

ROBO



Product Catalogue 4.1

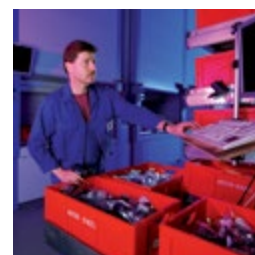
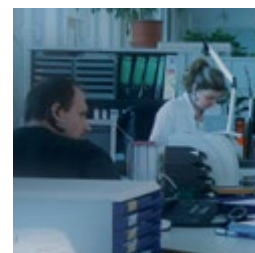


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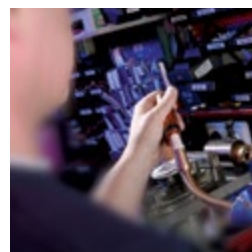
ABICOR BINZEL

About us



Global leader

With more than 900 employees, 36 production and sales companies as well as more than 20 exclusive partners, Alexander Binzel Schweißtechnik GmbH & Co. KG, founded in 1945, is one of the world's leading companies in the field of arc welding and welding torch technology.



With a top-quality range of products, the company provides complex individual solutions for welding-related manufacturing. Defined brand characteristics and guarantees for global market success include: Development strength, product quality, engineering competence and the international sales, consultation and service network.

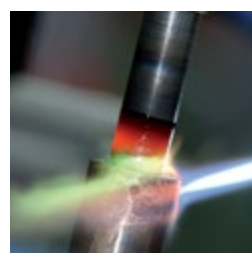
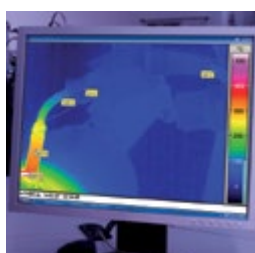
There are local teams available for consultation and support for trade partners in every country.

Quality – made by ABICOR BINZEL®

Our products are manufactured according to Binzel standards and international directives. Certified according to DIN EN ISO 9001.

Innovation – now and in the future

We develop products ourselves in our own modern laboratories and in global cooperation with innovative minds from science, research and industry.



Global-Player

Close to Customers – everywhere

www.binzel-abicor.com

World-wide customer proximity is one of the recipes for success for the ABICOR BINZEL quality brand. The network has been greatly expanded over the past few years, with separate companies and further national agencies, guarantees not only global consultation, service and delivery expertise for the brand in the most important industrial countries, but also supplies of genuine parts and genuine accessories to customers all over the world.

Genuine brand quality. International agencies in:

 Algeria	 France	 Mexico	 Sweden
 Argentina	 Germany	 Netherlands	 Switzerland
 Australia	 Greece	 Norway	 Syria
 Austria	 Hungary	 Oman	 Thailand
 Belarus	 Iceland	 Pakistan	 Turkey
 Belgium	 India	 Philippines	 Ukraine
 Bosnia and Herzegovina	 Indonesia	 Poland	 United Arab Emirates
 Brazil	 Iran	 Qatar	 United States of America
 Bulgaria	 Iraq	 Romania	 Venezuela
 Canada	 Israel	 Russia	 Vietnam
 China	 Italy	 Saudi Arabia	
 Croatia	 Japan	 Serbia and Montenegro	
 Cyprus	 Jordan	 Singapore	
 Czech Republic	 Kazakhstan	 Slovakian Republic	
 Denmark	 Kenya	 Slovenia	
 Egypt	 Kuwait	 South Africa	
 England	 Latvia	 South Korea	
 Estonia	 Lithuania	 Spain	
 Ethiopia	 Luxembourg	 Sri Lanka	
 Finland	 Macedonia	 Sudan	

MIG/MAG Welding Torch Systems

Air & Liquid cooled



ROBO WH / ROBO WH-PP air and liquid cooled

Quick adaptation to changing welding tasks ...

Capacity: up to 550 A

Application areas: Automotive construction, automotive suppliers (Tier 1, Tier 2), commercial vehicle construction, earth-moving equipment, rail vehicle construction, machine and steel construction

Degree of automation: Low Medium High

Page
9–24



ABIROB® W liquid cooled

Robust & flexible ...

Capacity: up to 600 A

Application areas: Commercial vehicle construction, earth-moving equipment, rail vehicle construction, shipbuilding, machine and steel construction

Degree of automation: Low Medium High

Page
25–34



ABIROB® A ECO air cooled

Simple & effective ...

Capacity: up to 500 A

Application areas: Automotive construction, automotive suppliers (Tier 1, Tier 2), bicycle industry, container construction, aviation- and aerospace industry

Degree of automation: Low Medium High

Page
35–42



ABIROB® 350 GC air cooled

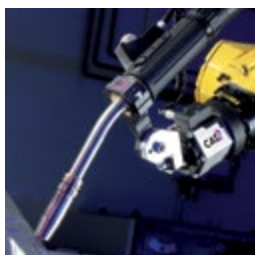
Sturdy, durable & economical ...

Capacity: up to 350 A

Application areas: Automotive construction, automotive suppliers (Tier 1, Tier 2), bicycle industry, container construction

Degree of automation: Low Medium High

Page
43–48



ROBO Standard liquid cooled

Powerful, reliable & economical ...

Capacity: up to 600 A

Application areas: Commercial vehicle construction, earth-moving equipment, rail vehicle construction, shipbuilding, container construction, machine and steel construction

Degree of automation: Low Medium High

Page
49–56

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
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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 CAT2
 - 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 CAT2
 - Fixed bracket RTM

up to
360 A



* 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)

"ROBO WH & WH-PP" air cooled

System Overview & Technical Data

Figure 1:
Quick change system

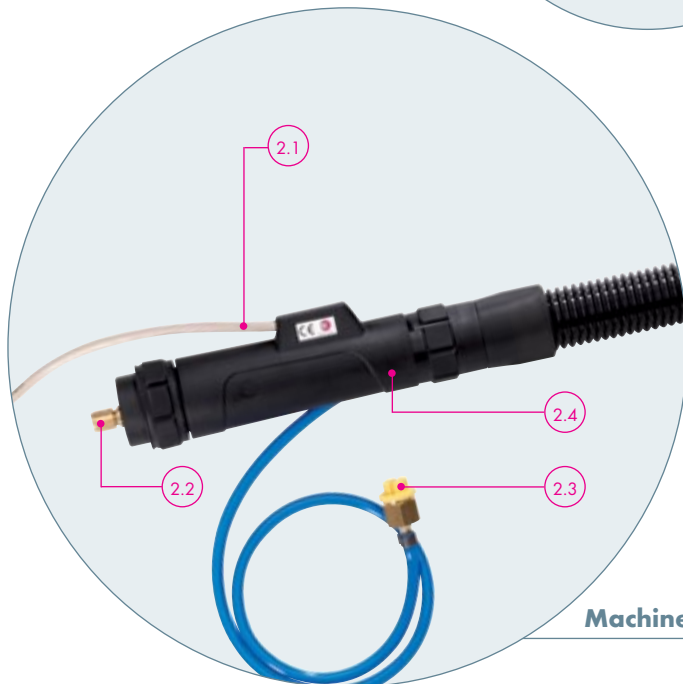
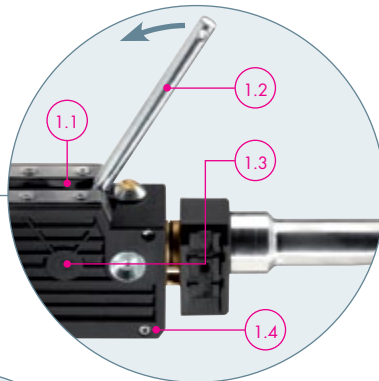


Figure 2:
Machine connection

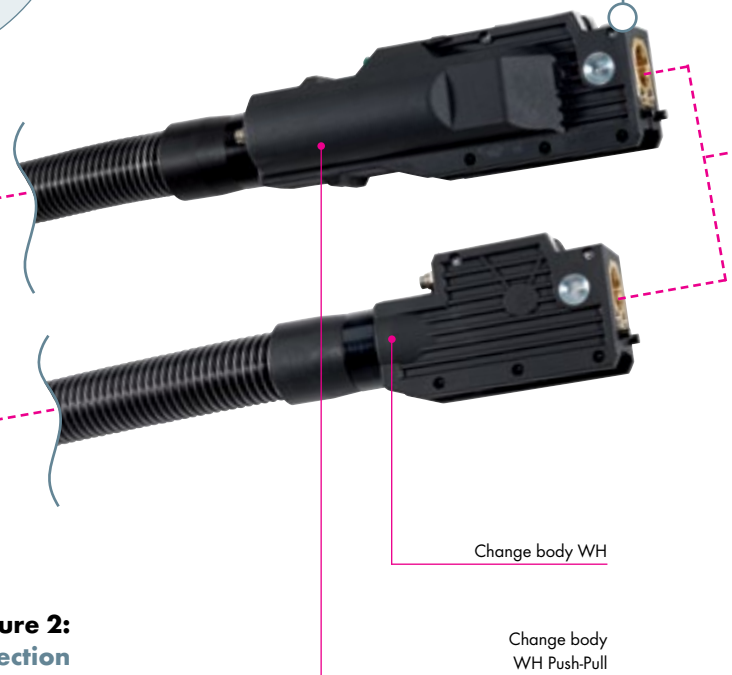


Figure 1:
Quick change system

- 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 brake¹)

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

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

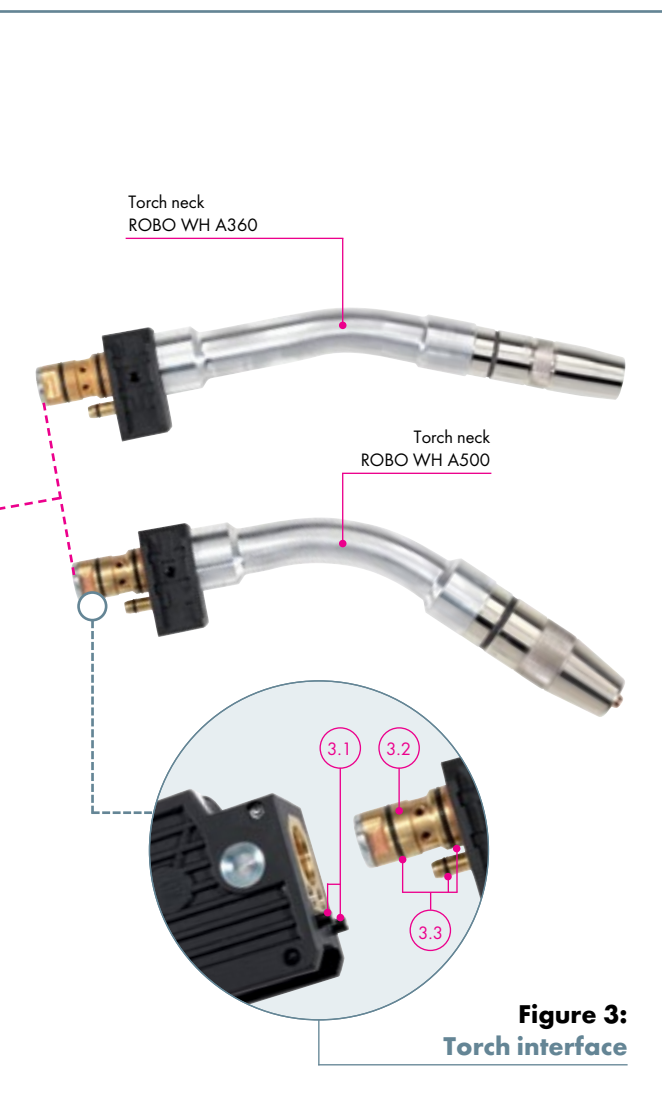
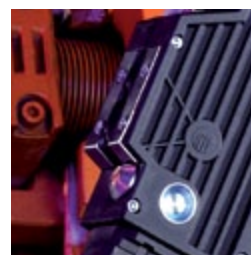
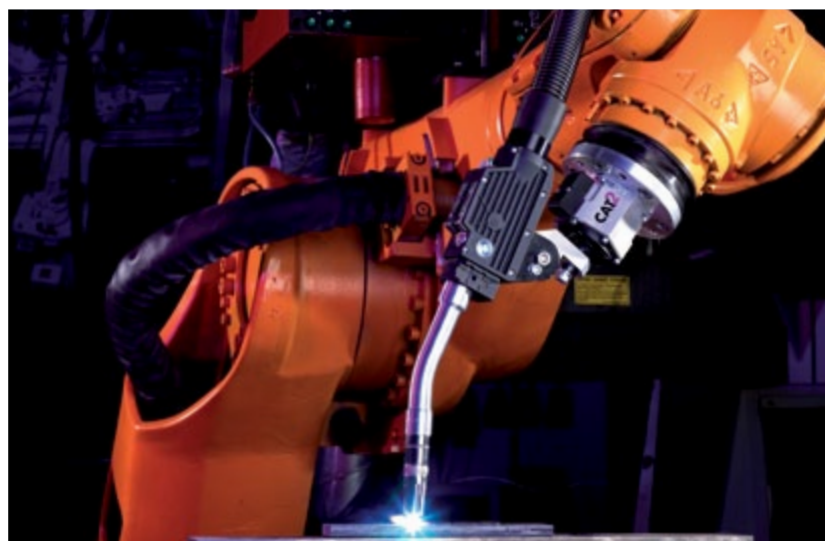


Figure 3:
Torch interface

- 3.1 Contacts for optional gas nozzle sensor¹
- 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 ₂ 250 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 – 1.2 mm
Torch geometries:	0°/22°/35°/45°

ROBO WH A500

Type of cooling:	air cooled*
Rating:	360 A CO ₂ 290 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

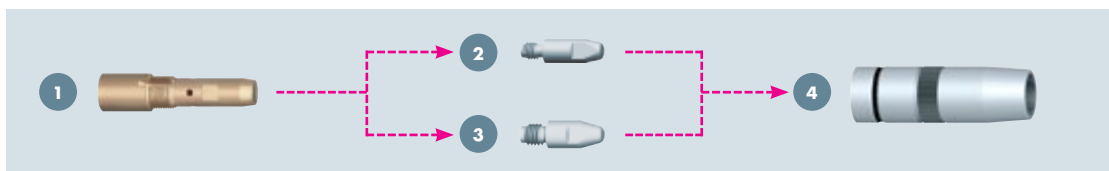
Features	Part-No.			
	0°	22°	35°	45°
Standard	962.1416	962.1410	962.1520	962.1411

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

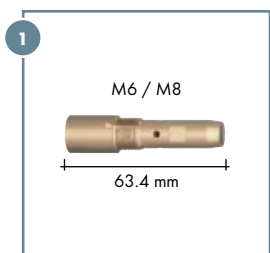
Neck liner

for	Torch geometry	Wire-Ø	Part-No.
Steel	0° / 22° / 35° / 45°	Ø 0.8-0.9	149.0276.5
		Ø 1.0-1.2	149.0277.5
		Ø 1.2-1.6	149.0279.5
Aluminium	0° / 22° / 35° / 45°	Ø 0.8-1.0	149.0278.5
		Ø 1.2-1.6	149.0279.5

Wear parts for ROBO WH A360



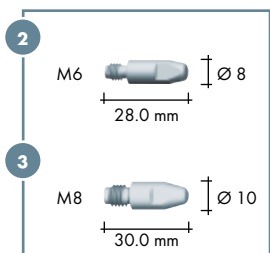
1 Contact tip holder (5 pcs.)



Type	Part-No.
M6 Copper ¹	142.0196.5
M6 Brass	142.0160.5
M8 Copper ¹	142.0170.5
M8 Brass	142.0163.5

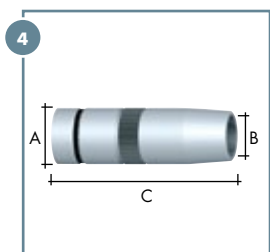
¹ Recommended for high amperages.

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 ²	Ø 22.0	Ø 12.0	68.0 mm	145.0599
Recess (-2.0 mm) ³	Ø 22.0	Ø 12.0	70.0 mm	145.0600
Stick-out (+3.0 mm) ⁴	Ø 22.0	Ø 12.0	65.0 mm	145.0601
Flush ²	Ø 22.0	Ø 14.0	68.0 mm	145.0618
Stick-out (+3.0 mm) ⁴	Ø 22.0	Ø 14.0	65.0 mm	145.0619

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

² Flush: Contact tip flush

³ Recess: Contact tip recessed

⁴ Stick-out: Contact tip protruding

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

ROBO WH A500



Torch necks

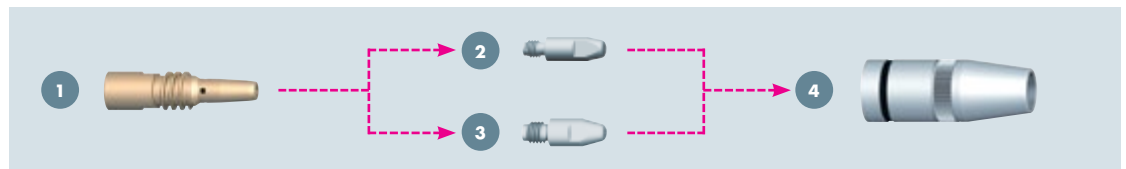
Features	Part-No.		
	0°	22°	45°
Standard	962.1504	962.1505	962.1506

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

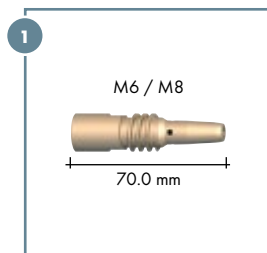
Neck liner

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
		Ø 1.2-1.6	149.0279.5
Aluminium	0° / 22° / 45°	Ø 0.8-1.0	149.0278.5
		Ø 1.2-1.6	149.0279.5

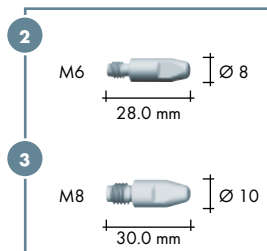
Wear parts for ROBO WH A500



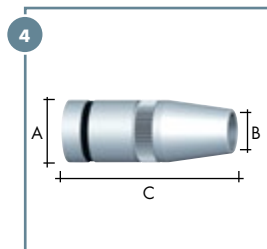
1 Contact tip holder (5 pcs.)



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 ¹	142.0169.5

¹ 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 ²	Ø 28.0	Ø 14.0	75.0 mm	145.0586
Recess (-2.0 mm) ³	Ø 28.0	Ø 14.0	77.0 mm	145.0587
Stick-out (+3.0 mm) ⁴	Ø 28.0	Ø 14.0	72.0 mm	145.0588
Flush ²	Ø 28.0	Ø 16.0	75.0 mm	145.0583
Recess (-2.0 mm) ³	Ø 28.0	Ø 16.0	77.0 mm	145.0584
Stick-out (+3.0 mm) ⁴	Ø 28.0	Ø 16.0	72.0 mm	145.0585

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

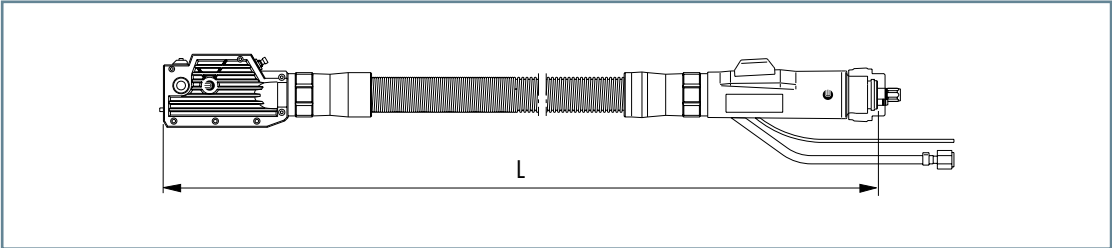
² Flush: Contact tip flush

³ Recess: Contact tip recessed

⁴ Stick-out: Contact tip protruding

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

Cable assembly and connection ty- pes



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 connection¹

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

¹ Liners for other connection types are available on request.
² 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.
³ 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.
⁴ Including 1x collet
⁵ For individual production including 2x collets

Accessories



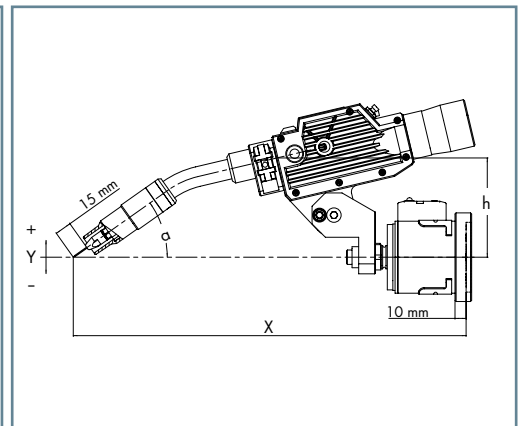
Alignment jig for torch type	Torch geometry	Part-No.
ROBO WH A	0°/22°/45°	837.0591

"ROBO WH & WH-PP" air cooled Holder & TCP Geometries

Torch holder for ROBO WH and WH-PP

in connection with CAT2 cpl.

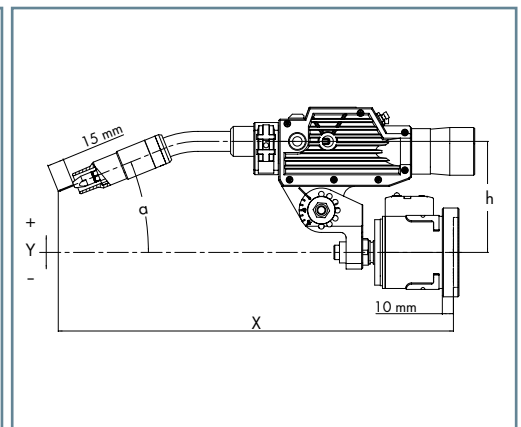
Torch type	Torch geometry	X	Y	h	α	Part-No.
ROBO	0°	407	0	83	20°	960.0026
WH A 360	22°	391	0	92	33°	960.0026
	35°	376	0	97	39°	960.0026
	45°	363	0	101	43°	960.0026
ROBO	0°	407	0	83	20°	960.0026
WH A 500	22°	391	0	92	33°	960.0026
	45°	363	0	101	43°	960.0026



Segment holder for ROBO WH and WH-PP¹

in connection with CAT2

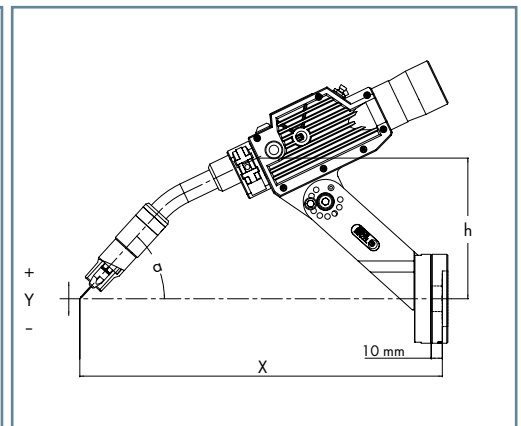
Torch type	Torch geometry	X	Y	h	α	Part-No.
ROBO	0°	402	100	100	0°	780.0146
WH A 360	22°	393	50	100	22°	780.0146
	35°	379	20	100	35°	780.0146
	45°	362	-6	100	45°	780.0146
ROBO	0°	402	100	100	0°	780.0146
WH A 500	22°	393	50	100	22°	780.0146
	45°	362	-6	100	45°	780.0146



RTM holder for ROBO WH and WH-PP¹

for robots with collision software

Torch type	Torch geometry	X	Y	h	α	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.

¹ Holder adjustable in 15° steps.

MIG/MAG welding torch system

"ROBO WH & WH-PP" liquid cooled



Quick adaptation to changing welding tasks ...

