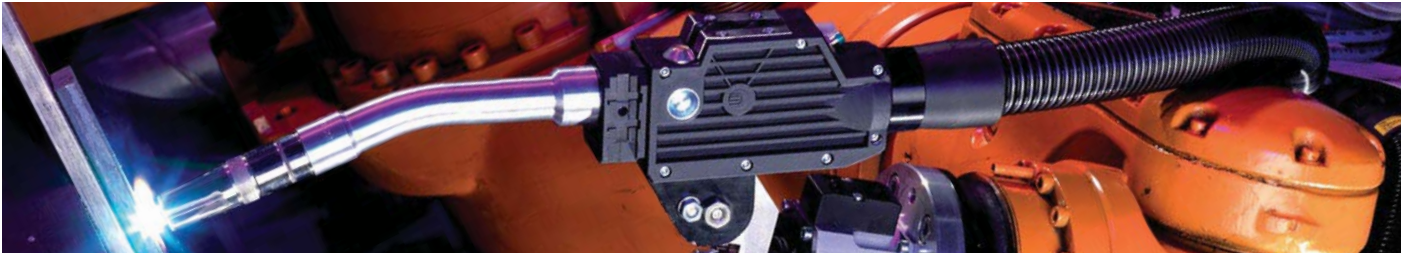


# MIG/MAG Welding Torch System

## "ROBO WH & WH-PP" air cooled



### Quick adaptation to changing welding tasks ...

The air cooled MIG/MAG neck change welding torch system WH / WH-PP enables the complete torch neck to be replaced either manually or automatically – thanks to the innovative interface technology on the change body. This means torches of the same design can be replaced in seconds for maintenance purposes, or torches with special geometries for different welding positions can be changed as required.

Equally, the replacement of contact tip and gas nozzle and the monitoring of the TCP also take place outside the welding cell, thus increasing the availability of the system and reducing downtimes.

### Advantages that speak for themselves:

- Fast torch neck change and replacement of wear parts increase system availability
- Flexible adaptation to changing welding tasks
- Also available as a push-pull system for precise wire feeding
- Air cooled up to 360 A

### Degree of automation:

Low	Medium	High
-----	--------	------

### Application areas:



- Automotive construction
- Automotive suppliers (Tier 1, Tier 2)
- Commercial vehicle construction
- Earth-moving equipment
- Rail vehicle construction
- Machine and steel construction

### Material:

- Construction steels (coated / non-coated)
- Chrome-nickel steels
- Duplex steels
- Nickel basic materials
- Mixed compounds
- Aluminium materials
- Magnesium materials
- Copper materials
- Special materials

### Robot interface:

- Conventional robot  
(Cable assembly external):
  - Robot mount CAT3
  - Fixed bracket RTM
- Hollow wrist robot  
(Cable assembly internal):
  - Robot mount iCAT
  - Bracket iSTM (for robots with integrated collision software)
- Hollow wrist robot  
(Cable assembly external):
  - Robot mount CAT3
  - Fixed bracket RTM