The liquid 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 takes place outside of 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
- Liquid cooled up to 600 A

Degree of automation:

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

Typical areas of application:

- 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 CAT2
 - 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 CAT2
 - Fixed bracket RTM

up to
550 A



* 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)

"ROBO WH & WH-PP" liquid cooled

System Overview & Technical Data

Figure 1:
Quick change system

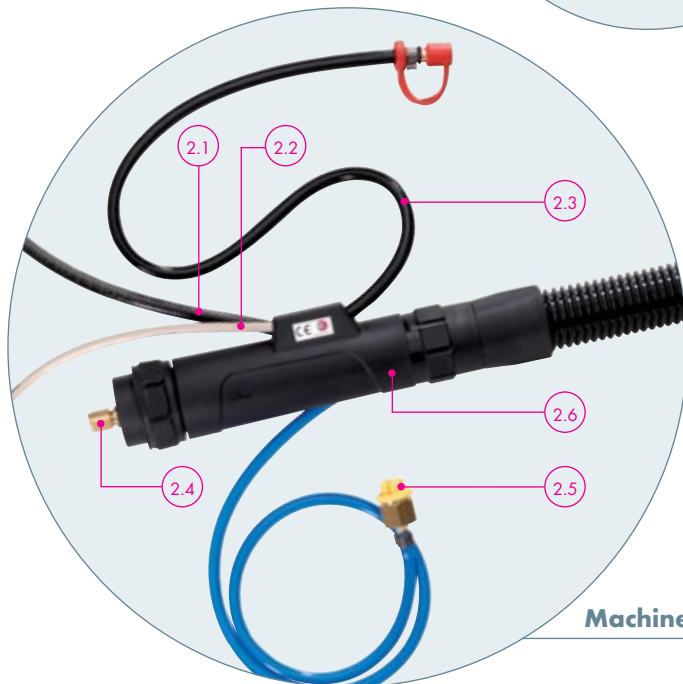
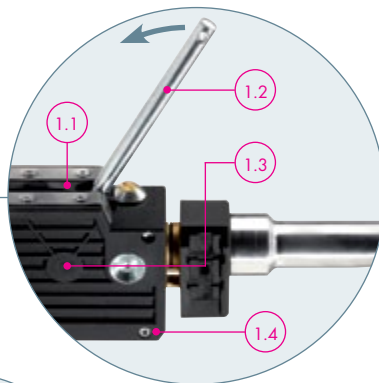


Figure 2:
Machine connection

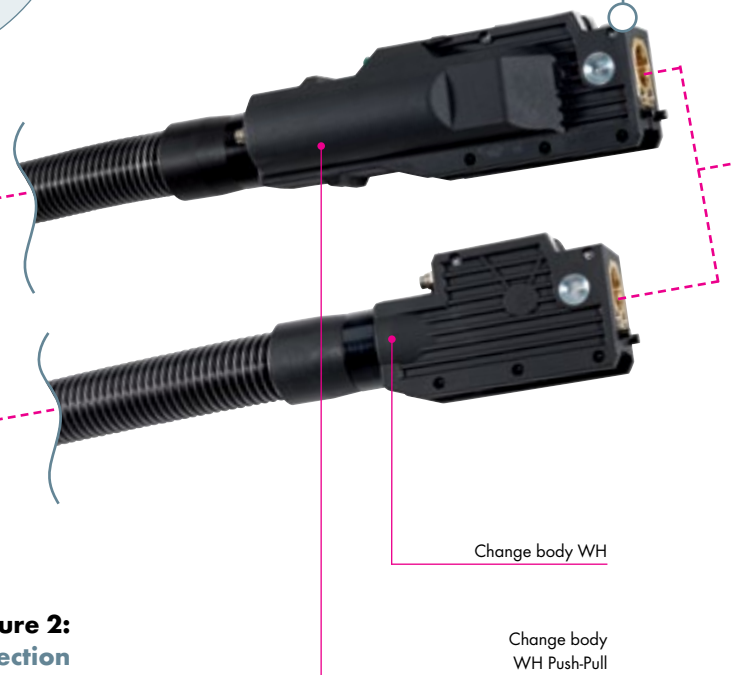


Figure 1:
Quick change system

- 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 brake¹)

Figure 2:
Machine connection

- 2.1 Coolant feed hose with closure
- 2.2 High-grade control cable with strain relief
- 2.3 Coolant return hose with closure
- 2.4 Machine connection available for all standard wire feeds
- 2.5 Airblast hose with blanking plug
- 2.6 Sturdy casing with bend-protection spring

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

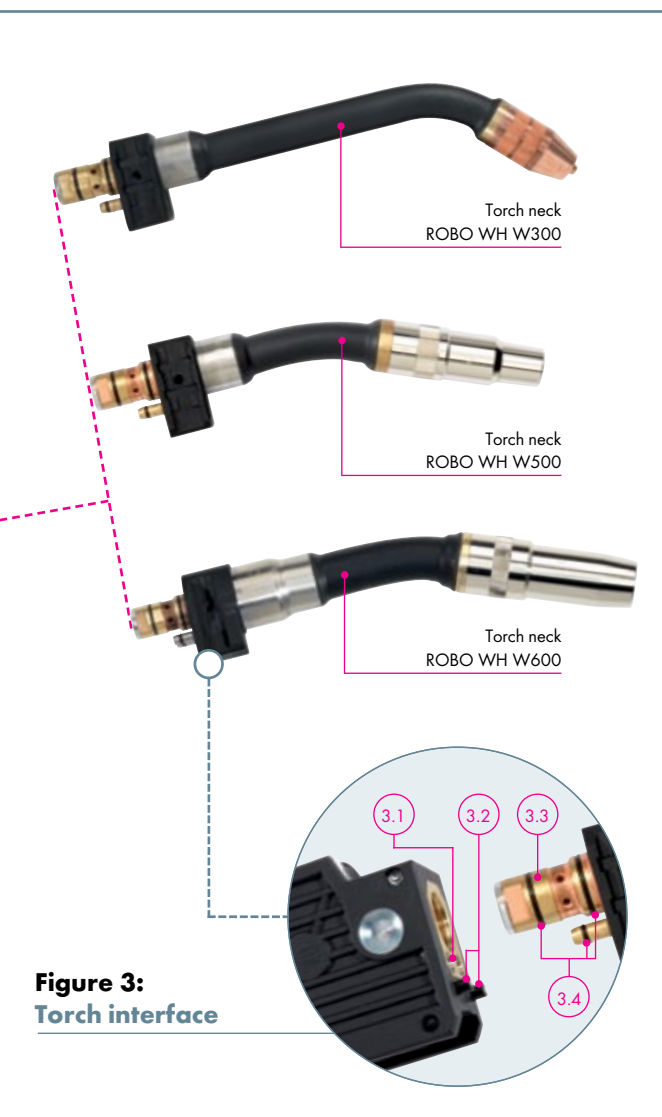
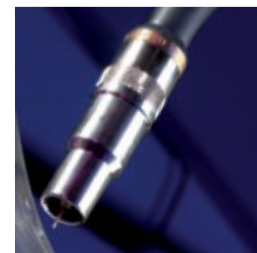


Figure 3:
Torch interface

Figure 3:
Torch interface

- 3.1 Non-return valves for leak-free torch neck replacement
- 3.2 Contacts for optional gas nozzle sensor¹
- 3.3 Compact and space-saving interface
- 3.4 O-rings ensure a coolant and gas-tight connection



Technical data (EN 60 974-7):

ROBO WH W300

Type of cooling:	liquid cooled
Rating:	330 A CO ₂ 300 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 – 1.2 mm
Torch geometries:	45°

ROBO WH W500

Type of cooling:	liquid cooled
Rating:	550 A CO ₂ 500 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 – 1.6 mm
Torch geometries:	0°/22°/35°/45°

ROBO WH W600

Type of cooling:	liquid cooled
Rating:	600 A CO ₂ 550 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	max. 1.6 mm
Torch geometries:	0°/22°/35°/45°

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” liquid cooled Torch Necks & Wear Parts



Torch neck

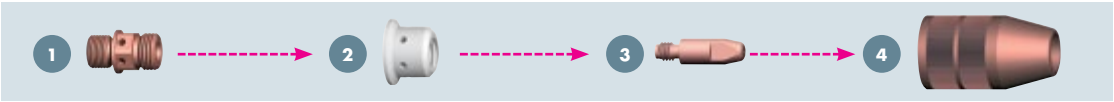
Features	Part-No.
Standard	45° 962.1889.1

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

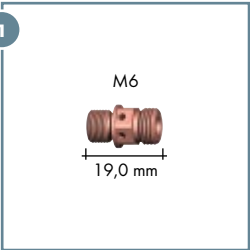
Neck liner

for	Wire-Ø	Part-No.
Steel	Ø 0.8 – 1.2	149.0040.5
Aluminium	Ø 0.8 – 1.2	149.0014.5

Wear parts for ROBO WH W300

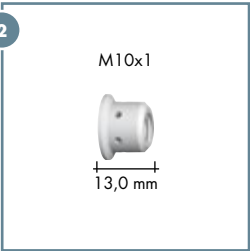


1 Contact tip holder
(10 pcs.)



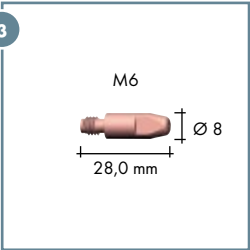
Type	Part-No.
M6 Copper ¹	785.5052
¹ Recommended for high amperages.	

2 Gas diffuser
(10 pcs.)



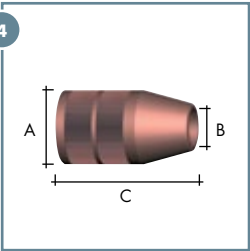
Type	Part-No.
Standard	962.0657
High temperature resistant (ceramic)	962.1341

3 Contact tip
(10 pcs.)



Type	Wire-Ø	Part-No.
CuCrZr	Ø 0.8	140.0054
	Ø 0.9	140.0172
	Ø 1.0	140.0245
	Ø 1.2	140.0382

4 Gas nozzle
(10 pcs.)



Type conical	Ø A	Ø B	Length C	Part-No.
Recess (-1.0 mm) ²	Ø 25.0	Ø 13.0	48.5 mm	145.0564
Stick-out (+3.0 mm) ³	Ø 25.0	Ø 13.0	44.5 mm	145.0495
Stick-out (+3.0 mm) ³	Ø 25.0	Ø 15.5	44.5 mm	145.0494

² Recess: Contact tip recessed
³ Stick-out: Contact tip protruding

"ROBO WH & WH-PP" liquid cooled Torch Necks & Wear Parts

ROBO WH W500



Torch neck

Features	Part-No.			
	0°	22°	35°	45°
Standard	962.1550.1	962.1549.1	962.1551.1	962.1532.1
with gas nozzle sensor*	962.1595.1	962.1596.1	962.1597.1	962.1598.1

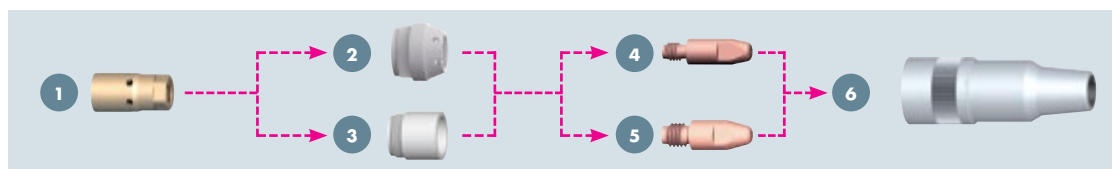
Wear parts and fittings are not included in the scope of delivery! Please order these separately and according to the application!

* Gas nozzle sensor connection for tactile seam location via gas nozzle

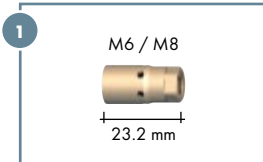
Neck liner

Torch geometry	Wire-Ø	Part-No.	
		for steel	for aluminium
0° / 22°	Ø 0.8–1.0	–	149.0230.5
	Ø 1.0–1.2	149.0226.5	149.0232.5
	Ø 1.4–1.6	149.0228.5	–
35° / 45°	Ø 0.8–1.0	–	149.0231.5
	Ø 1.0–1.2	149.0227.5	149.0233.5
	Ø 1.4–1.6	149.0229.5	–

Wear parts for ROBO WH W500



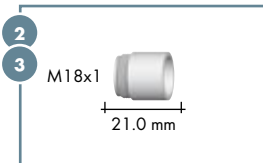
1 Contact tip holder (10 pcs.)



Type	Part-No.
M6 Copper ¹	142.0133.10
M6 Brass	142.0216.10
M8 Copper ¹	142.0151.10
M8 Brass	142.0117.10

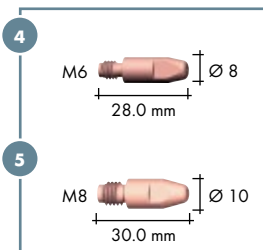
¹ Recommended for high amperages.

2 Gas diffuser 3 Nozzle insulator (10 pcs.)



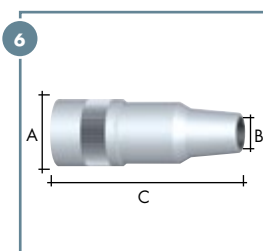
Type	Part-No.
Gas diffuser, standard (not ill.)	943.0284
Nozzle insulator, standard	146.0054
Nozzle insulator, standard/short	146.0064
Nozzle insulator, resistant to high temperatures	146.0059.10

4 Contact tip M6 5 Contact tip M8 (10 pcs.)



Type	Wire-Ø	Part-No.	
		M6	M8
CuCrZr	Ø 0.8	140.0054	140.0117
	Ø 0.9	140.0172	140.0217
	Ø 1.0	140.0245	140.0316
	Ø 1.2	140.0382	140.0445
	Ø 1.4	–	140.0536
	Ø 1.6	–	140.0590

6 Gas nozzle (10 pcs.)



Type bottle form	Ø A	Ø B	Length C	Part-No.
Recess (–2.6 mm) ²	Ø 27.0	Ø 13.0	77.0 mm	145.0556.10
Recess (–1.1 mm) ²	Ø 27.0	Ø 13.0	75.5 mm	145.0479.10
Recess (–2.6 mm) ²	Ø 27.0	Ø 15.5	77.0 mm	145.0480.10
Recess (–1.1 mm) ²	Ø 27.0	Ø 15.5	75.5 mm	145.0544.10
Stick-out (+2.4 mm) ³	Ø 27.0	Ø 15.5	72.0 mm	145.0466.10

Type conical	Ø A	Ø B	Length C	Part-No.
Recess (–1.1 mm) ²	Ø 27.0	Ø 15.5	75.5 mm	145.0553.10
Stick-out (+2.4 mm) ³	Ø 27.0	Ø 15.5	72.5 mm	145.0568.10

² Recess: Contact tip recessed

³ Stick-out: Contact tip protruding

“ROBO WH & WH-PP” liquid cooled Torch Necks & Wear Parts

ROBO WH W600



Torch neck

Features	Part-No.			
	0°	22°	35°	45°
Standard	962.1745.1	962.1746.1	962.1747.1	962.1748.1
with gas nozzle sensor*	962.1769.1	962.1770.1	962.1771.1	962.1772.1

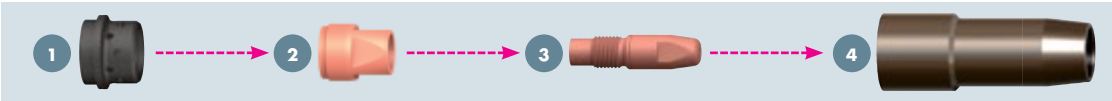
Wear parts and fittings are not included in the scope of delivery! Please order these separately and according to the application!

* Gas nozzle sensor connection for tactile seam location via gas nozzle

Neck-liner

for	Wire-Ø	Part-No.
Steel	Ø 1.0-1.2	149.0270.5
	Ø 1.4-1.6	149.0271.5
Aluminium	Ø 1.2-1.6	149.0272.5

Wear parts for ROBO WH W600

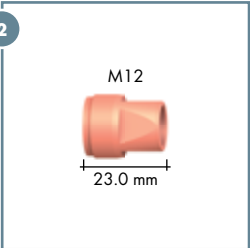


1 Gas diffuser (10 pcs.)



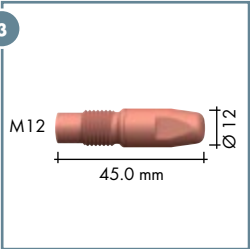
Type	Part-No.
Standard	146.0079.10

2 Contact tip holder (10 pcs.)



Type	Part-No.
M12	142.0214.10

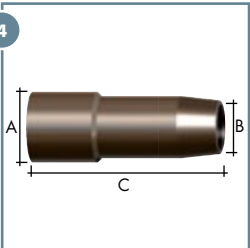
3 Contact tip (10 pcs.)



Type	Wire-Ø	Part-No.
CuCrZr	Ø 1.2	140.1563.10
	Ø 1.4	140.1564.10
	Ø 1.6	140.1565.10
HDS**	Ø 1.2	147.6563.10
	Ø 1.4	147.6564.10
	Ø 1.6	147.6565.10

**HDS = Heavy Duty Silver Contact Tips

4 Gas nozzle (5 pcs.)



Type conical	Ø A	Ø B	Length C	Part-No.
Flush ¹	34.0	21.5	92.0 mm	145.0686.5
Stick-Out (+ 6.0 mm) ²	34.0	21.5	86.0 mm	145.0687.5
Recess (- 3.0 mm) ³	34.0	21.5	95.0 mm	145.0688.5
Flush ¹	34.0	18.0	92.0 mm	145.0689.5

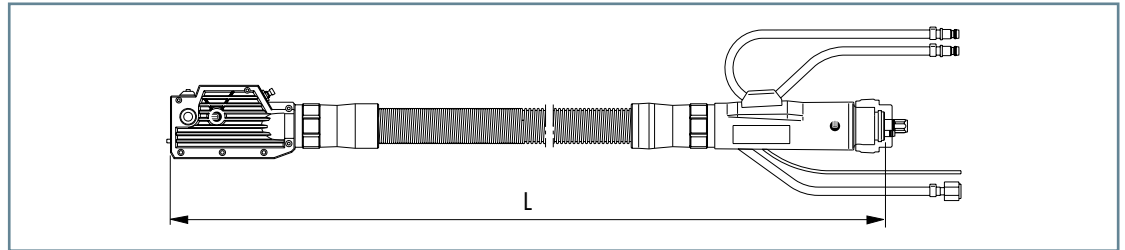
¹ Flush: Contact tip flush

² Stick-out: Contact tip protruding

³ Recess: Contact tip recessed

"ROBO WH & WH-PP" liquid cooled Cable Assemblies & Accessories

Cable assemblies and connection ty- pes



Cable assemblies "WH" cpl.

with connection type	Length	Part-No.
ABICOR BINZEL®	1.05 m	965.2001
Euro central connection	1.15 m	965.2002
	1.25 m	965.2003
	1.45 m	965.2004
	1.65 m	965.2005
	2.15 m	965.2006
	2.65 m	965.2007
	3.15 m	965.2008

The red steel liner 0.8 – 1.2 mm is included in the scope of delivery. Please order other versions separately.

*The control cable is not configured at the machine end. Power source specific versions of the motor-gear combination (24 V / 42 V / 32 V) as well as lengths greater than 3.2 m on request.

Cable assemblies "WH-PP" cpl.

(Gear ratio i=17.1:1 / Motor 42 V DC*)

with connection type	Length	Part-No.
ABICOR BINZEL®	1.10 m	965.4014
Euro central connection	1.50 m	965.4015
	1.70 m	965.4016
	2.20 m	965.4001
	2.70 m	965.4002
	3.20 m	965.4003

Liners for Euro central connection¹

Type	Wire-Ø	up to L=1.65 m	up to L=3.20 m	up to L=5.00 m
Liner steel red ²	Ø 0.8 – 1.2	124.0176	124.0111	124.0113
Liner steel BSLblue ²	Ø 1.4 – 1.6	124.0136	124.0108	124.0110
PA-liner ³	Ø 0.8 – 1.2	128.0039	128.0012	128.0016
	Ø 1.4 – 1.6	128.0040	128.0020	128.0030

¹ Liners for other connection types are available on request

² Red and BSLblue 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 tube, improving the welding process. The insulated steel liner must always be used for power sources with optimal welding wire sensors. Liners for aluminium and special wires on request.

³ PA-liners for the use of aluminium and special wires. Good gliding properties and abrasion resistance. Application temperature limit 150 °C.

Drive rolls for WH-PP

Wire-Ø	Aluminium (U-groove)	Universal (V-groove)
Ø 0.8	961.0017	961.0269
Ø 0.9	961.0056	961.0270
Ø 1.0	961.0018	961.0227
Ø 1.2	961.0019	961.0228
Ø 1.4	–	961.0279
Ø 1.6	961.0020	961.0267

Accessories



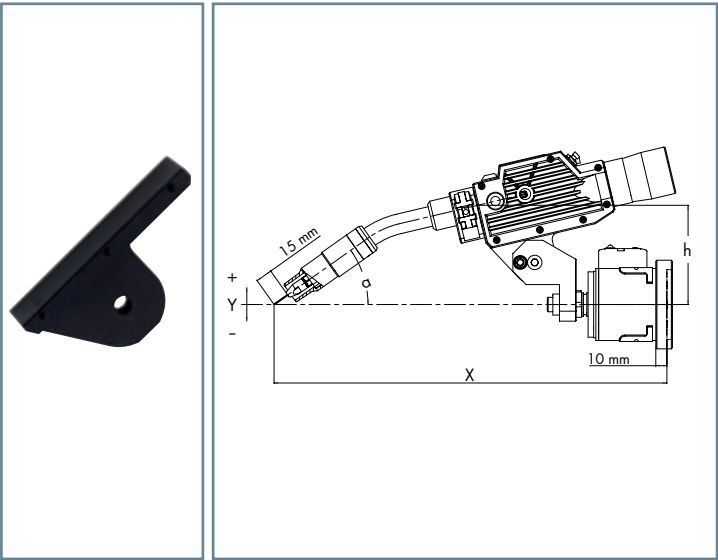
Alignment jig

for torch type	Torch geometry	Part-No.
ROBO WH W300	45°	837.0814.1
ROBO WH W500	0° / 22° / 45°	837.0692.1
ROBO WH W500	35°	837.0688
ROBO WH W600	0° / 22° / 45°	837.0846.1
ROBO WH W600	35°	837.0835.1

“ROBO WH & WH-PP” liquid cooled Holder & TCP Geometries

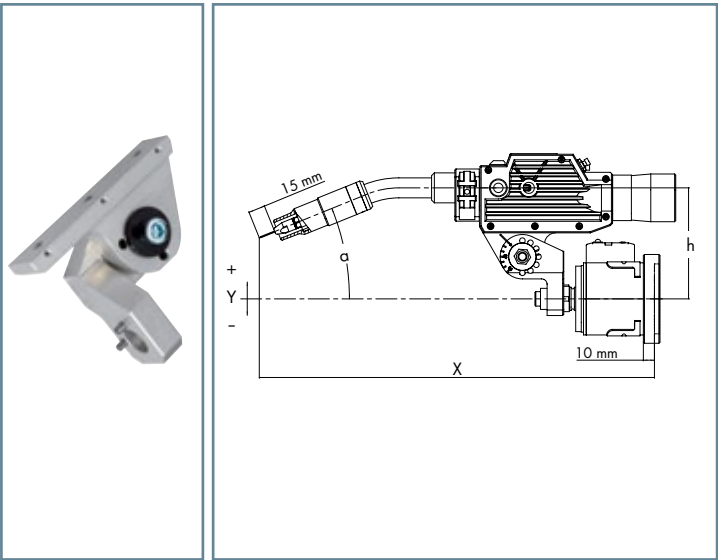
Torch holder for ROBO WH and WH-PP
in connection with CAT2 cpl.

Torch type	Torch geometry	X	Y	h	α	Part-No.
(mm)						
ROBO WH W300	45°	396	0	95	52°	960.0026
ROBO WH W500	0°	370	0	80	23°	960.0026
ROBO WH W600	22°	354	0	89	35°	960.0026
	35°	362	0	96	41°	960.0026
	45°	349	0	99	46°	960.0026
ROBO WH W300	0°	426	0	84	19°	960.0026
ROBO WH W600	22°	410	0	93	32°	960.0026
	35°	395	0	98	38°	960.0026
	45°	382	0	102	43°	960.0026



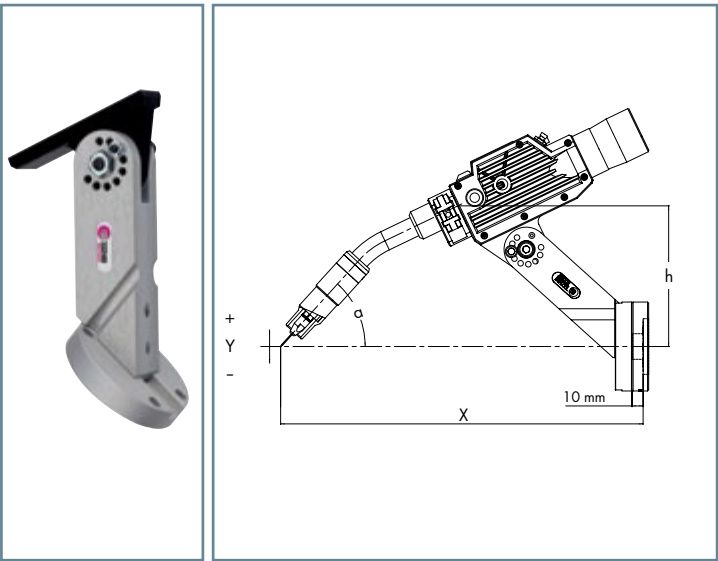
Segment holder for ROBO WH and WH-PP¹
in connection with CAT2²

Torch type	Torch geometry	X	Y	h	α	Part-No.
(mm)						
ROBO WH W300	45°	399	35	100	45°	780.0146
ROBO WH W500	0°	365	100	100	0°	780.0146
ROBO WH W600	22°	356	55	100	22°	780.0146
	35°	364	26	100	35°	780.0146
	45°	350	3	100	45°	780.0146
ROBO WH W300	0°	422	100	100	0°	780.0146
ROBO WH W600	22°	412	49	100	22°	780.0146
	35°	397	15	100	35°	780.0146
	45°	380	-11	100	45°	780.0146



RTM holder for ROBO WH and WH-PP¹
for robots with collision software

Torch type	Torch geometry	X	Y	h	α	Part-No.
(mm)						
ROBO WH W300	45°	356	-36	127	71°	780.0360
ROBO WH W500	0°	354	37	127	26°	780.0360
ROBO WH W600	22°	327	0	127	48°	780.0360
	35°	321	-30	127	61°	780.0360
	45°	288	-44	127	71°	780.0360
ROBO WH W300	0°	405	12	127	26°	780.0360
ROBO WH W600	22°	374	-30	127	48°	780.0360
	35°	346	-54	127	61°	780.0360
	45°	319	-70	127	71°	780.0360



Further holders are available on request.
¹ Holder adjustable in 15° steps.
² In connection with CAT2-HL please use segment holder 780.0307.