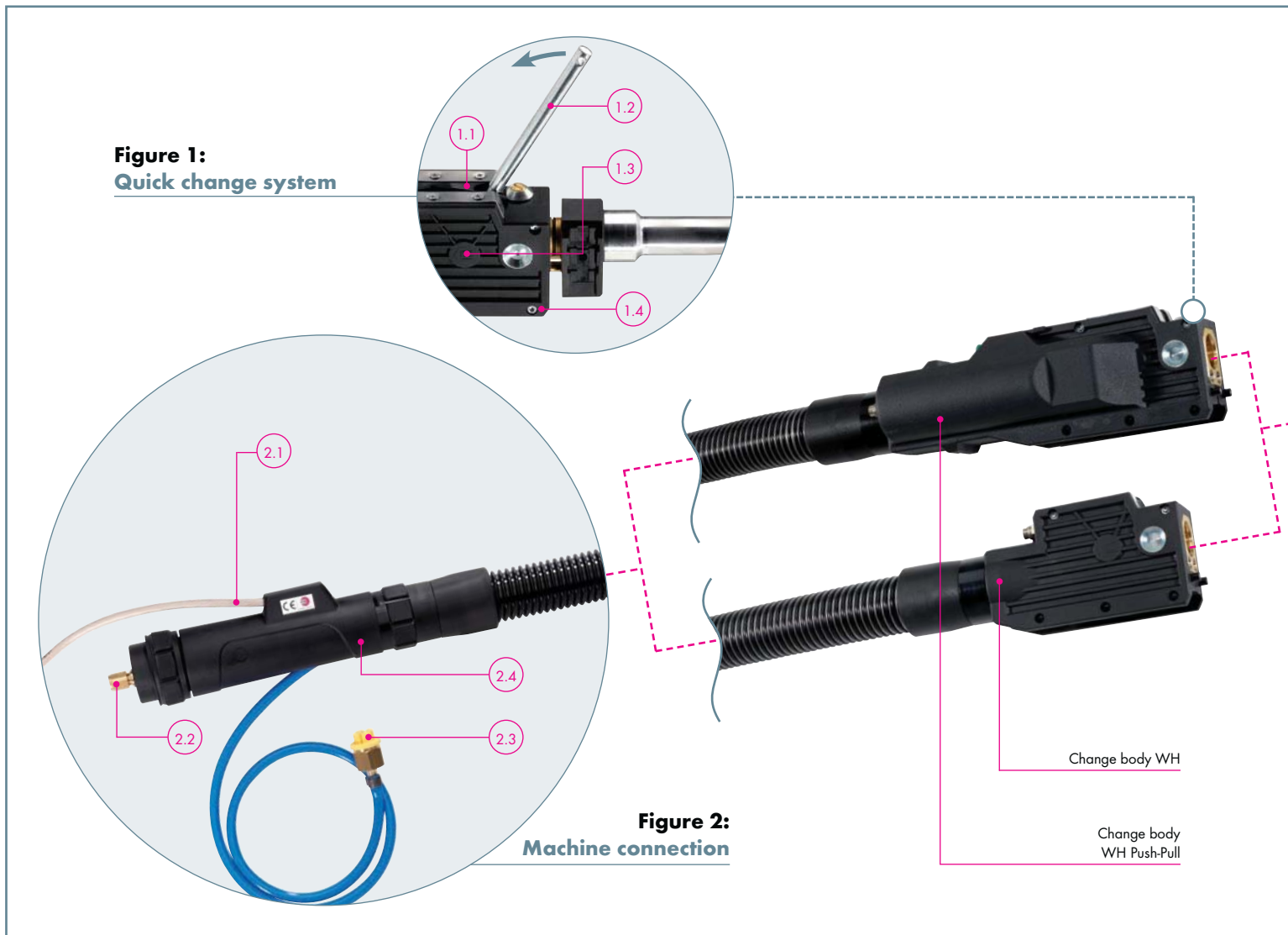
### \* Definition of the degree of automation:

- Low = Torch neck change not possible
- Medium = Torch neck change possible (manually)
- High = Torch neck change possible (manually & automatically)