MIG/MAG Welding Torch System

"ABIROB® W" liquid cooled



Robust & flexible ...

Pure ROBO power! Liquid-cooled ABIROB® W welding torches have power ratings up to 600 A and are equipped with state-of-the-art cable assembly and interface technology. The modular design of these rugged yet flexible torches allows a fast change of torch neck and cable assembly components without the TCP (Tool Centre Point) changing – thus avoiding additional programming effort.

High repetitive accuracy and a continuously precise welding process are ensured through the innovative but "simple" torch construction.

Advantages that speak for themselves:

- Robust torch necks with screw-on gas nozzle and replaceable contact tip holder guarantee high durability and a long service life cycle
- The innovative interface design ensures the fast change of torch neck and reproducible positioning of cable assembly and torch neck
- Hybrid cable assembly technology for optimized wire feeding, prevention of electrolytic corrosion and improved coolant flow
- Special torch neck geometries are available for joining components even with limited accessibility

Degree of automation:

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

Application areas:

- Commercial vehicle construction
- Earth-moving equipment
- Rail vehicle construction
- Shipbuilding
- 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 CAT2 HL
 - 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 CAT2 HL
 - Fixed bracket RTM

up to
600 A



* 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)

"ABIROB® W" liquid cooled

System Overview & Technical Data

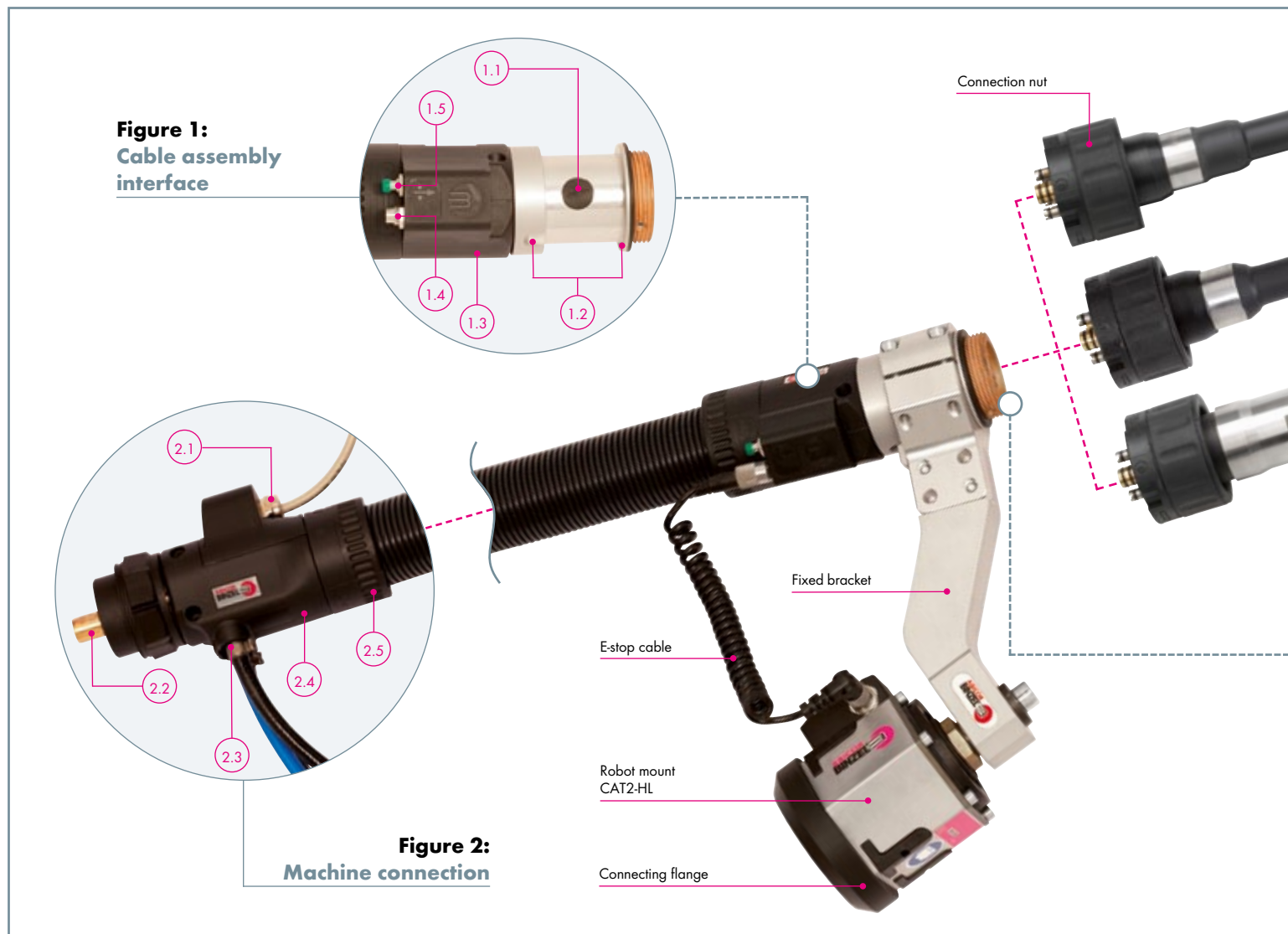


Figure 1:
Cable assembly interface

- 1.1 Connection for the optional wire clamp function (wire brake)¹
- 1.2 INTERLOCK connection – reproducible positioning of the cable assembly in three dimensions
- 1.3 Short housing for best accessibility
- 1.4 Connection CAT2-HL
- 1.5 Wire feed button

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 Straight discharge for coolant and airblast hose – no bending or twisting of the hoses
- 2.4 Short connection housing – high flexibility of the cable assembly
- 2.5 Rotatable outer hose connection – minimized torsion stress

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

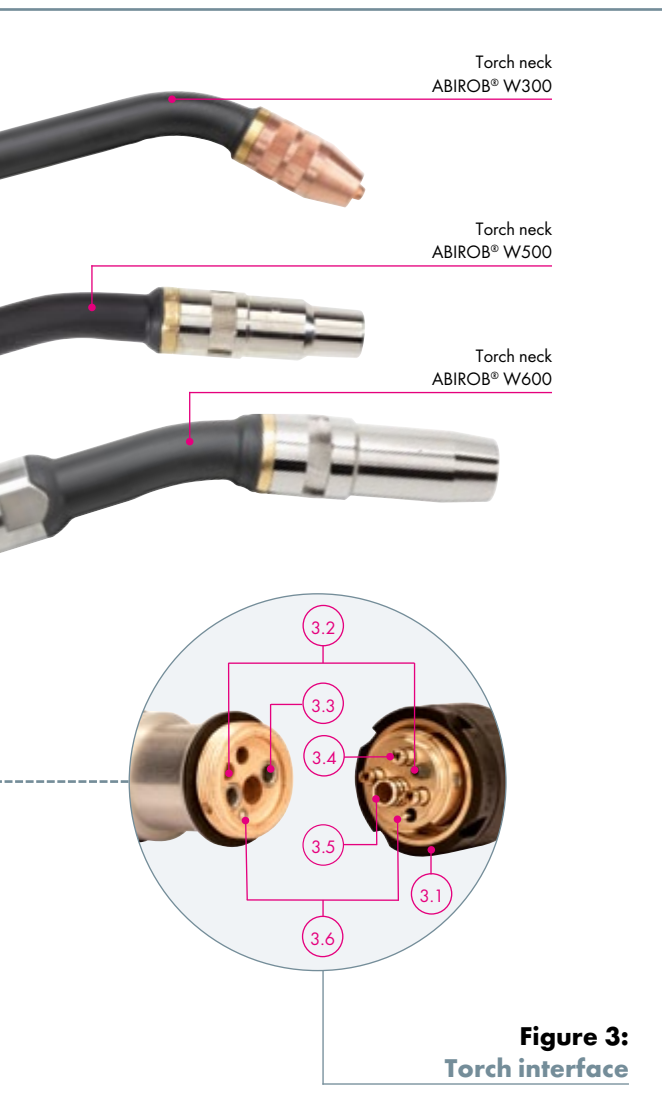
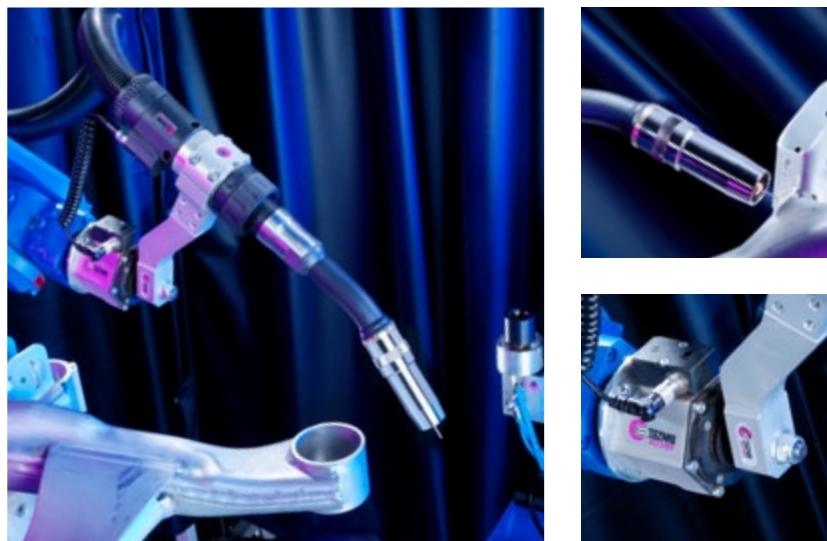


Figure 3:
Torch interface

Figure 3:
Torch interface

- 3.1 High-grip connection nut – for a fast and tight connection
- 3.2 Diamond head pin connection – for reproducible torch neck change
- 3.3 Flow check valves – no leaking of the coolant during the torch neck change
- 3.4 Gas and airblast – best gas shielding
- 3.5 One piece liner (neck liner on request)
- 3.6 Gas nozzle sensor¹



Technical data (EN 60 974-7):

ABIROB® W300

Type of cooling:	liquid cooled
Rating:	330 A CO ₂ 300 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 – 1.2 mm
Torch geometries:	22°/45°

ABIROB® W500 / W500 Wire brake

Type of cooling:	liquid cooled
Rating:	550 A CO ₂ 500 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 – 1.6 mm
Torch geometries:	0°/22°/35°/45°

ABIROB® W600 / W600 Wire brake

Type of cooling:	liquid cooled
Rating:	600 A CO ₂ 550 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 – 1.6 mm
Torch geometries:	0°/22°/35°/45°

Note on the technical data:

Rating data was 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.

"ABIROB® W" liquid cooled

Torch Necks & Wear Parts

ABIROB® W300



Torch neck

Features	Part-No.	
	22°	45°
Standard	782.0110.1	782.0111.1
with gas nozzle sensor*	782.0014.1	782.0015.1

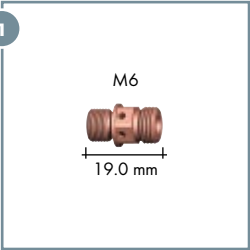
Wear parts and fittings are not included in the scope of delivery! Please order these separately and according to the application!

*Gas nozzle sensor connection for tactile seam location via gas nozzle

Wear parts for ABIROB® W300

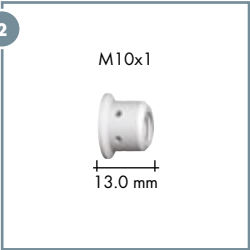


1 Contact tip holder (10 pcs.)



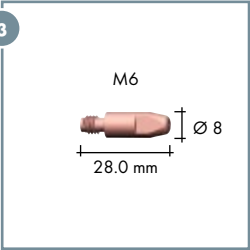
Type	Part-No.
M6 Copper	785.5052

2 Gas diffuser (10 pcs.)



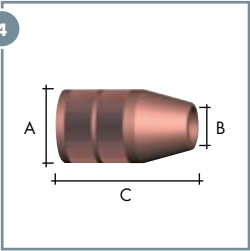
Type	Part-No.
Standard	962.0657
High temperature resistant (ceramic)	962.1341

3 Contact tip (10 pcs.)



Type	Wire-Ø	Part-No.
CuCrZr	Ø 0.8	140.0054
	Ø 0.9	140.0172
	Ø 1.0	140.0245
	Ø 1.2	140.0382

4 Gas nozzle (10 pcs.)



Type conical	Ø A	Ø B	Length C	Part-No.
Recess (- 1.0 mm) ²	Ø 25.0	Ø 13.0	48.5 mm	145.0564
Stick-out (+3.0 mm) ³	Ø 25.0	Ø 13.0	44.5 mm	145.0495
Stick-out (+3.0 mm) ³	Ø 25.0	Ø 15.5	44.5 mm	145.0494

² Recess: Contact tip recessed

³ Stick-out: Contact tip protruding

"ABIROB® W" liquid cooled Torch Necks & Wear Parts

ABIROB® W500



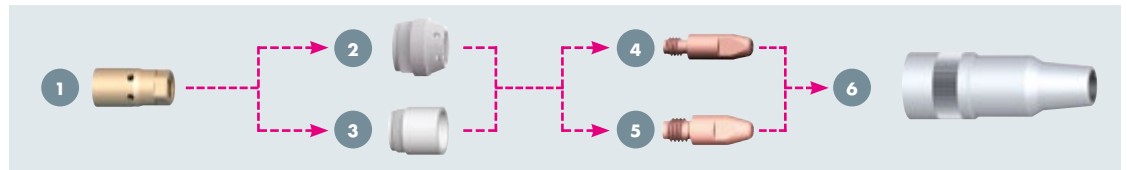
Torch neck

Features	Part-No.			
	0°	22°	35°	45°
Standard	782.0080.1	782.0076.1	782.0077.1	782.0078.1
Standard (+100)	782.0106.1	782.0107.1	782.0108.1	782.0109.1
with gas nozzle sensor*	782.0079.1	782.0003.1	782.0004.1	782.0005.1
with gas nozzle sensor* (+100)	782.0088.1	782.0089.1	782.0090.1	782.0091.1

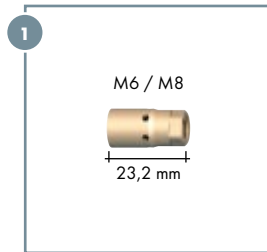
Wear parts and fittings are not included in the scope of delivery! Please order these separately and according to the application!

* Gas nozzle sensor connection for tactile seam location via gas nozzle

Wear parts for ABIROB® W500



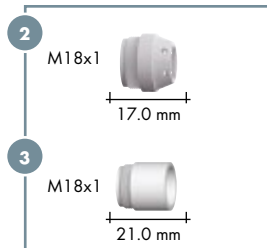
1 Contact tip holder (10 pcs.)



Type	Part-No.
M6 Copper ¹	142.0133.10
M6 Brass	142.0216.10
M8 Copper ¹	142.0151.10
M8 Brass	142.0117.10

¹ Recommended for high amperages.

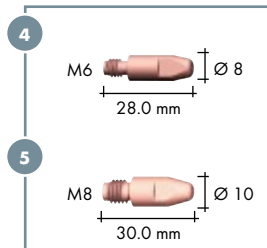
2 Gas diffuser 3 Nozzle insulator (10 pcs.)



Type	Part-No.
Gas diffuser standard	943.0284
Nozzle insulator standard	146.0054
Nozzle insulator standard short (L=11.4mm) ²	146.0064
Nozzle insulator, resistant to high temperatures	146.0059.10

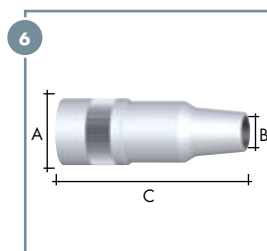
² Recommended for applications with galvanized materials in conjunction with gas nozzles 145.0553 and 145.0568.

4 Contact tip M6 5 Contact tip M8 (10 pcs.)



Type	Wire-Ø	Part-No.	
		M6	M8
CuCrZr	Ø 0.8	140.0054	140.0117
	Ø 0.9	140.0172	140.0217
	Ø 1.0	140.0245	140.0316
	Ø 1.2	140.0382	140.0445
	Ø 1.4	-	140.0536
	Ø 1.6	-	140.0590

6 Gas nozzle (10 pcs.)



Type bottle form	Ø A	Ø B	Length C	Part-No.
Recess (-2.6 mm) ³	Ø 27.0	Ø 13.0	77.0 mm	145.0556.10
Recess (-1.1 mm) ³	Ø 27.0	Ø 13.0	75.5 mm	145.0479.10
Recess (-2.6 mm) ³	Ø 27.0	Ø 15.5	77.0 mm	145.0480.10
Recess (-1.1 mm) ³	Ø 27.0	Ø 15.5	75.5 mm	145.0544.10
Stick-out (+2.4 mm) ⁴	Ø 27.0	Ø 15.5	72.0 mm	145.0466.10

Type conical	Ø A	Ø B	Length C	Part-No.
Recess (-1.1 mm) ³	Ø 27.0	Ø 15.5	75.5 mm	145.0553.10
Stick-out (+2.4 mm) ⁴	Ø 27.0	Ø 15.5	72.5 mm	145.0568.10

³ Recess: Contact tip recessed

⁴ Stick-out: Contact tip protruding

"ABIROB® W" liquid cooled

Torch Necks & Wear Parts

ABIROB® W600

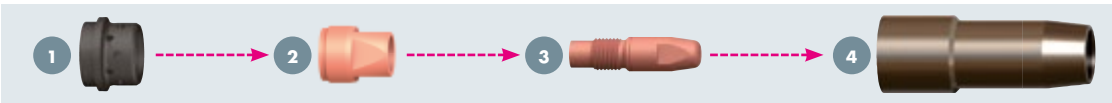


Torch neck

Features	Part-No.			
	0°	22°	35°	45°
Standard	782.0190.1	782.0191.1	782.0192.1	782.0193.1
Standard (+100)	782.0219.1	782.0220.1	782.0221.1	782.0222.1
with gas nozzle sensor*	782.0213.1	782.0214.1	782.0215.1	782.0216.1
with gas nozzle sensor* (+100)	782.0233.1	782.0234.1	782.0235.1	782.0236.1

Wear parts and fittings are not included in the scope of delivery! Please order these separately and according to the application!
 *Gas nozzle sensor connection for tactile seam location via gas nozzle

Wear parts for ABIROB® W600

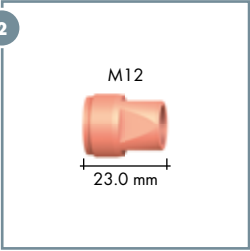


1 Gas diffuser (10 pcs.)



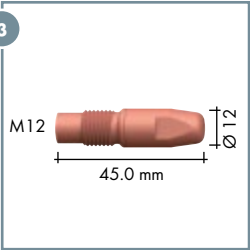
Type	Part-No.
Standard	146.0079.10

2 Contact tip holder (10 pcs.)



Type	Part-No.
M12	142.0214.10

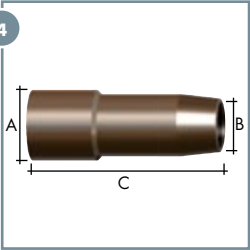
3 Contact tip (10 pcs.)



Type	Wire-Ø	Part-No.
CuCrZr	Ø 1.2	140.1563.10
	Ø 1.4	140.1564.10
	Ø 1.6	140.1565.10
HDS silver plated**	Ø 1.2	147.6563.10
	Ø 1.4	147.6564.10
	Ø 1.6	147.6565.10

**HDS = Heavy Duty Silver Contact Tips

4 Gas nozzle (5 pcs.)

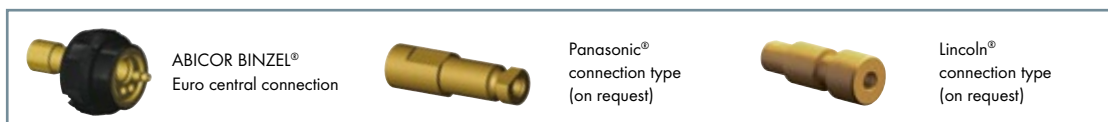
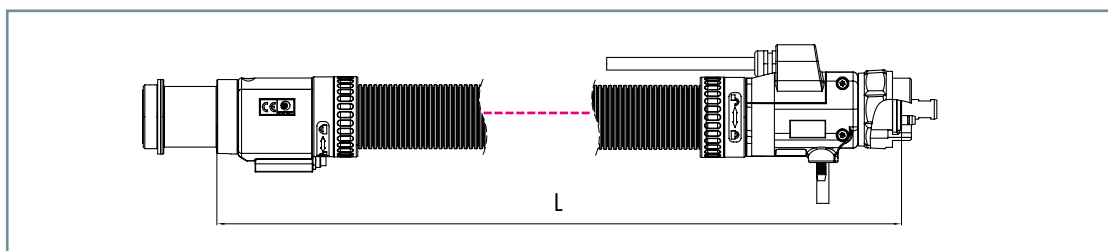


Type conical	Ø A	Ø B	Length C	Part-No.
Flush ¹	34.0	21.5	92.0 mm	145.0686.5
Stick-Out (+ 6.0 mm) ²	34.0	21.5	86.0 mm	145.0687.5
Recess (- 3.0 mm) ³	34.0	21.5	95.0 mm	145.0688.5
Flush ¹	34.0	18.0	92.0 mm	145.0689.5

¹ Flush: Contact tip flush
² Stick-out: Contact tip protruding
³ Recess: Contact tip recessed

"ABIROB® W" liquid cooled Cable Assemblies & Accessoires

Cable assemblies and connection types



Cable assemblies ABIROB® W5H

(Recommended for amperages up to 400 A and cable assembly lengths up to 2.50 m.)

with connection type	Length	Part-No.
ABICOR BINZEL®	1.10 m	782.1014.1
Euro central connection	1.35 m	782.1018.1
	1.50 m	782.1020.1

Other lengths are available on request.

The control cable is not pre-wired at the machine end. Power source specific types on request.

The steel liner 0.8–1.2 mm is included in the scope of delivery. Please order other versions separately.

Cable assemblies ABIROB® W7F

(Recommended for amperages over 400 A.)

with connection type	Length	Part-No.
ABICOR BINZEL®	1.10 m	782.1103.1
Euro central connection	1.35 m	782.1049.1
	1.50 m	782.1099.1

Liners for Euro central connection¹

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

¹ Liners for other connection types are available on request.

² Steel liners (insulated) for the use of non-alloyed and low-alloyed steels. The completely insulated wire feed prevents damage caused by "micro-arcing" on the wire. This allows optimal current transfer inside the contact tube, improving the welding process. The insulated steel liner must always be used for power sources with optimal welding wire sensors.

³ 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.

⁴ Including 1x collet

⁵ For individual production including 2x collets

Accessories



Description	Part-No.
1 Thread cutter M10x1 (for inner tube)	191.0085
2 Alignment tool (to align inner tube with outer tube)	191.0090.1
3 Pin wrench (to unscrew the connection)	191.0115

Alignment jig

for torch neck	torch geometry	Part-No.
ABIROB® W300	22°/45°	837.0484.1
ABIROB® W500	0°/22°/35°/45°	837.0589.1
ABIROB® W500 (+100 mm)	0°/22°/35°/45°	837.0735.1
ABIROB® W600	0°/22°/45°	837.0860.1
ABIROB® W600 (+100 mm)	0°/22°/45°	837.0868.1
ABIROB® W600 / W600 (+100 mm)	35°	837.0870.1

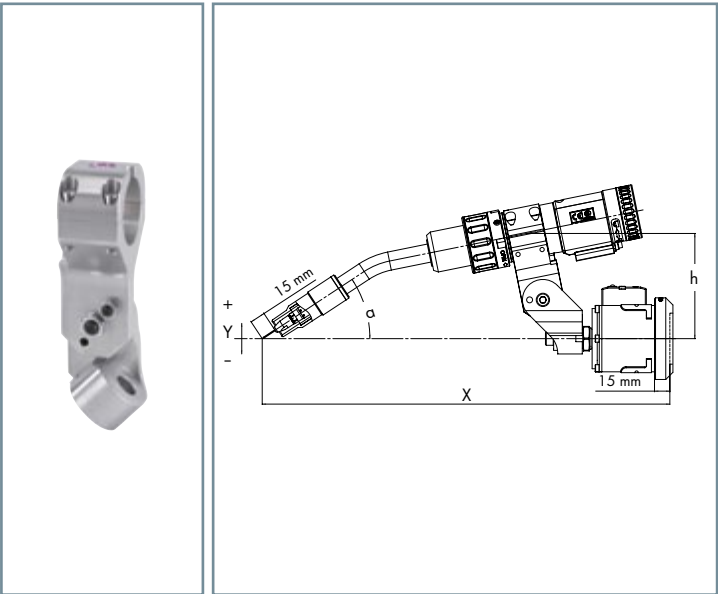


"ABIROB® W" liquid cooled Holder & TCP Geometries

CAT2-HL holder for ABIROB® W

in connection with CAT2-HL cpl.