up to  
360 A



# “ROBO WH & WH-PP” air cooled System Overview & Technical Data



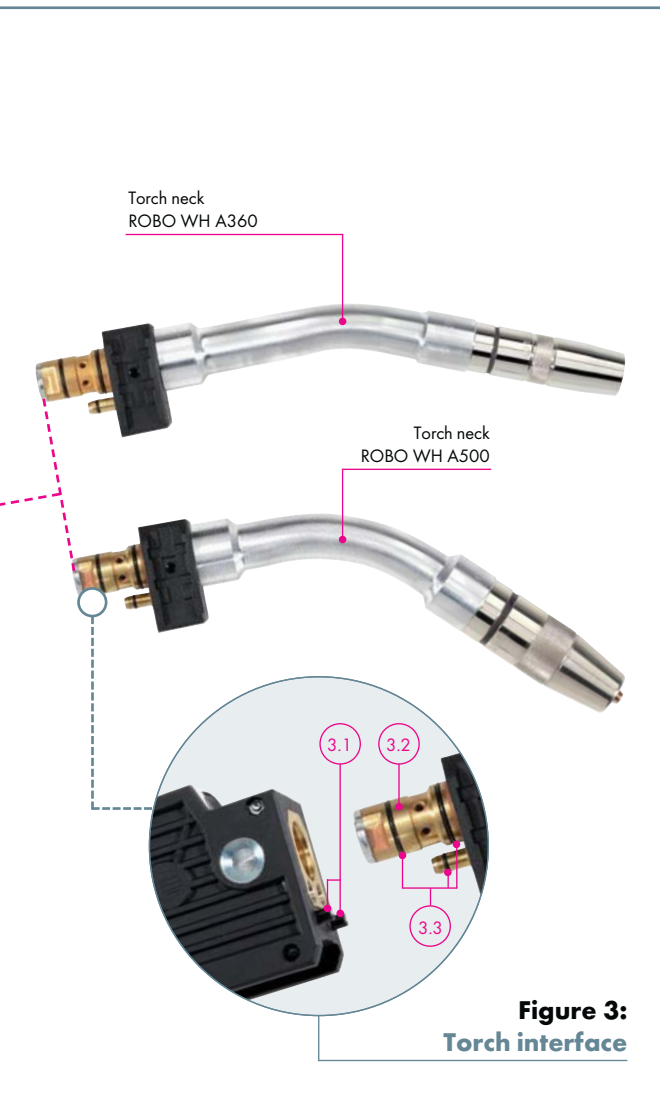
**Figure 1:**  
Quick change system

- 1.1 Rubber seals prevent dust/spatter penetration
- 1.2 Tool for manual torch neck replacement (hand lever)
- 1.3 Integrated wire-cutting and location function for torch neck replacement
- 1.4 Sturdy housing for change body (optionally with wire brake<sup>1</sup>)

**Figure 2:**  
Machine connection

- 2.1 High-quality control cable with strain relief (control cable connector on request)
- 2.2 Machine connection available for all standard wire feeds
- 2.3 Airblast hose with blanking plug
- 2.4 Sturdy casing with bend-protection spring

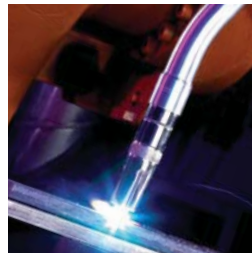
<sup>1</sup> Wire brake and gas nozzle sensor connection are required for tactile seam location via gas nozzle. Ask your robot manufacturer for more details.



**Figure 3:**  
**Torch interface**

**Figure 3:**  
**Torch interface**

- 3.1 Contacts for optional gas nozzle sensor<sup>1</sup>
- 3.2 Compact and space-saving interface
- 3.3 O-rings ensure a gas-tight connection



**Technical data (EN 60 974-7):**

**ROBO WH A360**

Type of cooling:	air cooled*
Rating:	300 A CO <sub>2</sub> 250 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 - 1.2 mm
Torch geometries:	22°/45°

**ROBO WH A500**

Type of cooling:	air cooled*
Rating:	360 A CO <sub>2</sub> 290 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 - 1.2 mm
Torch geometries:	0°/22°/45°

\* Capacity can be reduced when cable assemblies are longer than 3 m.

**Note on the technical data:**

Rating data were determined under normal conditions at low to medium reflected heat, free air circulation and at 28°C ambient temperature. When used under more difficult conditions, the rating data must be reduced by 10 - 20 %. The rating data are reduced by up to 35 % for pulse arc welding.

# "ROBO WH & WH-PP" air cooled Torch Necks & Wear Parts

## ROBO WH A360



### Torch necks

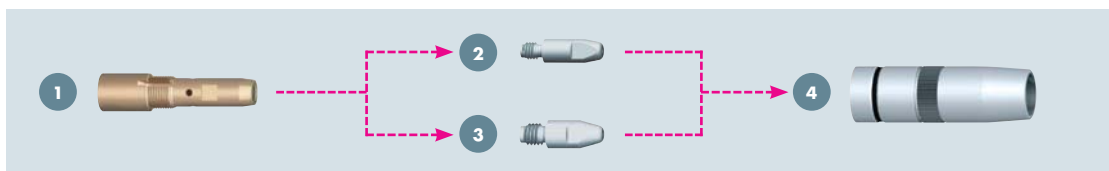
Features	22°	Part-No.	45°
Standard	962.1410.1		962.1411.1

Wear parts and fittings are not included in the scope of delivery! Please order these separately and according to the application!

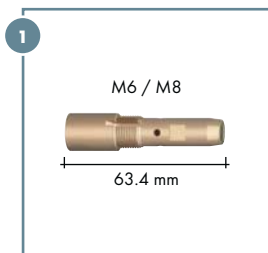
### Neck liner

for	Torch geometry	Wire-Ø	Part-No.
Steel	22° / 45°	Ø 0.8-0.9	149.0276.5
		Ø 1.0-1.2	149.0277.5
Aluminium	22° / 45°	Ø 0.8-1.0	149.0278.5
		Ø 1.2-1.6	149.0279.5

## Wear parts for ROBO WH A360



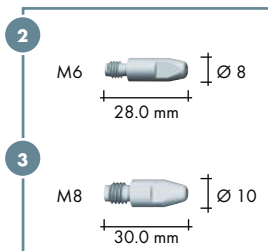
### 1 Contact tip holder (5 pcs.)



Type	Part-No.
M6 Copper <sup>1</sup>	142.0196.5
M6 Brass	142.0160.5
M8 Copper <sup>1</sup>	142.0170.5
M8 Brass	142.0163.5

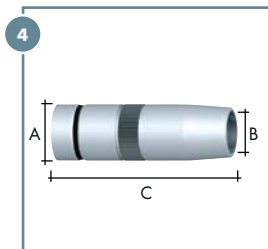
<sup>1</sup> Recommended for high amperages.

### 2 Contact tip M6 3 Contact tip M8 (10 pcs.)



Type	Wire-Ø	Part-No.	
		M6	M8
CuCrZr silver-plated	Ø 0.8	147.0054	147.0117
	Ø 0.9	147.0172	147.0217
	Ø 1.0	147.0245	147.0316
	Ø 1.2	147.0382	147.0445

### 4 Gas nozzle (5 pcs.)



Type bottle form	Ø A	Ø B	Length C	Part-No.
Flush <sup>2</sup>	Ø 22.0	Ø 12.0	68.0 mm	145.0599
Recess (-2.0 mm) <sup>3</sup>	Ø 22.0	Ø 12.0	70.0 mm	145.0600
Stick-out (+3.0 mm) <sup>4</sup>	Ø 22.0	Ø 12.0	65.0 mm	145.0601
Flush <sup>2</sup>	Ø 22.0	Ø 14.0	68.0 mm	145.0618
Stick-out (+3.0 mm) <sup>4</sup>	Ø 22.0	Ø 14.0	65.0 mm	145.0619

Type conical	Ø A	Ø B	Length C	Part-No.
Flush <sup>2</sup>	Ø 22.0	Ø 14.0	68.0 mm	145.0595
Recess (-2.0 mm) <sup>3</sup>	Ø 22.0	Ø 14.0	70.0 mm	145.0596
Stick-out (+3.0 mm) <sup>4</sup>	Ø 22.0	Ø 14.0	65.0 mm	145.0597
Flush <sup>2</sup>	Ø 22.0	Ø 16.0	68.0 mm	145.0592
Recess (-2.0 mm) <sup>3</sup>	Ø 22.0	Ø 16.0	70.0 mm	145.0593
Stick-out (+3.0 mm) <sup>4</sup>	Ø 22.0	Ø 16.0	65.0 mm	145.0594