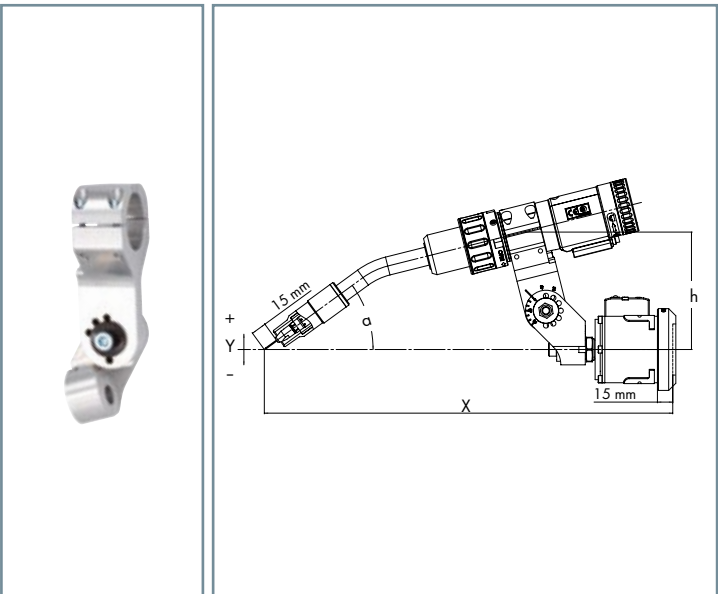
Torch type	Torch geometry	X	Y	h	α	Part-No.
(mm)						
ABIROB® W300	22°	437	0	102	36°	780.0430.1
	45°	416	0	104	53°	780.0430.1
ABIROB® W500	22°	399	0	103	33°	780.0430.1
	35°	383	0	104	40°	780.0430.1
	45°	370	0	105	45°	780.0430.1
ABIROB® W500 (+100 mm)	22°	499	0	104	30°	780.0430.1
	35°	484	0	105	39°	780.0430.1
	45°	470	0	105	45°	780.0430.1
ABIROB® W600	22°	440	0	104	32°	780.0430.1
	35°	424	0	105	39°	780.0430.1
	45°	410	0	105	44°	780.0430.1
ABIROB® W600 (+100 mm)	22°	540	0	104	29°	780.0430.1
	35°	525	0	105	38°	780.0430.1
	45°	510	0	105	44°	780.0430.1



Segment holder für ABIROB® W¹

in connection with CAT2-HL

Torch type	Torch geometry	X	Y	h	α	Part-No.
(mm)						
ABIROB® W300	22°	440	+10	115	36°	780.0433.1
	45°	413	-19	115	59°	780.0433.1
ABIROB® W500	22°	400	0	115	36°	780.0433.1
	35°	383	0	117	43°	780.0433.1
	45°	368	0	118	48°	780.0433.1
ABIROB® W500 (+100 mm)	22°	497	-24	115	36°	780.0433.1
	35°	475	-51	115	49°	780.0433.1
	45°	453	-70	115	59°	780.0433.1
ABIROB® W600	22°	439	-11	115	36°	780.0433.1
	35°	416	-40	115	49°	780.0433.1
	45°	393	-61	115	59°	780.0433.1
ABIROB® W600 (+100 mm)	22°	536	-36	115	36°	780.0433.1
	35°	513	-64	115	49°	780.0433.1
	45°	490	-86	115	49°	780.0433.1



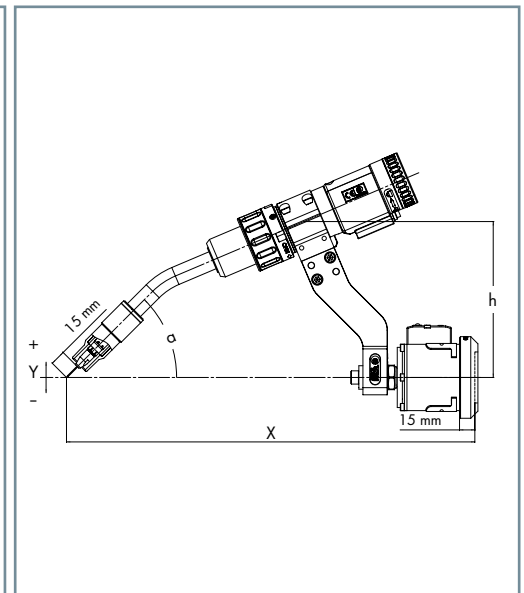
Further holders are available on request.
¹ Holder adjustable in 15° steps

"ABIROB® W" liquid cooled Holder & TCP Geometries

Fixed bracket for ABIROB® W

in connection with CAT2-HL

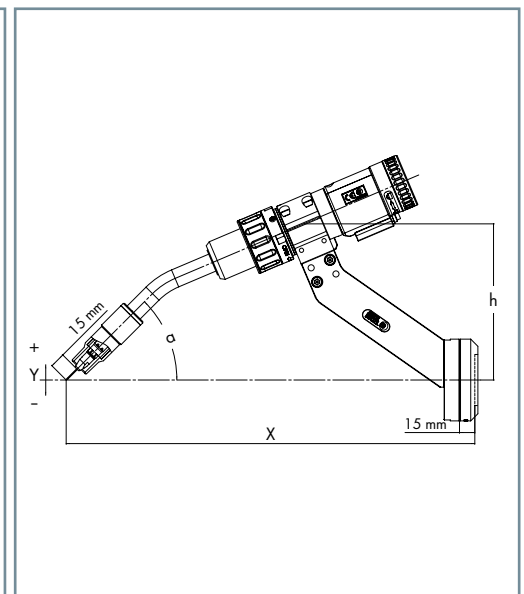
Torch type	Torch geometry	X	Y	h	α	Part-No.
		(mm)				
ABIROB®	22°	400	0	149	45°	780.0444.1
W300	45°	400	0	90	50°	780.0446.1
ABIROB®	22°	400	0	153	45°	780.0414.1
W500	35°	400	0	125	45°	780.0420.1
	45°	400	0	126	50°	780.0422.1
ABIROB®	22°	500	0	192	45°	780.0438.1
W500	35°	500	0	142	45°	780.0440.1
(+100 mm)	45°	500	0	134	50°	780.0442.1
ABIROB®	22°	400	0	170	45°	780.0781.1
W600	35°	400	0	136	45°	780.0782.1
	45°	400	0	135	50°	780.0784.1
ABIROB®	22°	500	0	209	45°	780.0785.1
W600	35°	500	0	153	45°	780.0786.1
(+100 mm)	45°	500	0	144	50°	780.0788.1



RTM holder for ABIROB® W

for robots with collision software

Torch type	Torch geometry	X	Y	h	α	Part-No.
		(mm)				
ABIROB®	22°	400	0	149	45°	780.0459.1
W300	45°	400	0	90	50°	780.0461.1
ABIROB®	22°	400	0	153	45°	780.0449.1
W500	35°	400	0	125	45°	780.0451.1
	45°	400	0	105	50°	780.0453.1
ABIROB®	22°	500	0	192	45°	780.0455.1
W500	35°	500	0	142	45°	780.0457.1
(+100 mm)	45°	500	0	105	45°	780.0453.1
ABIROB®	22°	400	0	170	45°	780.0789.1
W600	35°	400	0	136	45°	780.0790.1
	45°	400	0	135	50°	780.0792.1
ABIROB®	22°	500	0	198	45°	780.0793.1
W600	35°	500	0	153	45°	780.0794.1
(+100 mm)	45°	500	0	144	50°	780.0796.1



Further holders are available on request.

"ABIROB® W" liquid cooled Wire Brake Function



For tactile component search using the established ABIROB® W cable assembly, cable assemblies can now come with an optional wire clamp function to fix the wire. This function enables locking the wire in the cable assembly via a pneumatically operated piston that pushes the wire against an abutment. This ensures that the wire remains in position during sensing.

Arguments that speak for themselves:

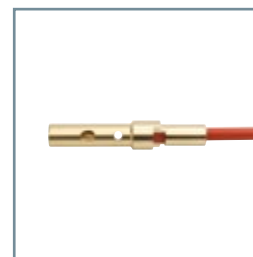
- No displacement of wire through torch movement or contact with materials
- Guaranteed "Stick-Out" during tactile sensing
- Nearly every variation of the ABIROB® W cable assembly can be factory fitted with a wire brake function

Torch necks for wire brake

Type	Part-No.			
	0°	22°	35°	45°
ABIROB® W300	-	782.0161.1	-	782.0162.1
ABIROB® W500	782.0320.1	782.0167.1	782.0168.1	782.0169.1
ABIROB® W500 (+100)	782.0177.1	782.0178.1	782.0179.1	782.0180.1
ABIROB® W600	782.0239.1	782.0240.1	782.0241.1	782.0242.1
ABIROB® W500 (+100)	782.0245.1	782.0246.1	782.0247.1	782.0248.1

Neck-Liners for wire brake

for torch neck	for	Wire-Ø	Length	Part-No.
ABIROB® W300	steel	1.0 - 1.2	255 mm	149.0344.5
ABIROB® W500	steel	1.0 - 1.2	222 mm	149.0287.5
		1.4 - 1.6	222 mm	149.0289.5
ABIROB® W600	steel	1.0 - 1.2	248 mm	149.0350.5
		1.0 - 1.2	348 mm	on request
		1.4 - 1.6	248 mm	149.0333.5
		1.4 - 1.6	348 mm	149.0334.5



Cable assemblies with wire brake function

Cable assemblies ABIROB® W5H

(Recommended for amperages up to 400 A and cable assembly lengths up to 2.50 m.)

with connection type	Length	Part-No.
ABICOR BINZEL®	1.10 m	782.1096.1
Euro central connection	1.35 m	782.1097.1
	1.50 m	782.1098.1

Other lengths are available on request.

The control cable is not pre-wired at the machine end. Power source specific types on request.

The steel liner 0.8 - 1.2 mm is included in the scope of delivery. Please order other versions separately.

Cable assemblies ABIROB® W7F

(Recommended for amperages over 400 A.)

with connection type	Length	Part-No.
ABICOR BINZEL®	1.10 m	782.1100
Euro central connection	1.35 m	782.1101
	1.50 m	782.1102

Holder

Type	Part-No.
Clamp holder Wire brake cpl.	780.0479.1

MIG/MAG Welding Torch System

"ABIROB® A ECO" air cooled



Simple & effective ...

The ABIROB® A ECO product line – groundbreaking in its design, trend-setting in standardisation – guarantees consistent precision and an economic welding process thanks to its robust construction and simple handling.

Thanks to the innovative interlock mechanism, the torch system allows a simple and fast change of cable assemblies while the TCP remains the same.

Advantages that speak for themselves:

- Simple and compact modular design – easy to service
- Slim design – optimum accessibility
- High stability and reproducibility – maximum TCP safety even in the event of a "crash"
- Innovative interlock system – straightforward and quick change of the cable assembly with constant TCP

Degree of automation:

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

Application areas:

- Automotive construction
- Automotive suppliers (Tier 1, Tier 2)
- Bicycle industry
- Container construction
- Aviation- and aerospace industry

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 CAT2
 - 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 CAT2
 - Fixed bracket RTM

up to
500 A



* 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)

"ABIROB® A ECO" air cooled

System Overview & Technical Data

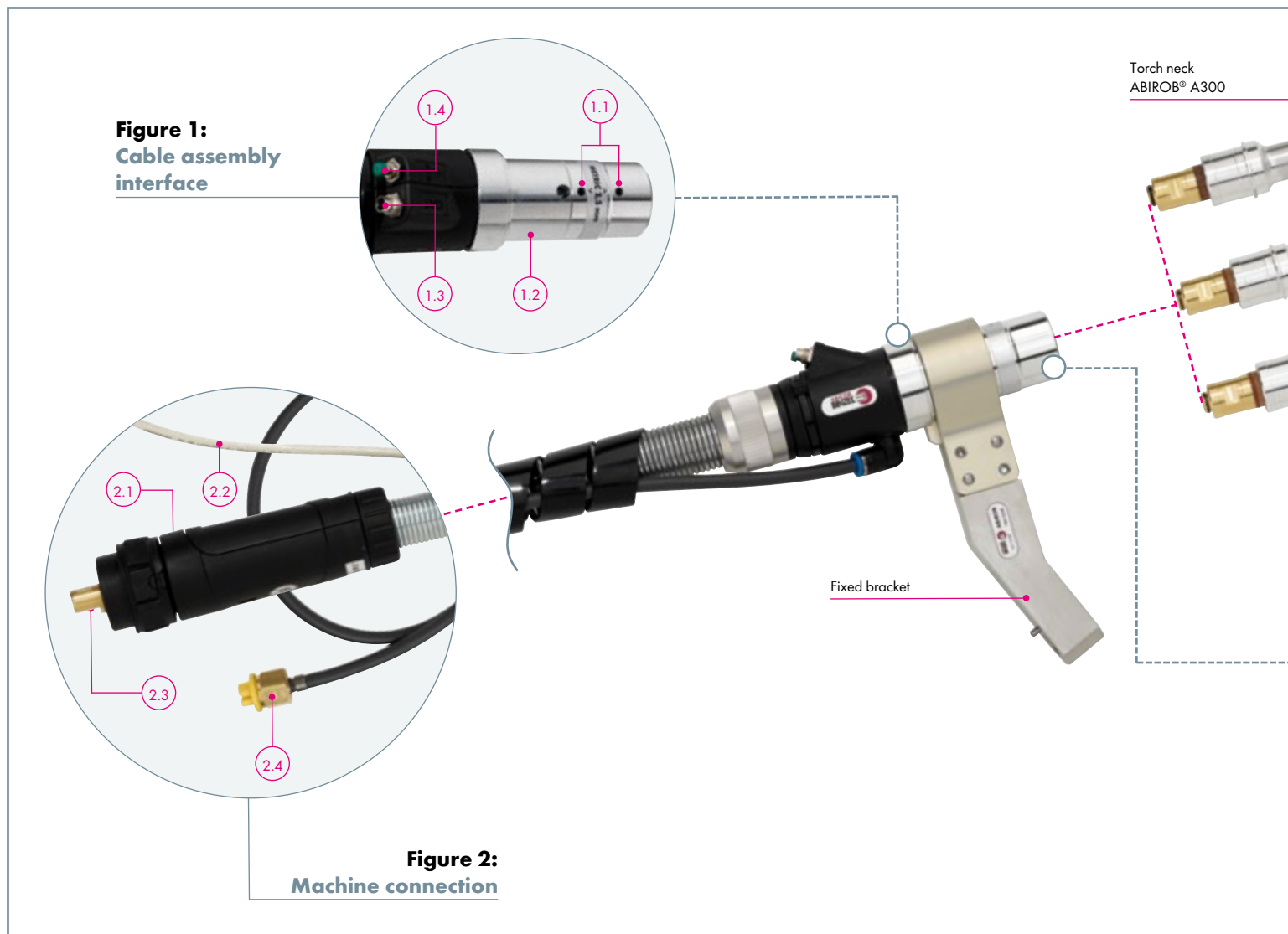


Figure 1:
Cable assembly interface

- 1.1 Clamping screws for safe clamping of the torch neck, covered by spatter protection ring
- 1.2 Solid housing for torch neck attachment using the tried-and-trusted INTERLOCK system for reproducible processes
- 1.3 CAT2 connection
- 1.4 Wire feed button

Figure 2:
Machine connection

- 2.1 Sturdy bend-resistant casing with strain relief spring
- 2.2 High-quality control cable with strain relief (control cable connector on request)
- 2.3 Machine connection available for all standard wire feeders
- 2.4 External connection for airblast function with blanking plug

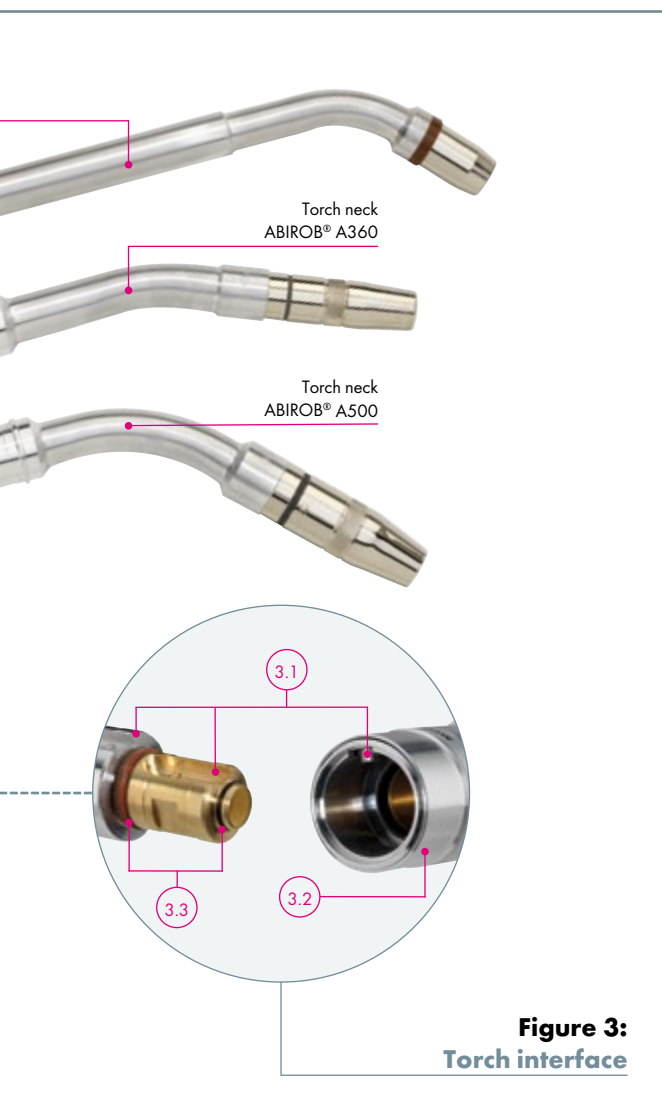
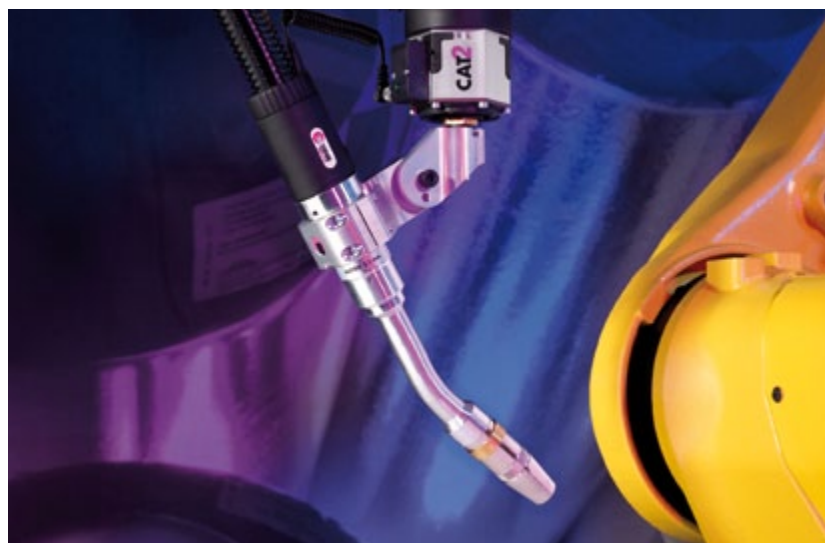


Figure 3:
Torch interface

Figure 3:
Torch interface

- 3.1 Fast torch neck change thanks to double groove guidance
- 3.2 Rotatable ring for optimum protection of the screw openings
- 3.3 O-rings ensure a gas-tight connection



Technical data (EN 60 974-7):

ABIROB® A300

Type of cooling:	air cooled
Rating:	300 A CO ₂ 250 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 - 1.4 mm
Torch geometries:	45°

ABIROB® A360

Type of cooling:	air cooled
Rating:	360 A CO ₂ 290 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 - 1.4 mm
Torch geometries:	0°/22°/35°/45°

ABIROB® A500

Type of cooling:	air cooled
Rating:	500 A CO ₂ 400 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 - 1.6 mm
Torch geometries:	0°/22°/35°/45°

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.

“ABIROB® A ECO” air cooled

Torch Necks & Wear Parts

ABIROB® A300

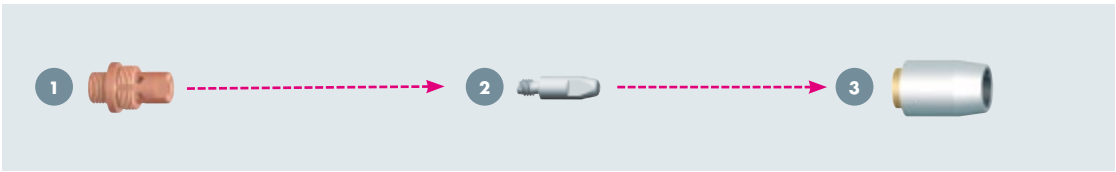


Torch necks

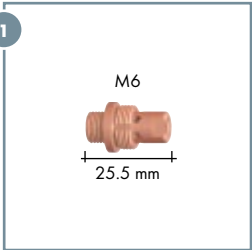
Features	Part-No.
Standard	980.1146.1

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

Wear parts for ABIROB® A300



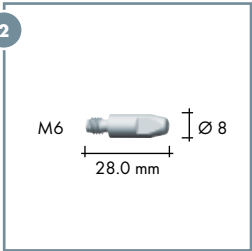
1 Contact tip holder (10 pcs.)



Type	Part-No.
M6 Copper ¹	142.0171

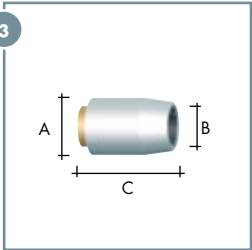
¹ Recommended for high amperages.

2 Contact tip M6 (10 pcs.)



Type	Wire-Ø	Part-No.
CuCrZr silver-plated	Ø 0.8	147.0054
	Ø 0.9	147.0172
	Ø 1.0	147.0245
	Ø 1.2	147.0382
	Ø 1.4	147.0519

3 Gas nozzle (10 pcs.)



Type bottle form	Ø A	Ø B	Length C	Part-No.
Flush ²	Ø 22.0	Ø 14.4	32.0 mm	145.0671.5
Stick-out (+3.0 mm) ³	Ø 22.0	Ø 14.4	29.0 mm	145.0677.5

² Flush: Contact tip flush

³ Stick-out: Contact tip protruding

"ABIROB® A ECO" air cooled Torch Necks & Wear Parts

ABIROB® A360

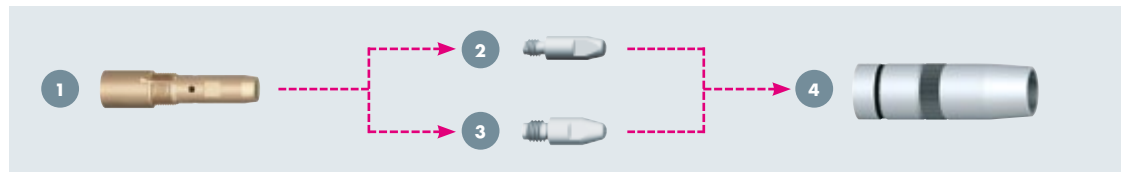


Torch necks

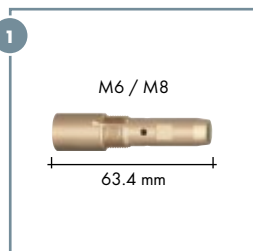
Features	Part-No.			
	0°	22°	35°	45°
Standard	980.1023.1	980.1024.1	980.1025.1	980.1026.1

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

Wear parts for ABIROB® A360



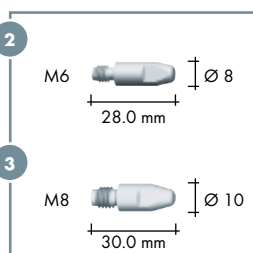
1 Contact tip holder (5 pcs.)



Type	Part-No.
M6 Brass	142.0160.5
M8 Brass	142.0163.5
M6 Copper ¹	142.0196.5
M8 Copper ¹	142.0170.5

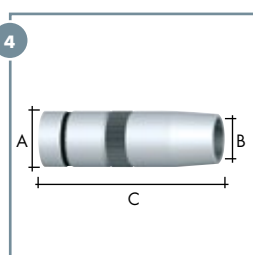
¹ Recommended for high amperages.