<sup>2</sup> Flush: Contact tip flush

<sup>3</sup> Recess: Contact tip recessed

<sup>4</sup> Stick-out: Contact tip protruding

# "ROBO WH & WH-PP" air cooled Torch Necks & Wear Parts

## ROBO WH A500



### Torch necks

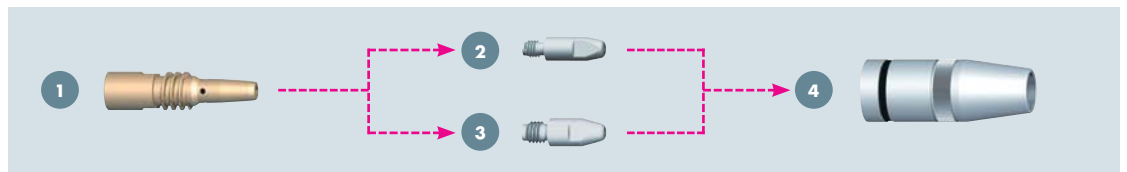
Features	Part-No.		
	0°	22°	45°
Standard	962.1504.1	962.1505.1	962.1506.1

Wear parts and fittings are not included in the scope of delivery! Please order these separately and according to the application!

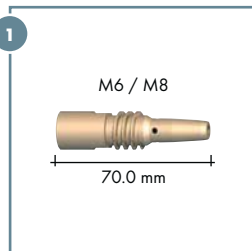
### Neck liner

for	Torch geometry	Wire-Ø	Part-No.
Steel	0° / 22° / 45°	Ø 0.8-0.9	149.0276.5
		Ø 1.0-1.2	149.0277.5
Aluminium	0° / 22° / 45°	Ø 0.8-1.0	149.0278.5
		Ø 1.2-1.6	149.0279.5

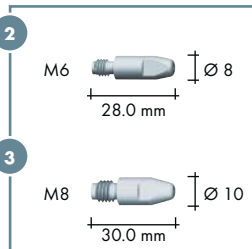
## Wear parts for ROBO WH A500



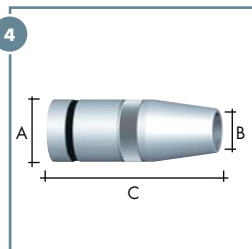
### 1 Contact tip holder (5 pcs.)



### 2 Contact tip M6 3 Contact tip M8 (10 pcs.)



### 4 Gas nozzle (5 pcs.)



Type	Part-No.
M6 Brass	142.0159.5
M8 Brass	142.0158.5
M8 Copper <sup>1</sup>	142.0169.5

<sup>1</sup> Recommended for high amperages.

Type	Wire-Ø	Part-No.	
		M6	M8
CuCrZr silver-plated	Ø 0.8	147.0054	147.0117
	Ø 0.9	147.0172	147.0217
	Ø 1.0	147.0245	147.0316
	Ø 1.2	147.0382	147.0445

Type bottle form	Ø A	Ø B	Length C	Part-No.
Flush <sup>2</sup>	Ø 28.0	Ø 14.0	75.0 mm	145.0586
Recess (-2.0 mm) <sup>3</sup>	Ø 28.0	Ø 14.0	77.0 mm	145.0587
Stick-out (+3.0 mm) <sup>4</sup>	Ø 28.0	Ø 14.0	72.0 mm	145.0588
Flush <sup>2</sup>	Ø 28.0	Ø 16.0	75.0 mm	145.0583
Recess (-2.0 mm) <sup>3</sup>	Ø 28.0	Ø 16.0	77.0 mm	145.0584
Stick-out (+3.0 mm) <sup>4</sup>	Ø 28.0	Ø 16.0	72.0 mm	145.0585

Type conical	Ø A	Ø B	Length C	Part-No.
Flush <sup>2</sup>	Ø 28.0	Ø 13.0	75.0 mm	145.0589
Recess (-2.0 mm) <sup>3</sup>	Ø 28.0	Ø 13.0	77.0 mm	145.0590
Stick-out (+3.0 mm) <sup>4</sup>	Ø 28.0	Ø 13.0	72.0 mm	145.0591
Flush <sup>2</sup>	Ø 28.0	Ø 16.0	75.0 mm	145.0580
Recess (-2.0 mm) <sup>3</sup>	Ø 28.0	Ø 16.0	77.0 mm	145.0581
Stick-out (+3.0 mm) <sup>4</sup>	Ø 28.0	Ø 16.0	72.0 mm	145.0582

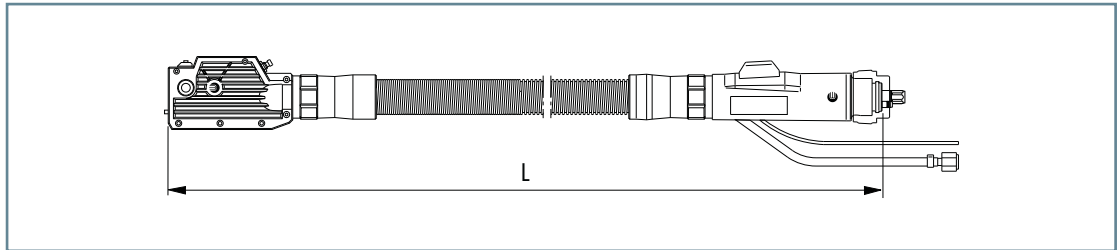
<sup>2</sup> Flush: Contact tip flush

<sup>3</sup> Recess: Contact tip recessed

<sup>4</sup> Stick-out: Contact tip protruding

# “ROBO WH & WH-PP” air cooled Cable Assemblies & Accessories

## Cable assembly and connection types



On account of the large number of connection variants and cable assembly lengths we cannot list every part number here. Please contact your application consultant to find the optimum solution for your requirements. When you inquire, please have all the relevant information on hand ready, such as connection variant, make and type of power source, description of wire feeder, pin assignment for the control cable and individual connections for the airblast function.

## Liners for Euro central connection<sup>1</sup>

Type	Wire-Ø	up to L=1.5 m <sup>4</sup>	up to L=3.15 m <sup>4</sup>	10.0 m <sup>5</sup>	Collet
Liner steel red <sup>2</sup>	Ø 0.8-1.2	124.0145.1	124.0146.1	124.0159.1	131.0012
Liner steel white <sup>2</sup>	Ø 1.4-1.6	124.0147	124.0148	124.0160	131.0011
Combined wire feed <sup>3</sup>	Ø 0.8-1.2	128.M008	128.M009	-	131.0019
	Ø 1.4-1.6	128.M012.1	128.M013.1	-	131.0020

<sup>1</sup> Liners for other connection types are available on request.

<sup>2</sup> Red and white steel liners (insulated) for the use of non-alloyed and low-alloyed steels. The totally insulated wire feed prevents damage caused by “micro-arcing” on the wire. This allows optimal current transfer inside the contact tip, improving the welding process. The insulated steel liner must always be used for power sources with optimal welding wire sensors.

<sup>3</sup> Combined wire feed - for aluminium or bronze wires - is a combination of PA-liner and a bronze liner pressed on in the front section to avoid thermal overload of the PA.

<sup>4</sup> Including 1x collet

<sup>5</sup> For individual production including 2x collets

## Accessories



### Alignment jig

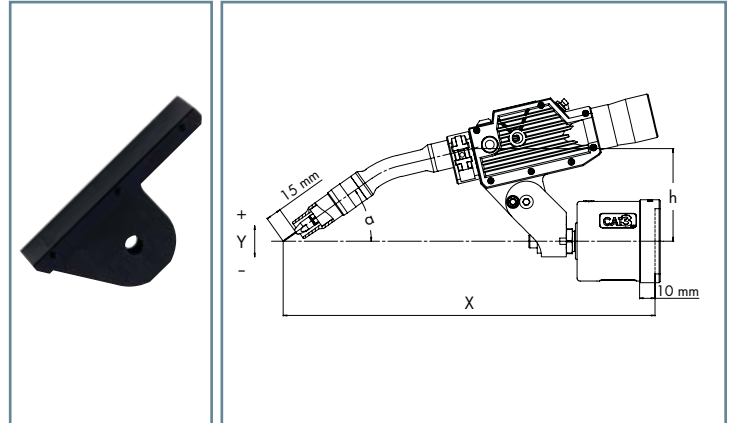
for torch type	Torch geometry	Part-No.
ROBO WH A	0°/22°/45°	837.0591.1

# “ROBO WH & WH-PP” air cooled Holder & TCP Geometries

## Torch holder for ROBO WH and WH-PP

in connection with CAT3 cpl.