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
	Ø 1.4	147.0519	147.0536

4 Gas nozzle (10 pcs.)



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

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

² Flush: Contact tip flush

³ Recess: Contact tip recessed

⁴ Stick-out: Contact tip protruding

"ABIROB® A ECO" air cooled Torch Necks & Wear Parts

ABIROB® A500

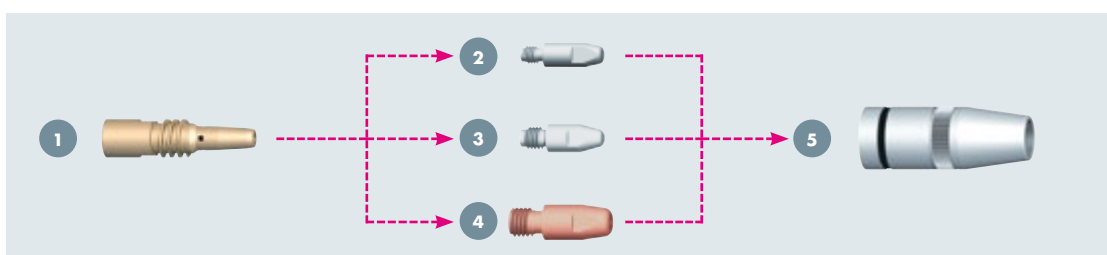


Torch necks

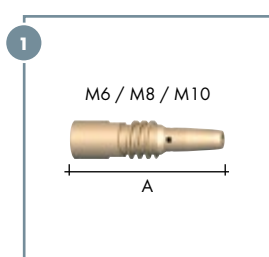
Features	Part-No.			
	0°	22°	35°	45°
Standard	980.1012.1	980.1013.1	980.1014.1	980.1015.1

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

Wear parts for ABIROB® A500



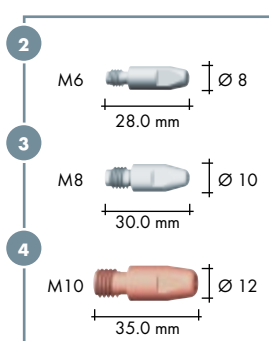
1 Contact tip holder (5 pcs.)



Type	Length A	Part-No.
M6 Brass	70.0 mm	142.0159.5
M8 Brass	70.0 mm	142.0158.5
M8 Copper ¹	70.0 mm	142.0169.5
M10 Copper ¹	67.0 mm	142.0228.5

¹ Recommended for high amperages.

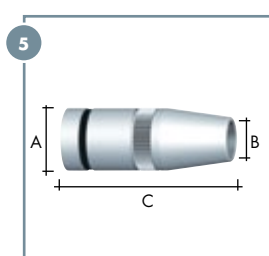
2 Contact tip M6 3 Contact tip M8 4 Contact tip M10 (10 pcs.)



Type	Wire-Ø	M6 ²	Part-No. M8 ²	M10
CuCrZr	Ø 0.8	147.0054	147.0117	-
	Ø 0.9	147.0172	147.0217	-
	Ø 1.0	147.0245	147.0316	140.0348
	Ø 1.2	147.0382	147.0445	140.0481
	Ø 1.4	147.0519	147.0536	140.0547
	Ø 1.6	-	147.0590	140.0616

² silver-plated

5 Gas nozzle (5 pcs.)



Type bottle form	Ø A	Ø B	Length C	Part-No.
Flush ³	Ø 28.0	Ø 14.0	75.0 mm	145.0586
Recess (-2.0 mm) ⁴	Ø 28.0	Ø 14.0	77.0 mm	145.0587
Stick-out (+3.0 mm) ⁵	Ø 28.0	Ø 14.0	72.0 mm	145.0588
Flush ³	Ø 28.0	Ø 16.0	75.0 mm	145.0583
Recess (-2.0 mm) ⁴	Ø 28.0	Ø 16.0	77.0 mm	145.0584
Stick-out (+3.0 mm) ⁵	Ø 28.0	Ø 16.0	72.0 mm	145.0585

Type bottle form	Ø A	Ø B	Length C	Part-No.
Flush ³	Ø 28.0	Ø 13.0	75.0 mm	145.0589
Recess (-2.0 mm) ⁴	Ø 28.0	Ø 13.0	77.0 mm	145.0590
Stick-out (+3.0 mm) ⁵	Ø 28.0	Ø 13.0	72.0 mm	145.0591
Flush ³	Ø 28.0	Ø 16.0	75.0 mm	145.0580
Recess (-2.0 mm) ⁴	Ø 28.0	Ø 16.0	77.0 mm	145.0581
Stick-out (+3.0 mm) ⁵	Ø 28.0	Ø 16.0	72.0 mm	145.0582

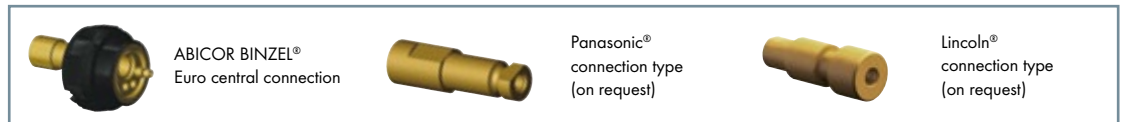
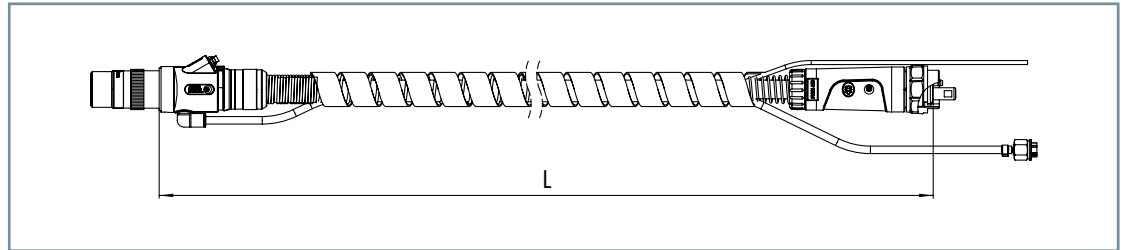
³ Flush: Contact tip flush

⁴ Recess: Contact tip recessed

⁵ Stick-out: Contact tip protruding

"ABIROB® A ECO" air cooled Cable Assemblies & Accessories

Cable assemblies and connection types



Cable assemblies cpl. ABIROB® A ECO

with connection type	Length	Part-No.
ABICOR BINZEL®	1.15 m	980.1066
Euro central connection	1.20 m	980.1067
	1.30 m	980.1068
	1.45 m	980.1069

Cable assemblies cpl. ABIROB® A ECO

with connection type	Length	Part-No.
ABICOR BINZEL®	1.60 m	980.1070
Euro central connection	2.15 m	980.1097
	3.15 m	980.1098

The control cable is not pre-wired at the machine end. Power source specific types on request.

The steel liner Ø 0.8–1.2 mm is included in the scope of delivery. Please order other versions separately.

Liners for Euro central connection¹

Type	Wire-Ø	up to L=1.6 m ³	up to L=3.15 m ³	10.0 m ⁴	Collet
Liner steel ²	Ø 0.8–1.2	124.0145.1	124.0146.1	124.0159.1	131.0012
Liner steel ²	Ø 1.4–1.6	124.0147	124.0148	124.0160	131.0011

¹ Liners for other connection types are available on request.

² 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 tube, improving the welding process. The insulated steel liner must always be used for power sources with optimal welding wire sensors. Liners for aluminium and special wires on request.

³ Including 1x collet

⁴ For individual production including one collet

Accessories



Description	Part-No.
Alignment tool (to align inner tube with outer tube)	191.0090.1
Gas nozzle sensor clip ABIROB® A360 (without figure)	980.1099
Gas nozzle sensor clip ABIROB® A500 (without figure)	980.1100



Alignment jig

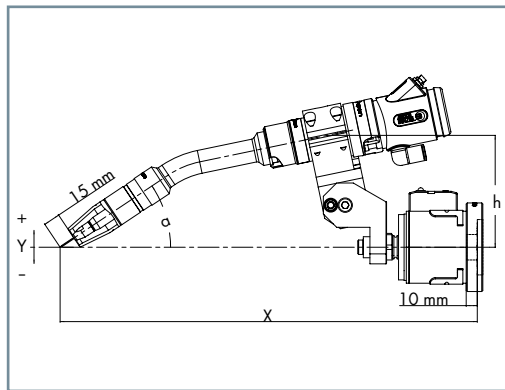
for torch type	Torch geometry	Part-No.
ABIROB® A300	45°	837.0600
ABIROB® A360 / A500	0° / 22° / 45°	837.0500
ABIROB® A360 / A500	35°	837.0514

"ABIROB® A ECO" air cooled Holder & TCP Geometries

Clamp holder for ABIROB® A ECO

in connection with CAT2 cpl.

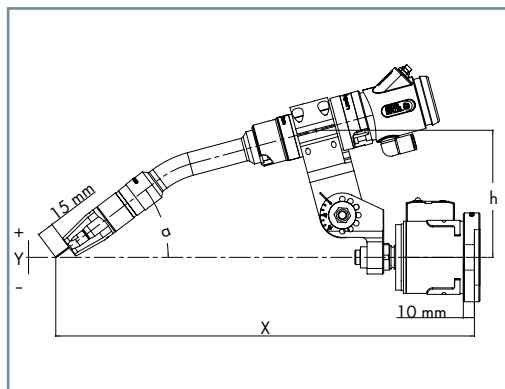
Torch type	Torch geometry	X	Y	h	α	Part-No.
(mm)						
ABIROB® A360	0°	393	0	97	21°	780.0259
	22°	376	0	101	34°	780.0259
	35°	361	0	102	40°	780.0259
	45°	348	0	103	44°	780.0259
ABIROB® A500	0°	393	0	97	21°	780.0259
	22°	376	0	101	34°	780.0259
	35°	361	0	102	40°	780.0259
	45°	348	0	103	44°	780.0259



Segment holder for ABIROB® A ECO¹

in connection with CAT2

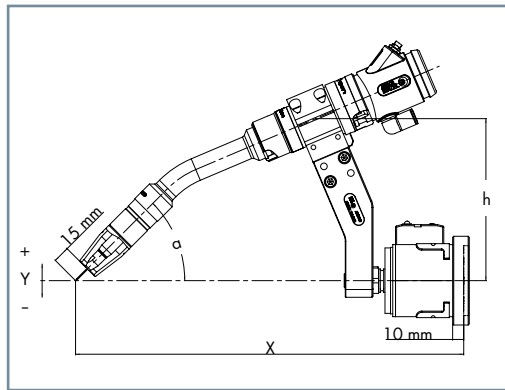
Torch type	Torch geometry	X	Y	h	α	Part-No.
(mm)						
ABIROB® A360	0°	399	46	114	15°	780.0184
	22°	377	0	114	37°	780.0184
	35°	355	-27	114	50°	780.0184
	45°	332	-47	114	60°	780.0184
ABIROB® A500	0°	399	46	114	15°	780.0184
	22°	377	0	114	37°	780.0184
	35°	355	-27	114	50°	780.0184
	45°	332	-47	114	60°	780.0184



Fixed bracket for ABIROB® A ECO

in connection with CAT2

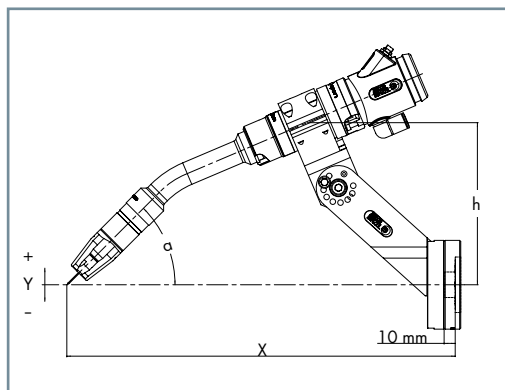
Torch type	Torch geometry	X	Y	h	α	Part-No.
(mm)						
ABIROB® A360	22°	350	0	146	45°	780.0268
	35°	350	0	123	45°	780.0272
	45°	350	0	107	45°	780.0270
ABIROB® A500	22°	350	0	146	45°	780.0268
	35°	350	0	123	45°	780.0272
	45°	350	0	107	45°	780.0270



RTM holder for ABIROB® A ECO²

for robots with collision software

Torch type	Torch geometry	X	Y	h	α	Part-No.
(mm)						
ABIROB® A360	0°	378	42	146	23°	780.0195
	22°	324	0	146	45°	780.0195
	35°	324	-24	146	58°	780.0195
	45°	399	-40	146	68°	780.0195
ABIROB® A500	0°	378	42	146	23°	780.0195
	22°	324	0	146	45°	780.0195
	35°	324	-24	146	58°	780.0195
	45°	399	-40	146	68°	780.0195



Further holders are available on request.

¹ Holder adjustable in 15° steps.

² Holder adjustable in 7.5° steps.

MIG/MAG Welding Torch System

"ABIROB® 350GC" air cooled



Sturdy, durable & economic ...

ABIROB® 350GC – in the typical design of an air cooled CO₂ welding torch – is mainly used for automated welding in the Asian market.

The changeable torch with a high capacity which enables long duty cycles. Its intelligent interface guarantees fast and reproducible maintenance and thus avoids downtimes.

The welding torch system is available for all standard wire feeder connections (ABICOR BINZEL®, MOTOMAN®, PANASONIC®, OTC®).

Advantages that speak for themselves:

- Compatible with Asian CO₂ torches
- Changeable torch neck with intelligent pin fixing reduces line downtimes and costs
- Optimum temperature behaviour guarantees long service life for wear parts
- High-grade cable assemblies guarantee a long service life
- Sturdy torch design provides high crash stability

Degree of automation:

Low

Medium

High

Application areas:

- Automobile construction
- Suppliers (Tier 1, Tier 2)
- Bicycle industry
- Container construction

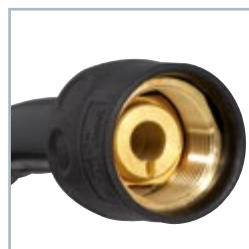
Material:

- Construction steels (coated / non-coated)
- Chrome-nickel steels
- Duplex steels
- Nickel basic materials

Robot interface:

- Conventional robot
(Cable assembly on the outside):
 - Robot mount CAT2
 - Fixed bracket RTM
- Hollow wrist robot
(Cable assembly on the inside):
 - Robot mount iCAT
 - Bracket iSTM (for robots with integrated collision software)
- Hollow wrist robot
(Cable assembly on the outside):
 - Robot mount CAT2
 - Fixed bracket RTM

up to
350 A



* 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)

"ABIROB® 350GC" air cooled

System Overview & Technical Data

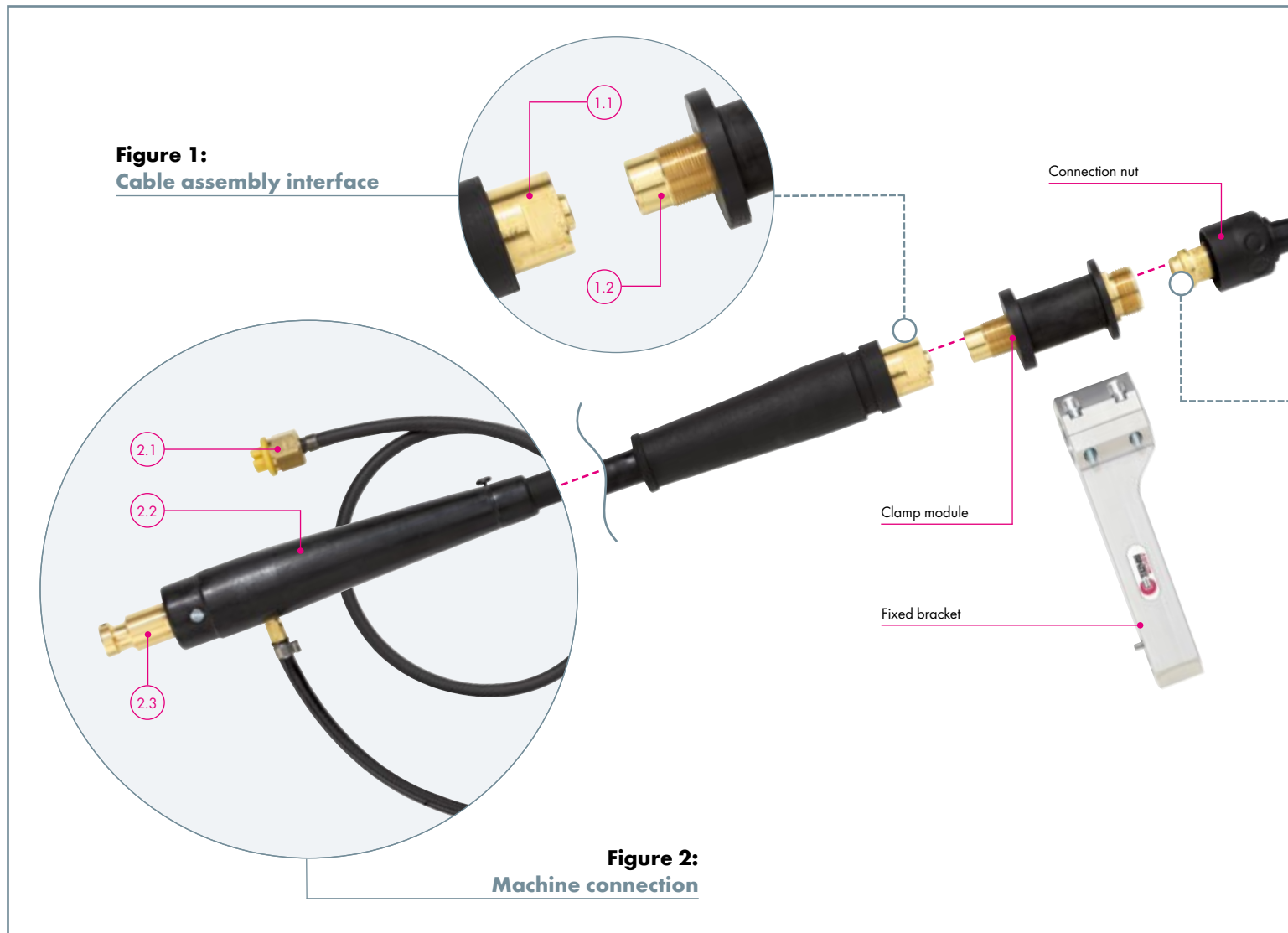


Figure 1:
Cable assembly interface

- 1.1 Straightforward attachment of the cable assembly through connection nut
- 1.2 Clamp module – the holder does not need to be opened for consistent changing of cable assembly and torch neck

Figure 2:
Machine connection

- 2.1 Airblast hose with blanking plug (optional)
- 2.2 Flexible casing for protection in every position
- 2.3 Power connection available for all standard wire feeders

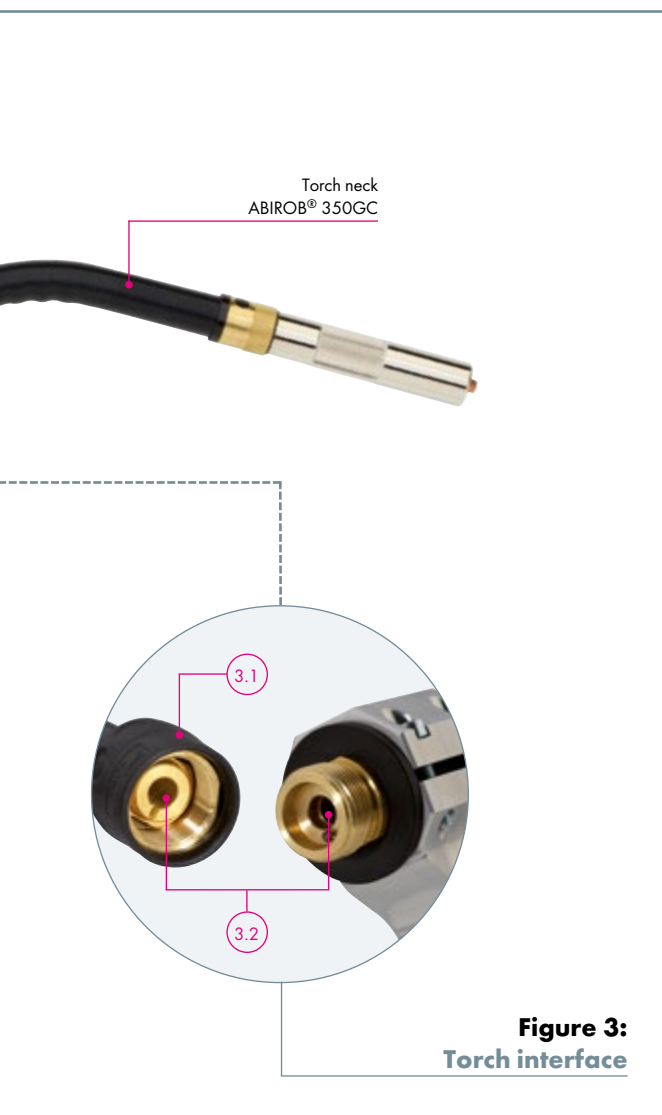


Figure 3:
Torch interface

- 3.1 High-grip connection nut – for a fast and tight connection
- 3.2 Lock pin and groove – for reproducible torch neck changing



Technical data (EN 60 974-7):

ABIROB® 350GC

Type of cooling:	air cooled
Rating:	350 A CO ₂ 300 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 – 1.2 mm
Torch geometries:	30°/35°

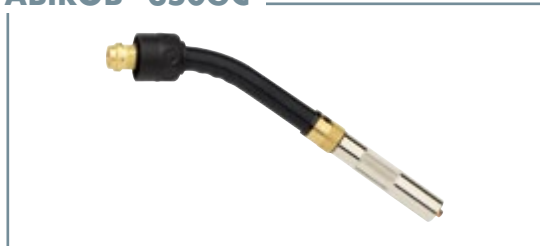
Note on the technical data:

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.

"ABIROB® 350GC" air cooled

Torch Necks & Wear Parts

ABIROB® 350GC



Torch neck

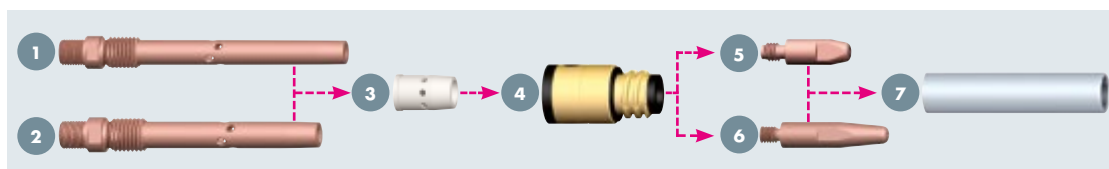
Features	30°	Part-No.	35°
Standard	-		980.0004
Short	980.0027		-
Long	980.0028		-

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

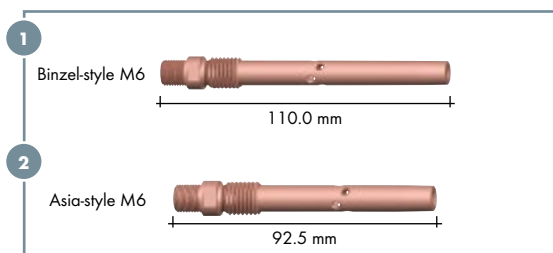
Neck liner

for	for torch geometry	Wire-Ø	Part-No.
Steel	35° Standard	Ø 0.8-1.2	980.0033.5
Steel	30° short	Ø 0.8-1.2	980.0035.5
Steel	30° long	Ø 0.8-1.2	980.0036.5

Wear parts for ABIROB® 350GC

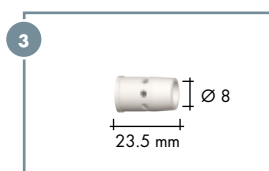


- 1 Binzel-style contact tip holder
- 2 Asia-style contact tip holder (5 pcs.)



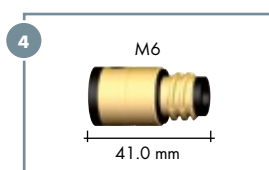
Type	Part-No.
Binzel-style M6 copper	142.0152
Asia-style M6 copper	142.0143.5

- 3 Gas diffuser (10 pcs.)



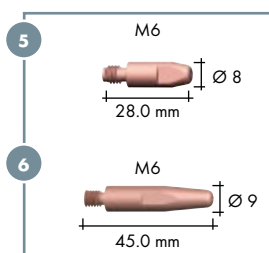
Type	Part-No.
Standard	980.0019

- 4 Gas nozzle holder (10 pcs.)



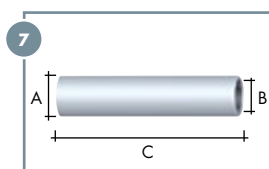
Type	Part-No.
Standard	980.0142.10

- 5 Binzel-style M6 contact tip
- 6 Asia-style M6 contact tip (10 pcs.)