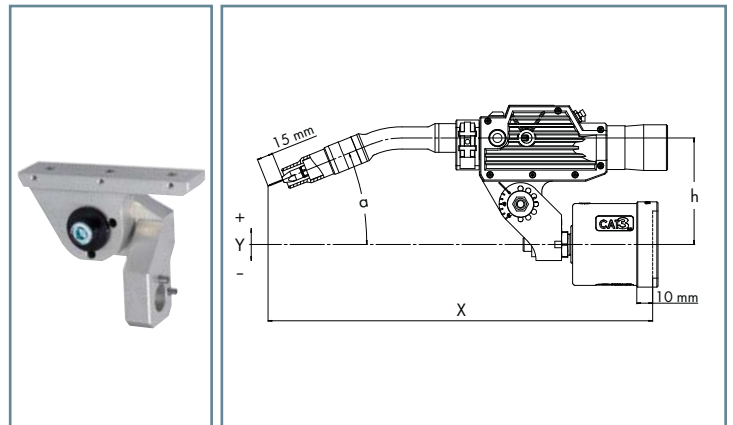
Torch type	Torch geometry	X	Y	h	$\alpha$	Part-No.
ROBO	0°	407	0	83	20°	960.0026.1
WH A 360	22°	391	0	92	33°	960.0026.1
	35°	376	0	97	39°	960.0026.1
	45°	363	0	101	43°	960.0026.1
ROBO	0°	407	0	83	20°	960.0026.1
WH A 500	22°	391	0	92	33°	960.0026.1
	45°	363	0	101	43°	960.0026.1



## Segment holder for ROBO WH and WH-PP<sup>1</sup>

in connection with CAT3

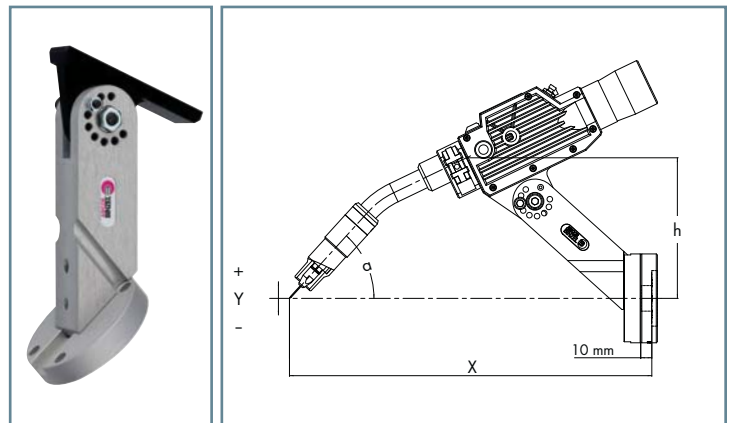
Torch type	Torch geometry	X	Y	h	$\alpha$	Part-No.
ROBO	0°	402	100	100	0°	780.0307.1
WH A 360	22°	393	50	100	22°	780.0307.1
	35°	379	20	100	35°	780.0307.1
	45°	362	-6	100	45°	780.0307.1
ROBO	0°	402	100	100	0°	780.0307.1
WH A 500	22°	393	50	100	22°	780.0307.1
	45°	362	-6	100	45°	780.0307.1



## RTM holder for ROBO WH and WH-PP<sup>1</sup>

for robots with collision software

Torch type	Torch geometry	X	Y	h	$\alpha$	Part-No.
ROBO	0°	388	21	127	0°	780.0360
WH A 360	22°	358	-20	127	48°	780.0360
	35°	331	-41	127	61°	780.0360
	45°	305	-58	127	71°	780.0360
ROBO	0°	388	21	127	0°	780.0360
WH A 500	22°	358	-20	127	48°	780.0360
	45°	305	-58	127	71°	780.0360



Further holders are available on request.

<sup>1</sup> Holder adjustable in 15° steps.