Type	Wire-Ø	Part-No.	
		M6 Binzel-style	M6 Asia-style
CuCrZr	Ø 0.8	140.0054	-
	Ø 0.9	-	140.1355
	Ø 1.0	140.0245	140.1356
	Ø 1.2	140.0382	140.1357

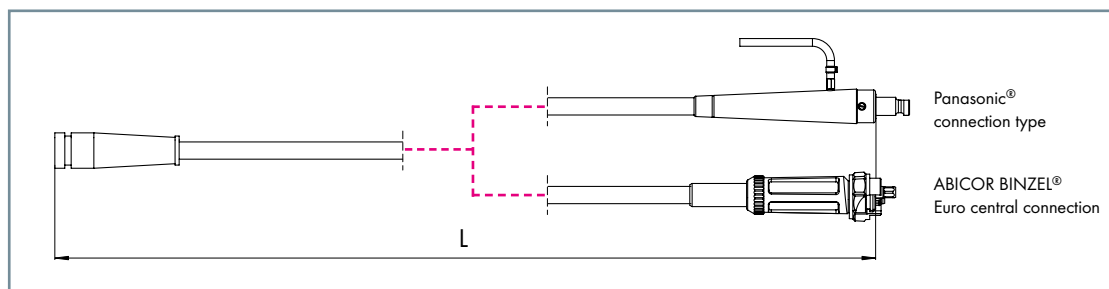
- 7 Gas nozzle (10 pcs.)



Type	Ø A	Ø B	Length C	Part-No.
Conical	Ø 20.0	Ø 12.0	89.5 mm	145.0558.10
Conical	Ø 20.0	Ø 13.0	89.5 mm	145.0573.10
Bottle form	Ø 20.0	Ø 14.0	89.5 mm	145.0559.10
Cylindrical	Ø 20.0	Ø 15.0	89.5 mm	145.0557.10

"ABIROB® 350GC" air cooled Cable Assemblies & Accessories

Cable assemblies and connection types



Cable assemblies cpl.

with connection type	Length	Part-No.
ABICOR BINZEL® Euro central connection	1.10 m	980.0030
PANASONIC®	1.10 m	980.0029

The control cable is not pre-wired at the machine end. Power source specific types on request.

The steel liner Ø 0.8–1.2 mm is included in the scope of delivery. Please order other versions separately.

Clamp module and connection nut

Type	Part-No.
Clamp module 350GC	980.0006.1
Connection nut	980.0081

Options

Type	Part-No.
Wire brake module	980.0143.1
CAT2 connection kit	780.0716.1

Liners

For connection type	Type	Wire-Ø	to L=1.3 m
ABICOR BINZEL® Euro central connection	Liner steel black ¹	Ø 0.8–1.2	124.0145.1
PANASONIC®	Liner steel black ¹	Ø 1.4–1.6	124.0147

¹ 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 tube, improving the welding process. The insulated steel liner must always be used for power sources with optimal welding wire sensors. Liners for aluminium and special wires on request.

Accessories



Alignment jig

for torch type	Torch geometry	Part-No.
ABIROB® 350GC	35°	837.0551
Standard		

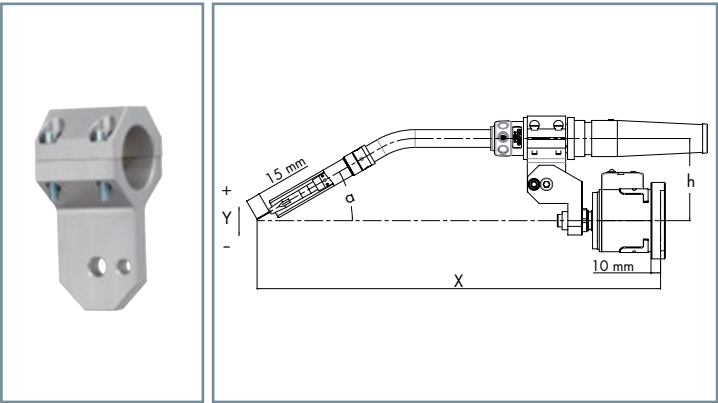
"ABIROB® 350GC" air cooled

Holder & TCP Geometries

Torch holder for ABIROB® 350GC

in connection with CAT2 cpl.

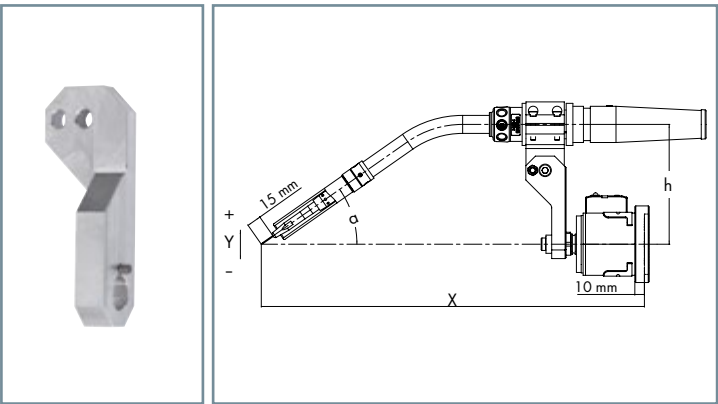
Torch type	Torch geometry	X	Y	h	α	Part-No.
		(mm)				
ABIROB®	30°	453	86	86	0°	780.0145
350GC	35°	415	-39	86	35°	780.0145



CAT2 holder for ABIROB® 350GC

in connection with CAT2 and holder 786.0145

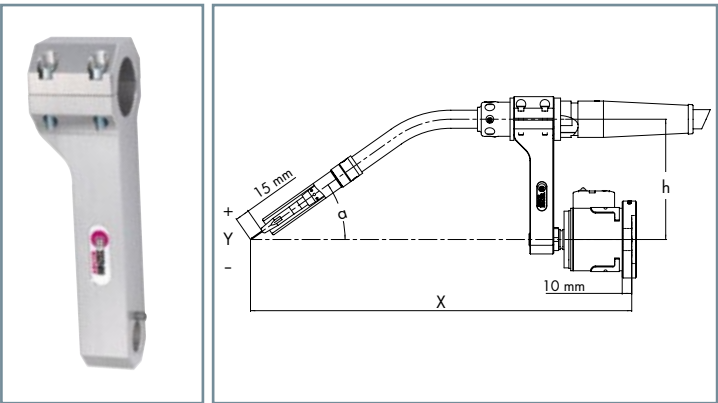
Torch type	Torch geometry	X	Y	h	α	Part-No.
		(mm)				
ABIROB®	30°	437	125	125	0°	780.0310.1
350GC	35°	400	0	125	35°	780.0310.1



Fixed bracket for ABIROB® 350GC

in connection with CAT2

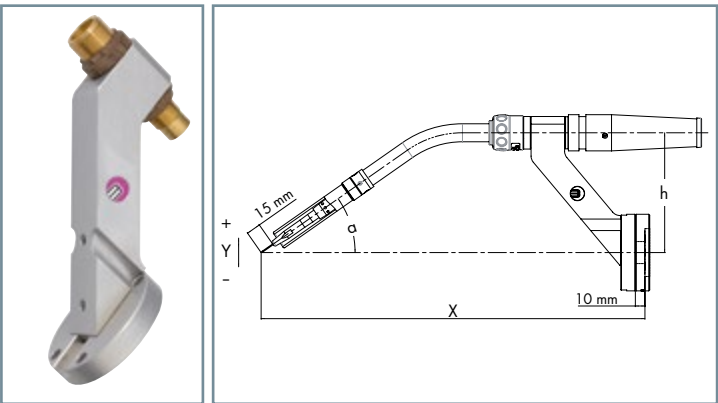
Torch type	Torch geometry	X	Y	h	α	Part-No.
		(mm)				
ABIROB®	35°	400	0	125	35°	780.0309
350GC						



I-bracket for ABIROB® 350GC

for robots with collision software

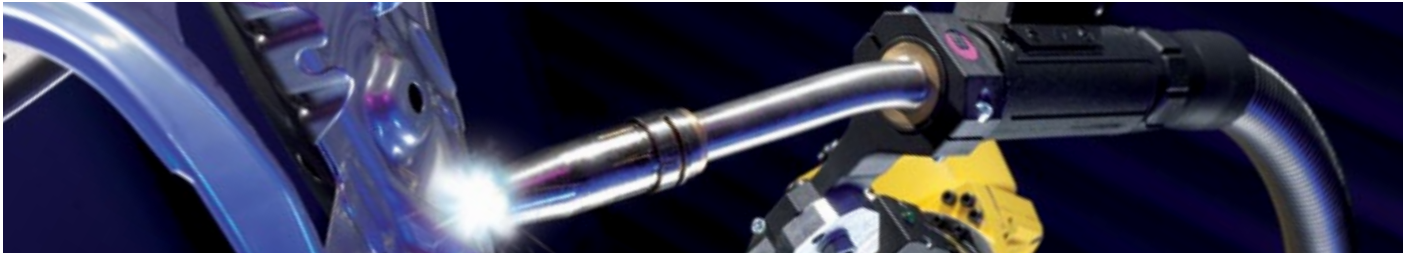
Torch type	Torch geometry	X	Y	h	α	Part-No.
		(mm)				
ABIROB®	35°	400	0	125	35°	780.0183
350GC						



Further holders are available on request.

MIG/MAG Welding Torch System

"ROBO Standard" liquid cooled



Powerful, reliable & economical ...

The "ROBO Standard" torch series provides maximum reliability and is the optimum choice for robot welding cells with a low degree of automation. Their mechanical design makes these sturdy torches particularly crash-resilient, thus reducing downtime and maintenance costs to a minimum.

In addition, the excellent cooling performance of the torches guarantees high service lives for the wear parts with reduced spatter adhesion.

As standard, the welding torch system has an integrated airblast function, trigger for automatic wire feed and connection modules for the robot mount CAT2.

"ROBO Standard" torches have been in permanent use in tough industrial applications for many years – proving their worth thousands of times over.

Advantages that speak for themselves:

- Technically mature and 100% reliable
- Water-cooled up to 600 A (CO₂)
- Gas nozzle holder (with 650 TS) cooled separately
- Integrated airblast function
- Simple installation and handling

Degree of automation:

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

Application areas:

- Commercial vehicle construction
- Earth-moving equipment
- Rail vehicle construction
- Shipbuilding
- Container 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
(External cable assembly):
 - Robot mount CAT2
 - Fixed bracket RTM

up to
600 A



* 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)

"ROBO Standard" liquid cooled

System Overview & Technical Data

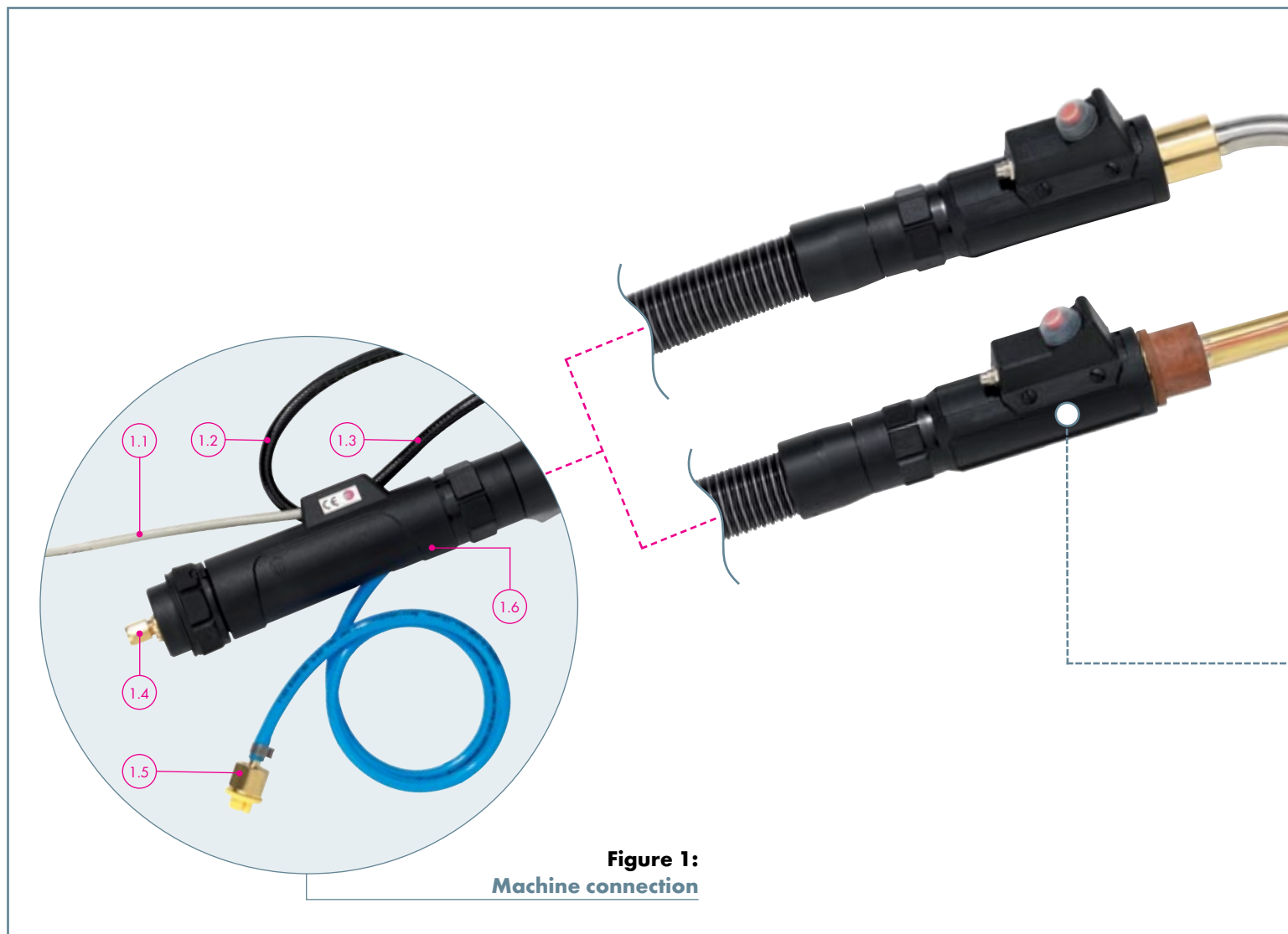


Figure 1:
Machine connection

- 1.1 High-quality control cable with strain relief (control cable connector on request)
- 1.2 Coolant feed hose with closure
- 1.3 Coolant return hose with closure
- 1.4 Machine connection available for all standard wire feeds
- 1.5 Airblast hose with blanking plug
- 1.6 Sturdy bend-protection casing with strain relief spring

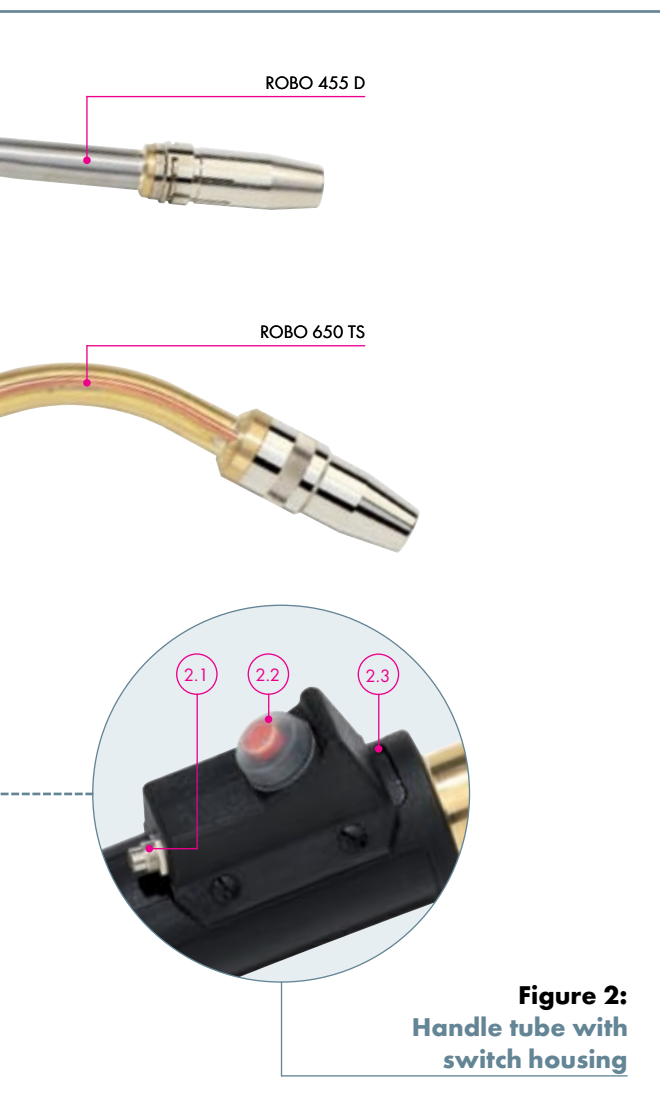


Figure 2:
Handle tube with
switch housing

Figure 2:
Handle tube with switch housing

- 2.1 CAT2 connection
- 2.2 Wire feed button
- 2.3 Sturdy housing for optimum torch protection



Technical data (EN 60 974-7):

ROBO 455 D

Type of cooling:	liquid cooled
Rating:	450 A CO ₂ 400 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	0.8 - 1.6 mm
Torch geometries:	0°/22°/45°

ROBO 650 TS

Type of cooling:	liquid cooled
Rating:	600 A CO ₂ 500 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	1.0 - 3.2 mm
Torch geometries:	0°/22°/45°

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 Standard" liquid cooled

Torch Necks & Wear Parts

ROBO 455 D

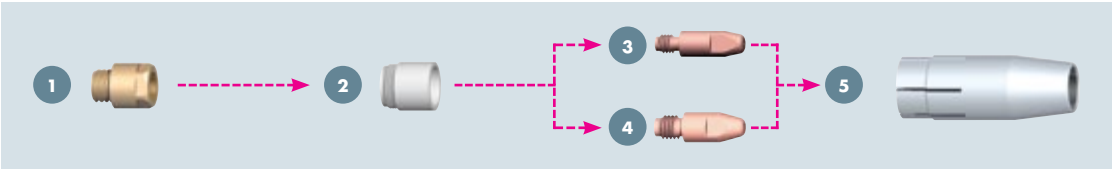


Torch neck

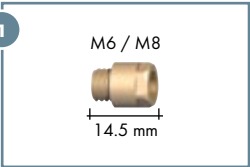
Features	Part-No.		
	0°	22°	45°
Torch complete with cable assembly (L=3.00 m)	943.0247	943.0248	943.0249
Individual torch neck (spare torch)	943.0161.1	943.0162.1	943.0163.1

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

Wear parts for ROBO 455 D

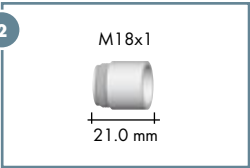


1 Contact tip holder (10 pcs.)



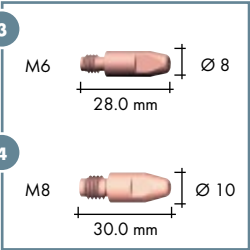
Type	Part-No.
M6 Brass	142.0123
M8 Brass	142.0122

2 Nozzle insulator (10 pcs.)



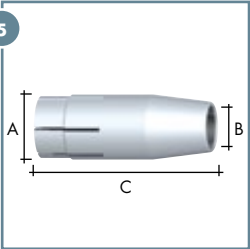
Type	Part-No.
Standard	146.0054
High temperature resistant	146.0059.10

3 Contact tip M6 4 Contact tip M8 (10 pcs.)



Type	Wire-Ø	Part-No.	
		M6	M8
CuCrZr	Ø 0.8	140.0054	140.0117
	Ø 0.9	140.0172	140.0217
	Ø 1.0	140.0245	140.0316
	Ø 1.2	140.0382	140.0445
	Ø 1.4	-	140.0536
	Ø 1.6	-	140.0590

5 Gas nozzle (10 pcs.)



Type bottle form	Ø A	Ø B	Length C	Part-No.
Recess (- 1.5 mm) ¹	Ø 25.0	Ø 15.5	67.5 mm	145.0164

Type conical	Ø A	Ø B	Length C	Part-No.
Recess (- 1.5 mm) ¹	Ø 25.0	Ø 13.0	67.5 mm	145.0134
Recess (- 1.5 mm) ¹	Ø 25.0	Ø 15.5	67.5 mm	145.0089.10
Stick-out (+1.5 mm) ²	Ø 25.0	Ø 15.5	64.5 mm	145.0106

¹ Recess: Contact tip recessed
² Stick-out: Contact tip protruding

"ROBO Standard" liquid cooled Torch Necks & Wear Parts

ROBO 650 TS

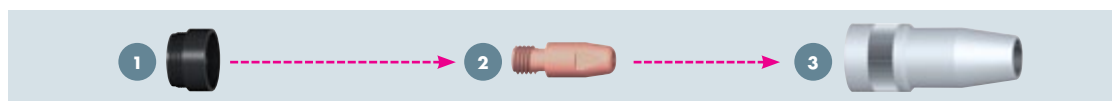


Torch neck

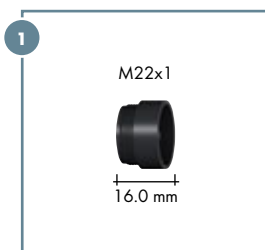
Features	0°	Part-No. 22°	45°
Torch complete with cable assembly (L=3.00 m)	944.0109	944.0110	944.0111
Individual torch neck (spare torch)	944.0104	944.0105	944.0108

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

Wear parts for ROBO 650 TS

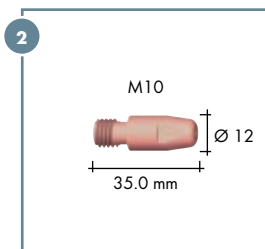


1 Nozzle insulator (10 pcs.)



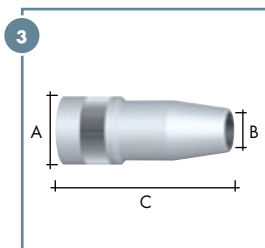
Type	Part-No.
Standard	146.0056
High temperature resistant (ceramic)	146.0069

2 Contact tip (10 pcs.)



Type	Wire-Ø	Part-No.
CuCrZr	Ø 1.0	140.0348
	Ø 1.2	140.0481
	Ø 1.4	140.0547
	Ø 1.6	140.0616
	Ø 2.0	140.0665
	Ø 2.4	140.0698
	Ø 3.2	140.1439

3 Gas nozzle (10 pcs.)

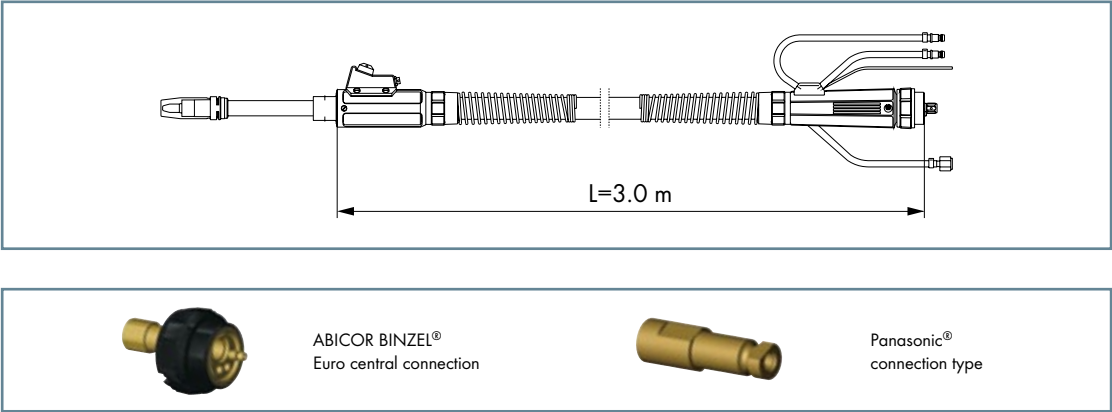


Type bottle form	Ø A	Ø B	Length C	Part-No.
Recess (-3.0 mm) ¹	Ø 30.0	Ø 18.0	78.0 mm	145.0578.10

¹ Recess: Contact tip recessed

“ROBO Standard” liquid cooled Cable Assemblies

Cable assemblies and connection types



Note: The cable assemblies for the ROBO Standard series are only available as complete packages including the torch neck. The part numbers can be found in the “torch neck” category on pages 52 and 53.

The standard length of the cable assemblies is 3.00 m. Other cable assembly lengths are available on request.
 The control cable is not pre-wired at the machine end. Power source specific types on request.
 The red steel liner 0.8 – 1.2 mm is included in the scope of delivery. Please order other versions separately.

Liners for Euro central connection¹

Type	for torch type	Wire-Ø	up to L=3.40 m
Liner steel ¹	ROBO 455 D	Ø 0.8 – 1.2	122.0031
Liner steel ¹	ROBO 455 D	Ø 1.4 – 1.6	122.0056
Liner steel ¹	ROBO 650 TS	Ø 0.8 – 1.2	122.0031 ²
Liner steel ¹	ROBO 650 TS	Ø 1.4 – 1.6	122.0066
Liner steel ¹	ROBO 650 TS	Ø 2.0 – 3.2	122.0083

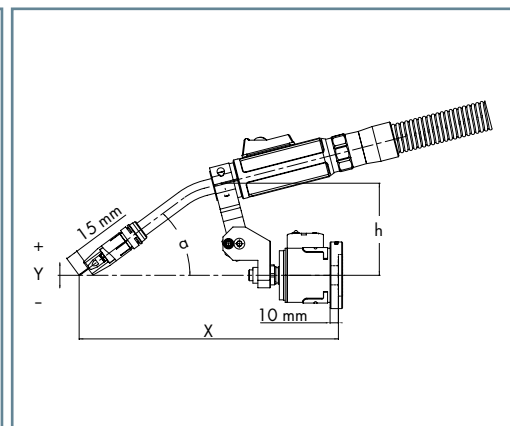
¹ Steel liner (insulated) for the use of non-alloyed and low-alloyed steels. The totally insulated wire feed prevents damage caused by “micro-arcing” on the wire. This allows optimal current transfer inside the contact tube, improving the welding process. The insulated steel liner must always be used for power sources with optimal welding wire sensors. Liners for aluminium and special wires on request.
² Can only be used in conjunction with an intermediate liner (122.0099). Please order separately.

"ROBO Standard" liquid cooled Holder & TCP Geometries

Torch holder for ROBO Standard

in connection with CAT2 cpl.

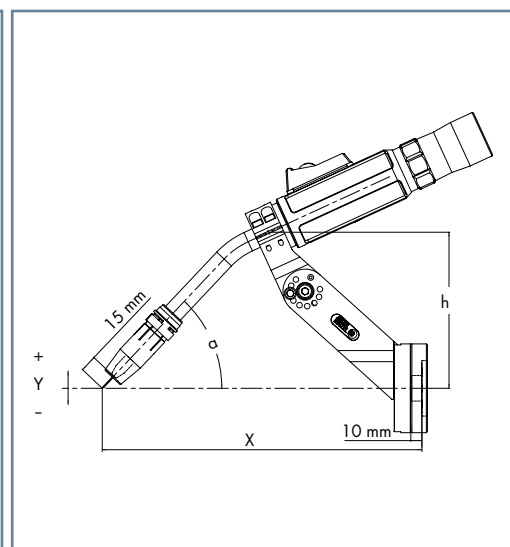
Torch type	Torch geometry	X	Y	h	α	Part-No.
ROBO 455 D ¹	0°	337	0	103	30°	780.0203
	22°	312	0	111	36°	780.0203
	45°	366	0	113	46°	780.0203
ROBO 650 TS	0°	337	0	103	30°	780.0203
	22°	375	0	111	35°	780.0203
	45°	344	0	113	44°	780.0203



RTM holder for ROBO Standard²

for robots with collision software

Torch type	Torch geometry	X	Y	h	α	Part-No.
ROBO 455 D ¹	0°	327	54	141	25°	780.0326
	22°	288	0	141	47°	780.0326
	45°	242	-29	141	70°	780.0326
ROBO 650 TS	0°	329	67	143	21°	780.0326
	22°	356	0	143	43°	780.0326
	45°	302	-46	143	66°	780.0326



Further holders are available on request.

¹ Please order torch holder for ROBO 455D always in combination with insulation bush 835.0013.

² Holder adjustable in 7.5° steps.

TIG Welding Torch Systems

Liquid cooled



ABITIG® WH liquid cooled

Fast, safe and reliable ...

Capacity: up to 400 A

Application areas: Automotice construction, bicycle industry, container and pipe construction, machine and steel construction, aviation and aerospace industry

Degree of automation: Low Medium High

Page
59–66



ABITIG® MT liquid cooled

Efficient allrounder ...

Capacity: up to 500 A

Application areas: Automotice construction, bicycle industry, container and pipe construction, machine and steel construction, aviation and aerospace industry

Degree of automation: Low Medium High

Page
67–74

TIG Welding Torch System

"ABITIG® WH" liquid cooled



Fast, safe & reliable ...

The ABITIG® WH welding torch system from ABICOR BINZEL for TIG brazing and TIG welding offers a high degree of process reliability for the joining of a wide range of different materials.

Pre-set tungsten electrodes, reproducible torch replacement and servicing work done outside the robot cell guarantee consistently high quality and system availability.

With only two design sizes in different geometries, even for the most complex of components, the TIG welding torch system ABITIG® WH covers almost all automatic TIG applications. Also available with cold wire feeding according to the push or push-pull principle.

Advantages that speak for themselves:

- Flexible and fast adaptation to changing welding tasks
- Pre-set tungsten electrode
- Reproducible torch position
- With cold wire feeding and push-pull function
- Liquid cooled up to 400 A
- Technically matured and 100% reliable
- Automatic neck change available for maximum system up-time

Degree of automation:

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

Typical areas of application:

- Automotive construction
- Bicycle industry
- Container and pipe construction
- Machine and steel construction
- Aviation and aerospace industry

Material:

- 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 CAT2
 - Fixed bracket RTM

up to
400 A



* 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)

"ABITIG® WH" liquid cooled

System Overview & Technical Data

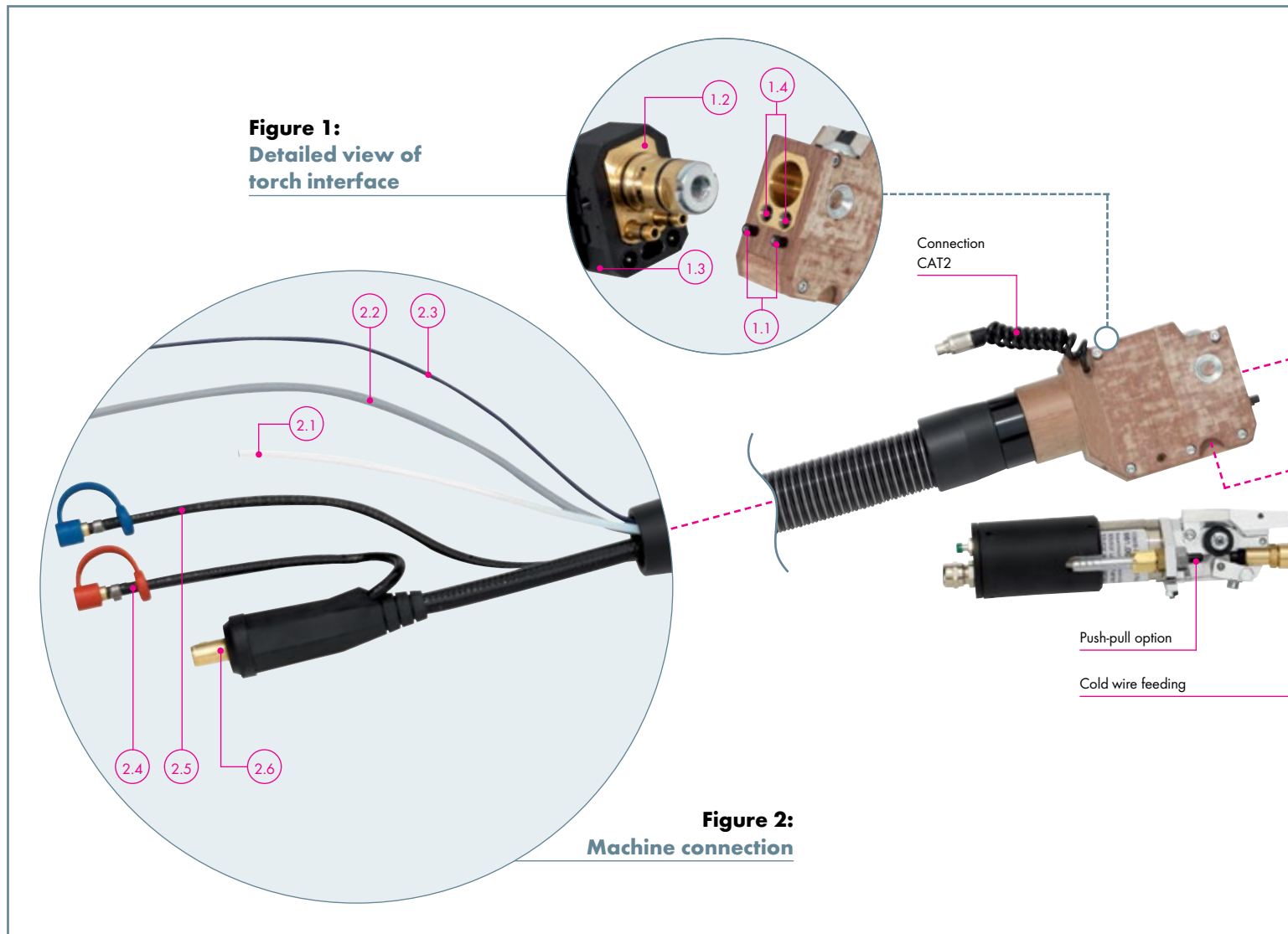


Figure 1:
Detailed view of cable assembly

- 1.1 Contacts for help with ignition
- 1.2 O-rings ensure a gas-tight connection
- 1.3 Compact and space-saving interface
- 1.4 Non-return valves for leak-free torch neck replacement

Figure 2:
Machine connection

- 2.1 Hose for inert gas feed
- 2.2 High-quality control cable
- 2.3 Flexible control cable for ignition aid (optional) or sensor
- 2.4 Coolant return hose with closure
- 2.5 Coolant feed hose with closure
- 2.6 Sturdy brass connector with high-grip rubber bend protection (machine connection available for all standard power sources)

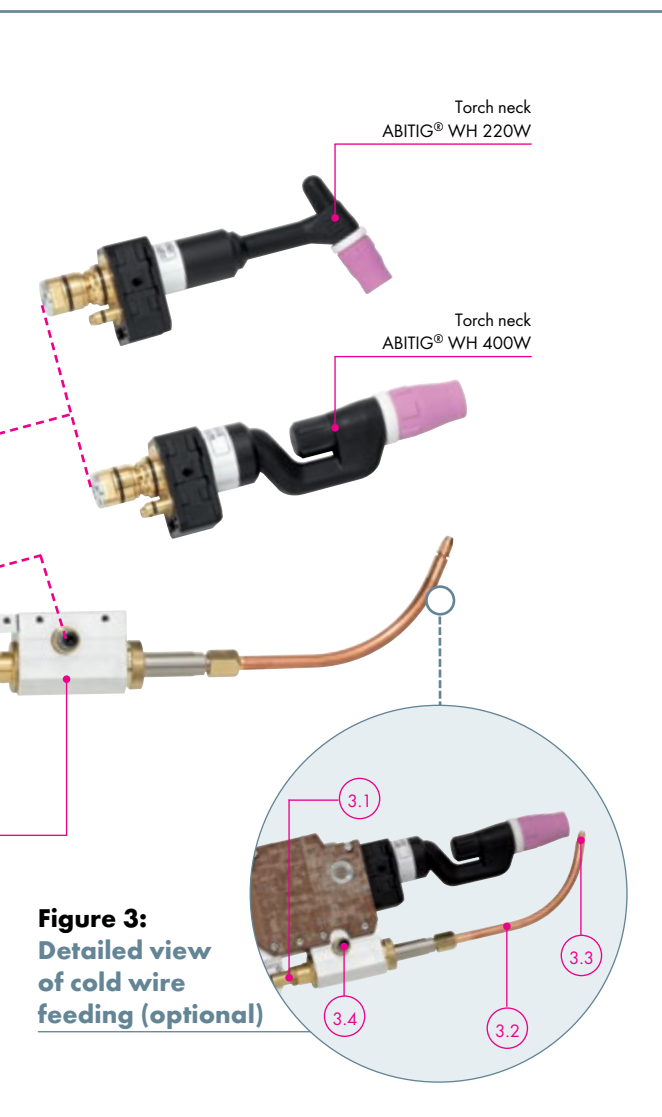
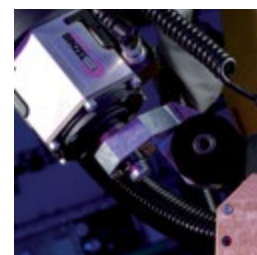
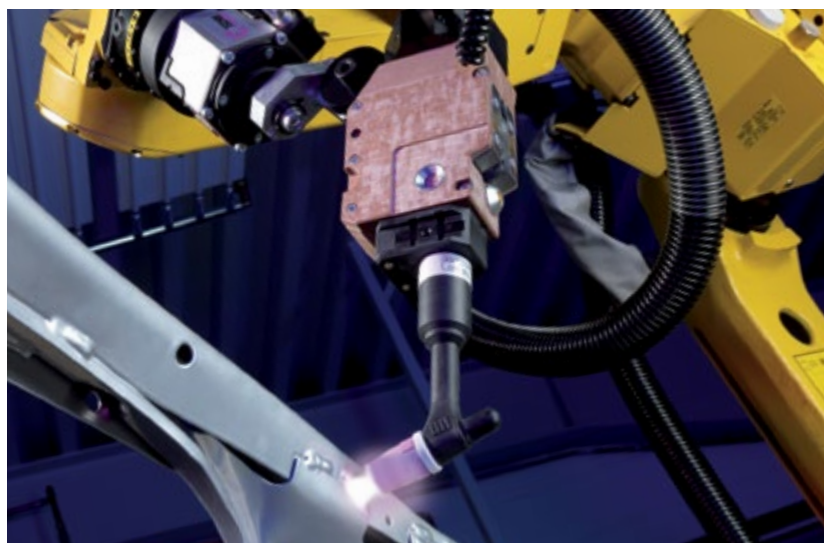


Figure 3:
Detailed view of cold wire feeding

- 3.1 Cold wire feeding with and without push-pull option
- 3.2 Feeding tube
- 3.3 Feeding tip
- 3.4 Swivel function for fully automatic torch neck replacement in connection with ATS rotor



Technical data (EN 60 974-7):

ABITIG® WH 220W

Type of cooling:	liquid cooled
Rating:	220 A DC
	160 A AC
Duty cycle:	100 %
Electrode-Ø:	1.0-3.2 mm
Torch geometries:	70°

ABITIG® WH 400W

Type of cooling:	liquid cooled
Rating:	400 A DC
	280 A AC
Duty cycle:	100 %
Electrode-Ø:	1.6-4.8 mm
Torch geometries:	0°/45°/70°/90°

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.

"ABITIG® WH" liquid cooled Torch Necks & Wear Parts

ABITIG® WH 220W

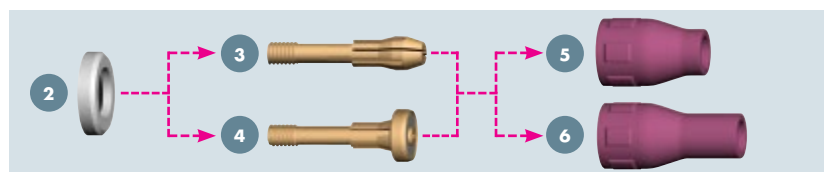
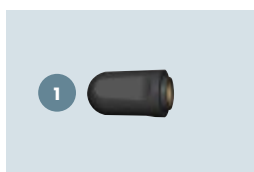


Torch neck

Features	Part-No.
Standard	781.1001
WS version	781.2010.1

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

Wear parts for ABITIG® WH 220 W



1 Torch cap (1 pc.)



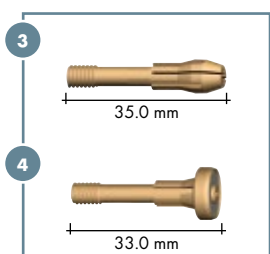
Type	Part-No.
Standard	776.0053
WS clamping element (not illustrated)	781.2012.1

2 Insulator (10 pcs.)



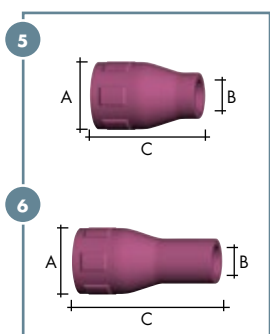
Type	Part-No.
Standard	776.1043

3 Electrode holder 4 Gas diffuser (5 pcs.)



Type	Wire-Ø	Part-No.
		Electrode holder
Standard	Ø 1.0	776.0061
	Ø 1.6	776.0062
	Ø 2.0	776.0067
	Ø 2.4	776.0063
	Ø 3.2	776.0064
		Gas diffuser
		776.0171
		776.0172
		776.0177
		776.0173
		776.0174

5 Gas nozzle, short 6 Gas nozzle, long (10 pcs.)



Short type	Ø A	Ø B	Length C	Part-No.
Standard	Ø 16.8	Ø 6.5	26.0 mm	777.0081
	Ø 16.8	Ø 8.0	26.0 mm	777.0082
	Ø 16.8	Ø 9.5	26.0 mm	777.0083
	Ø 16.8	Ø 11.0	26.0 mm	777.0084

Long type	Ø A	Ø B	Length C	Part-No.
Standard	Ø 16.8	Ø 6.5	36.0 mm	777.2171
	Ø 16.8	Ø 8.0	36.0 mm	777.2172
	Ø 16.8	Ø 9.5	36.0 mm	777.2173
	Ø 16.8	Ø 11.0	36.0 mm	777.2174

"ABITIG® WH" liquid cooled Torch Necks & Wear Parts

ABITIG® WH 400W

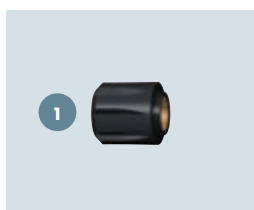


Torch neck

Features	Part-No.			
	0°	45°	70°	90°
Standard	781.0504	781.0507	781.0501	781.0510
WS version	781.2008.1	-	-	-

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

Wear parts for ABITIG® WH 400 W



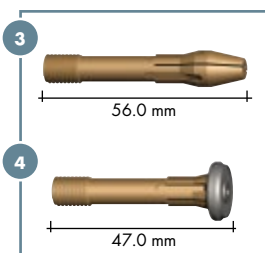
1 Torch cap (1 pc.)



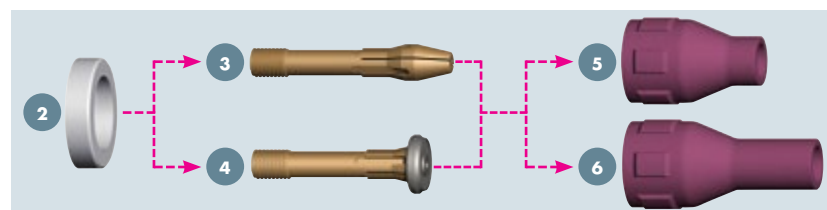
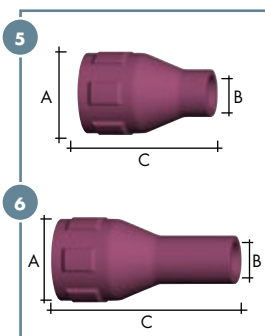
2 Insulator (1 pc.)



3 Electrode holder 4 Gas diffuser (5 pcs.)



5 Gas nozzle, short 6 Gas nozzle, long (10 pcs.)



Type	Part-No.
Standard	967.1351
WS clamping element (not illustrated)	781.2006.1

Type	Part-No.
Standard	775.1043

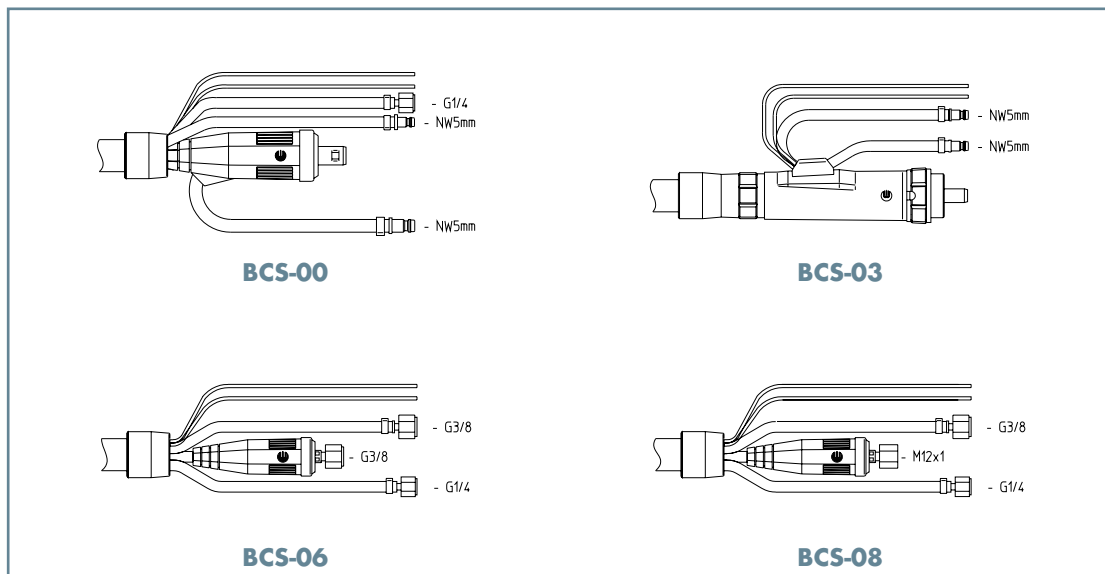
Type	Wire-Ø	Part-No.	
		Electrode holder	Gas diffuser
Standard	Ø 1.6	775.0062	773.0172
	Ø 2.0	775.0067	773.0177
	Ø 2.4	775.0063	773.0173
	Ø 3.2	775.0064	773.0174
	Ø 4.0	775.0065	773.0175
	Ø 4.8	775.0066	773.0176

Short type	Ø A	Ø B	Length C	Part-No.
Standard	Ø 23.5	Ø 7.5	37.0 mm	775.0081
	Ø 23.5	Ø 10.0	37.0 mm	775.0082
	Ø 23.5	Ø 13.0	37.0 mm	775.0083
	Ø 23.5	Ø 15.0	37.0 mm	775.0084

Long type	Ø A	Ø B	Length C	Part-No.
Standard	Ø 23.5	Ø 7.5	52.0 mm	775.2171
	Ø 23.5	Ø 10.0	52.0 mm	775.2172
	Ø 23.5	Ø 13.0	52.0 mm	775.2173
	Ø 23.5	Ø 15.0	52.0 mm	775.2174

"ABITIG® WH" liquid cooled Cable Assemblies & Options

Cable assemblies



Cable assemblies cpl.

Design	L=4.00 m *	Part-No. L=6.00 m *	L=8.00 m *
BCS-00 Standard	781.0526	781.0527	781.0528
BCS-03	781.0517	781.0518	781.0519
BCS-06	781.0523	781.0524	781.0525
BCS-08	781.0520	781.0521	781.0522

* Further versions on request

Options

Cold wire feeding

Description	Version / specifications	Part-No.
Cold wire feeding cpl.	incl. feeding tube and tip	967.0320
Feeding tube	ABITIG® WH 220W 70	967.0327
Feeding tube	ABITIG® WH 400W 0	967.0326
Feeding tube	ABITIG® WH 400W 45	967.0328
Feeding tube	ABITIG® WH 400W 70	967.0325
Feeding tube	ABITIG® WH 400W 90	967.0325
Feeding tube	ABITIG® WH 280/400WS	967.0338.1
Feeding tip	for wire-Ø 0.6	967.0335
Feeding tip	for wire-Ø 0.8	967.0329
Feeding tip	for wire-Ø 1.0	967.0330
Feeding tip	for wire-Ø 1.2	967.0331
Feeding tip	for wire-Ø 1.6	967.0332
Wire conduit cpl.	4.00 m long	781.0514
Wire conduit cpl.	6.00 m long	781.0515
Wire conduit cpl.	8.00 m long	781.0516

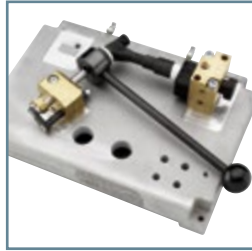
Push-pull option

Push-pull option cpl. with tacho-motor	i=13.7:1 for $\Delta V = 1.1 - 8.0$ m / min. incl. drive rolls 1.0 mm	963.0120
Push-pull option cpl. with encoder motor	i=34.3:1 for $\Delta V = 0.2 - 5.0$ m / min. incl. drive rolls 1.0 mm	963.0253
Drive roll	for wire-Ø 0.6	961.0268
Drive roll	for wire-Ø 0.8	961.0269
Drive roll	for wire-Ø 1.0	961.0227
Drive roll	for wire-Ø 1.2	961.0228
Drive roll	for wire-Ø 1.6	961.0267

"ABITIG® WH" liquid cooled

Accessories & Holders

Accessories



Alignment jig

for torch type	Torch geometry	Part-No.
ABITIG® WH 220W	70°	837.0442
ABITIG® WH 400W	0° / 70°	837.0440
ABITIG® WH 400W	45° / 90°	837.0441

Ignition aid (not ill.)

for torch type	Part-No.
ABITIG® WH 220W	967.0102
ABITIG® WH 400W	967.0101

Bracket



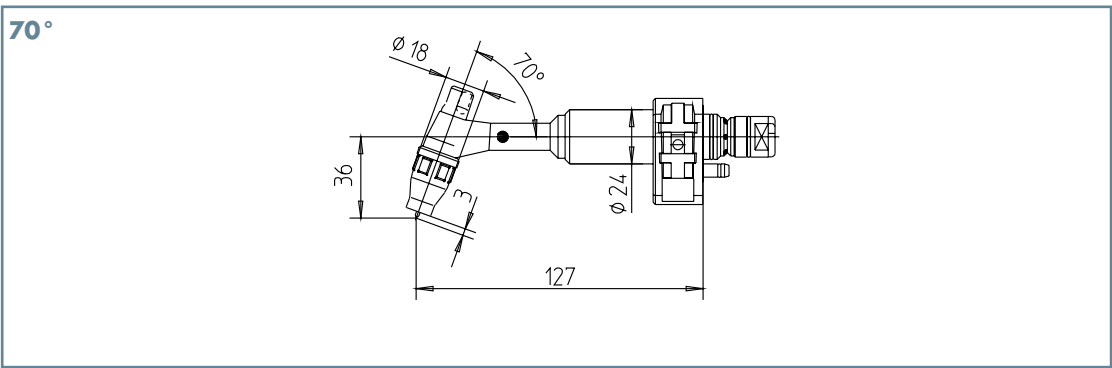
Clamp holder for ABITIG® WH

in connection with CAT2 cpl.

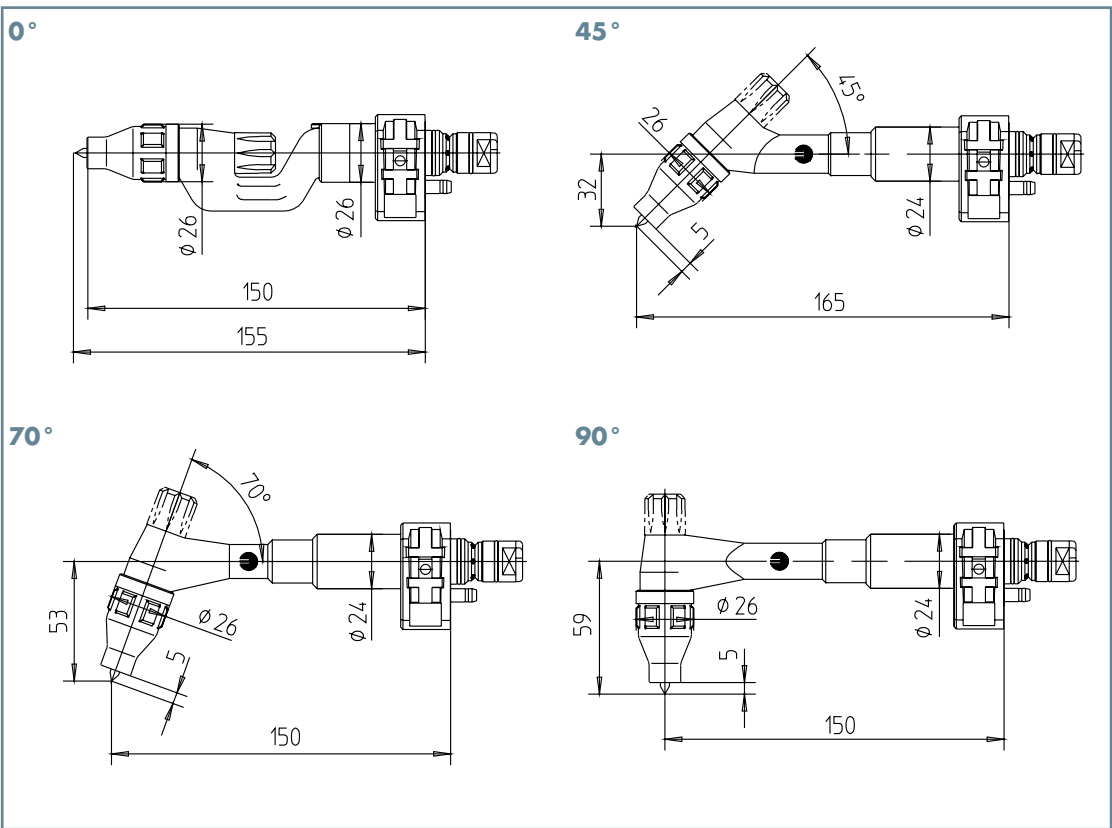
Torch type	Part-No.
ABITIG® WH	963.0007

“ABITIG® WH” liquid cooled Geometries

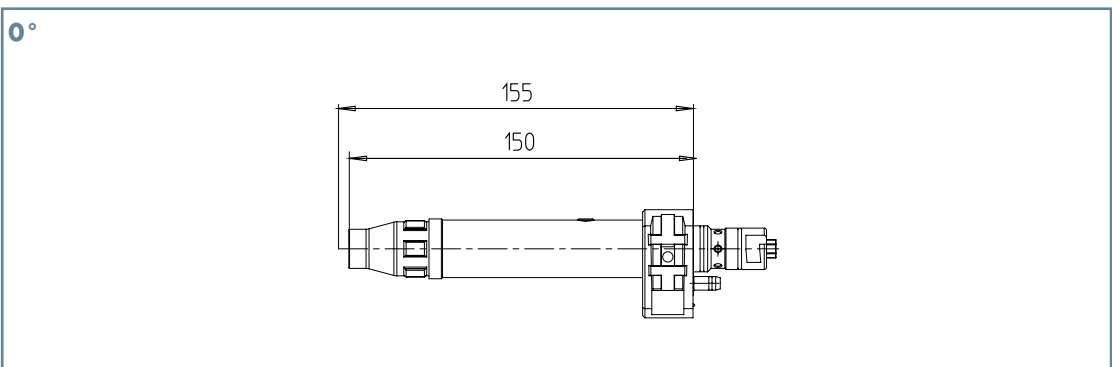
Dimensional sketch
ABITIG® WH 220W



Dimensional sketch
ABITIG® WH 400W



Dimensional sketch
ABITIG® WH 400WS



TIG Welding Torch System

"ABITIG® MT" liquid cooled



Efficient all-rounder ...

With its compact design and pre-settable electrode, the ABITIG® welding torch system is an efficient solution for welding work on components with simple geometries.

Torches of different capacities with cable assembly outlets at the side, are available for a wide range of different welding tasks.

Advantages that speak for themselves:

- Long service life cycles thanks to excellent heat dissipation combined with the smallest of design sizes
- Cable assembly outlet at the side reducing cable wear
- Tungsten electrode can be pre-set from the rear
- Tried-and-trusted design principle in common with ABITIG® handheld torches

Degree of automation:

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

Typical areas of application:

- Automotive construction
- Bicycle industry
- Container and pipe construction
- Machine and steel construction
- Aviation and aerospace industry

Material:

- 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 CAT2
 - Fixed bracket RTM

up to
500 A



* 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)

"ABITIG® MT" liquid cooled

System Overview & Technical Data

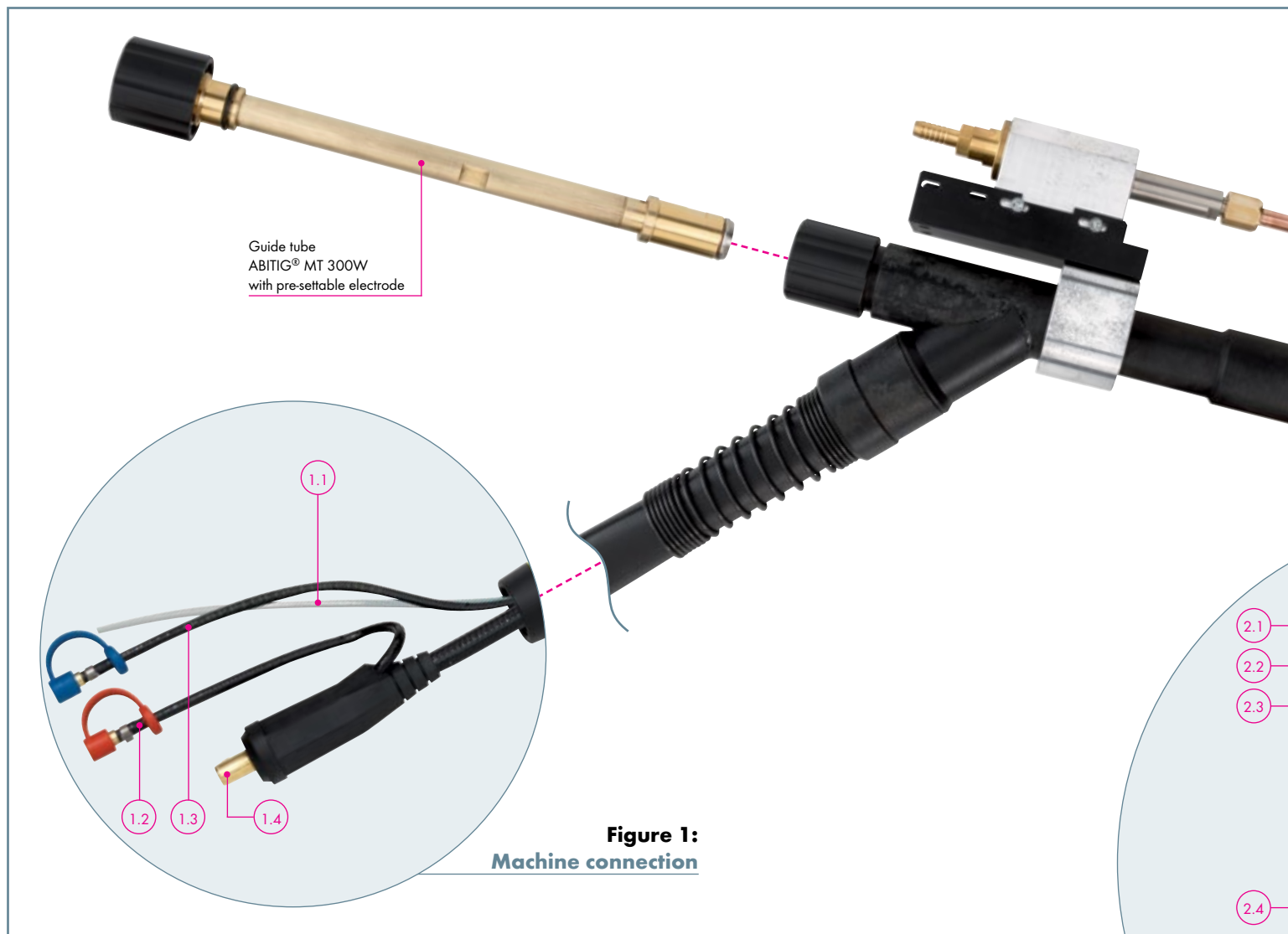
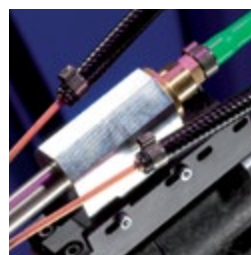
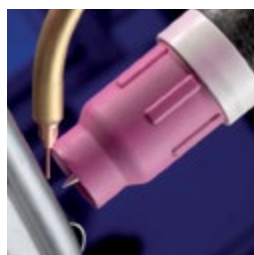
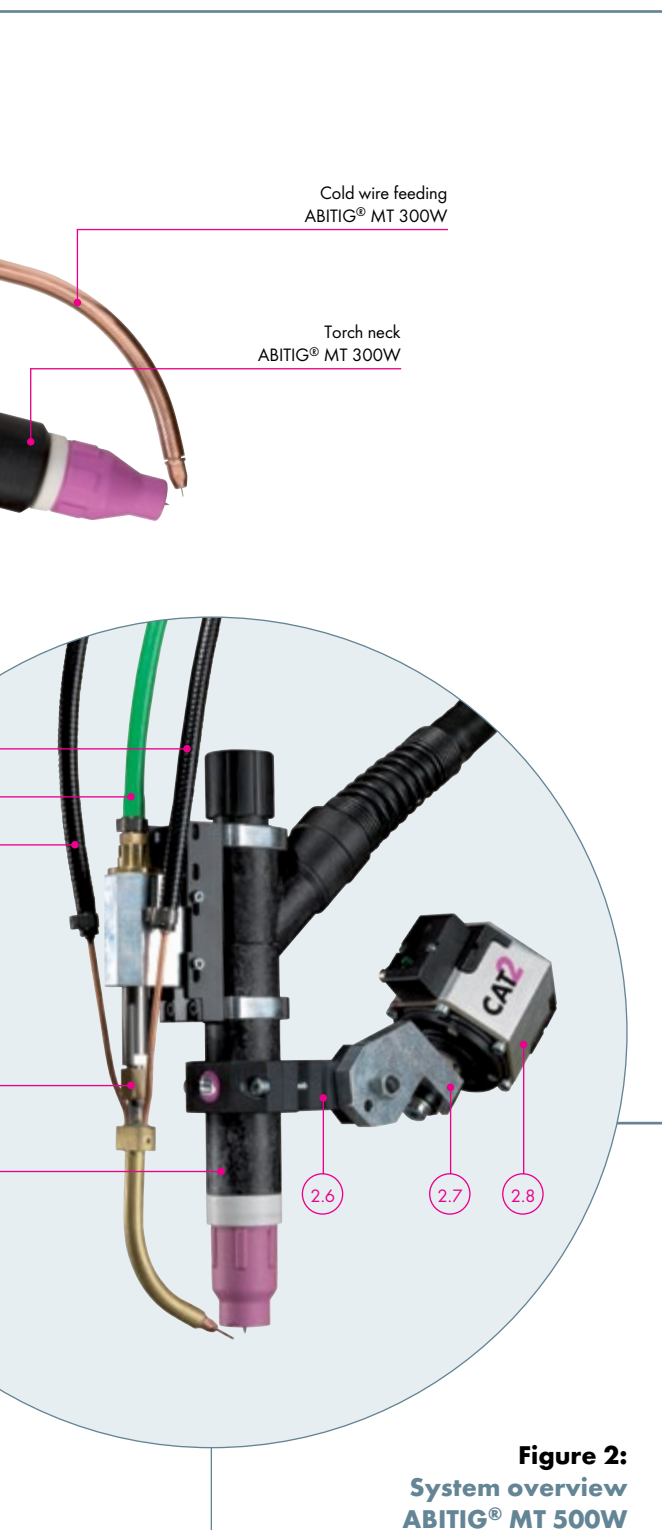


Figure 1:
Machine connection

- 1.1 Hose for inert gas feed
- 1.2 Coolant return hose with closure
- 1.3 Coolant feed hose with closure
- 1.4 Sturdy brass connector with high-grip rubber bend protection (machine connection available for all standard power sources)

Figure 2:
System overview ABITIG® MT 500W

- 2.1 Coolant feed hose
- 2.2 Wire conduit
- 2.3 Coolant return hose
- 2.4 Feeding tube liquid cooled (optional)
- 2.5 Torch body ABITIG® MT 500W
- 2.6 Torch holder MT 35
- 2.7 Bracket CAT2
- 2.8 Robot mount CAT2



Technical data (EN 60 974-7):

ABITIG® MT 300W

Type of cooling:	liquid cooled
Rating:	300 A DC 210 A AC
Duty cycle:	100 %
Electrode-Ø:	1.6 – 4.8 mm
Torch geometries:	0°

ABITIG® MT 500W

Type of cooling:	liquid cooled
Rating:	500 A DC 350 A AC
Duty cycle:	100 %
Electrode-Ø:	1.6 – 6.4 mm
Torch geometries:	0°

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.

"ABITIG® MT" liquid cooled Torch Necks & Wear Parts

ABITIG® MT 300W

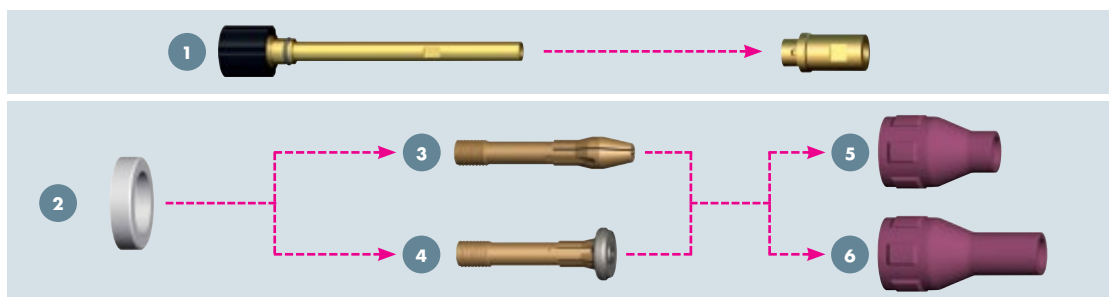


Torch neck

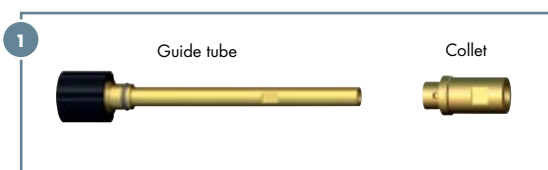
Features	Part-No.
ABITIG® MT 300W Standard	779.2020

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

Wear parts for ABITIG® MT 300W



1 Guide tube with collet (1 pc.)



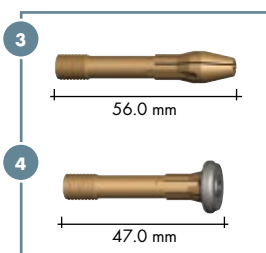
Type	Part-No.
Guide tube cpl.	778.1030
Collet	778.1140
O-ring (20 pcs.)	165.0079

2 Insulator (1 pc.)



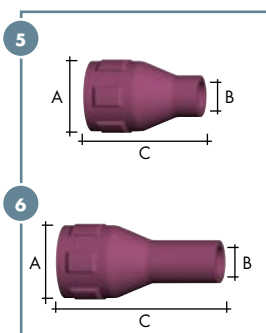
Type	Part-No.
Standard	775.1043

3 Electrode holder 4 Gas diffuser (5 pcs.)



Type	Wire-Ø	Part-No.
		Electrode holder
Standard	Ø 1.6	775.0062
	Ø 2.0	775.0067
	Ø 2.4	775.0063
	Ø 3.2	775.0064
	Ø 4.0	775.0065
	Ø 4.8	775.0066
		Gas diffuser
Standard	Ø 1.6	773.0172
	Ø 2.0	773.0177
	Ø 2.4	773.0173
	Ø 3.2	773.0174
	Ø 4.0	773.0175
	Ø 4.8	773.0176

5 Gas nozzle, short 6 Gas nozzle, long (10 pcs.)



Short type	Ø A	Ø B	Length C	Part-No.
Ceramic	Ø 23.5	Ø 7.5	37.0 mm	775.0081
	Ø 23.5	Ø 10.0	37.0 mm	775.0082
	Ø 23.5	Ø 13.0	37.0 mm	775.0083
	Ø 23.5	Ø 15.0	37.0 mm	775.0084
Long type	Ø A	Ø B	Length C	Part-No.
Ceramic	Ø 23.5	Ø 7.5	52.0 mm	775.2171
	Ø 23.5	Ø 10.0	52.0 mm	775.2172
	Ø 23.5	Ø 13.0	52.0 mm	775.2173
	Ø 23.5	Ø 15.0	52.0 mm	775.2174

"ABITIG® MT" liquid cooled Torch Necks & Wear Parts

ABITIG® MT 500W



Torch neck

Features

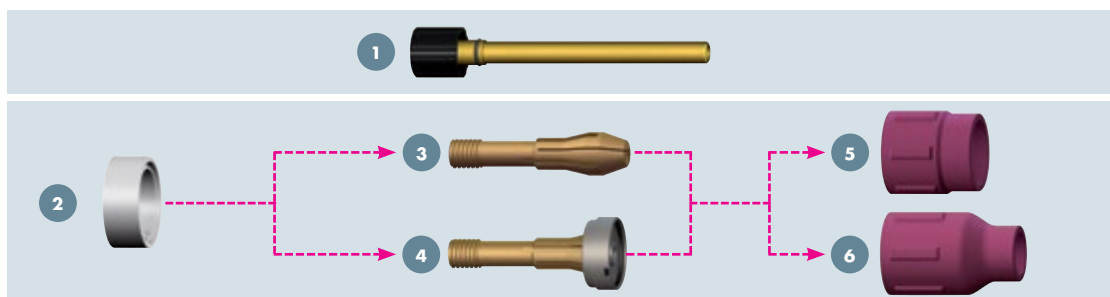
ABITIG® MT 500W Standard

Part-No.

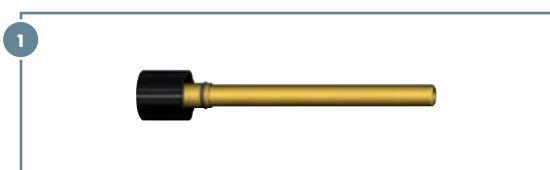
779.6020

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

Wear parts for ABITIG® MT 500W



1 Guide tube (1 pc.)



Type

Guide tube cpl.

Part-No.

779.6026

O-ring (20 pcs.)

165.0079

2 Insulator (1 pc.)



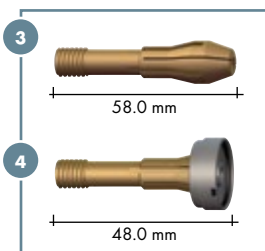
Type

Standard

Part-No.

779.6033

3 Electrode holder 4 Gas diffuser (5 pcs.)



Type

Wire-Ø

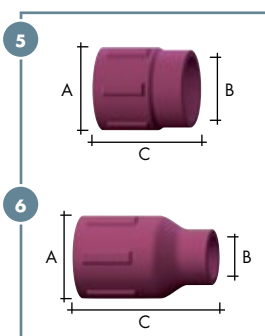
Part-No.

Electrode holder

Gas diffuser

Standard	Ø 1.6	779.6044	779.6058
	Ø 2.0	779.6049	779.6063
	Ø 2.4	779.6045	779.6059
	Ø 3.2	779.6046	779.6060
	Ø 4.0	779.6047	779.6061
	Ø 4.8	779.6048	779.6062
	Ø 6.4	779.6050	779.6064

5 Gas nozzle, short 6 Gas nozzle, long (10 pcs.)



Short type

Type	Ø A	Ø B	Length C	Part-No.
------	-----	-----	----------	----------

Ceramic	Ø 31.0	Ø 24.0	34.0 mm	778.1189
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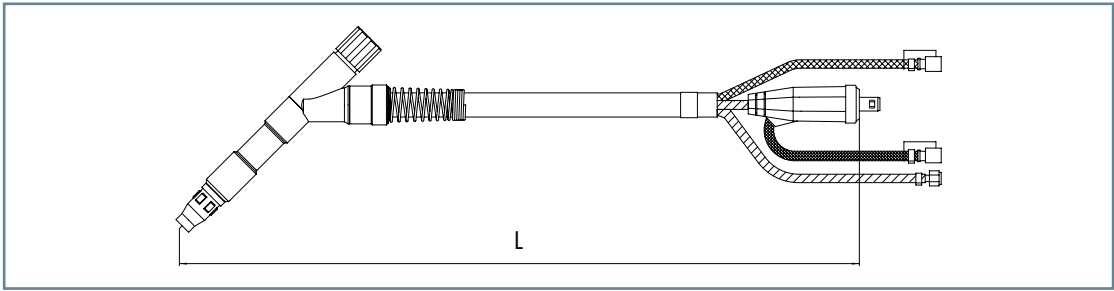
Long type	Ø A	Ø B	Length C	Part-No.
-----------	-----	-----	----------	----------

Ceramic	Ø 31.0	Ø 12.5	48.0 mm	778.1183
	Ø 31.0	Ø 16.0	48.0 mm	778.1184
	Ø 31.0	Ø 19.5	48.0 mm	778.1188

“ABITIG® MT” liquid cooled

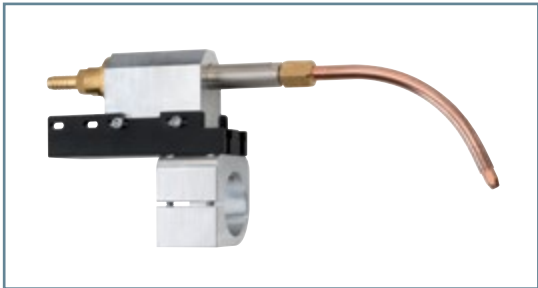
Cable Assemblies, Cold Wire Feeding & Accessories

Cable assemblies



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, such as connection variant, make and type of power source, description of wire feed case, pin assignment for the control cable and individual connections for the airblast function.

Cold wire feeding



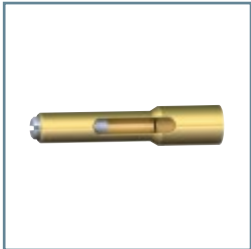
Cold wire feeding for ABITIG® MT

Type	Part-No.
Cold wire feeding cpl. ABITIG® MT 300W	779.6514.1
Cold wire feeding cpl. ABITIG® MT 500W	779.6500
Feeding tube ABITIG® MT liquid cooled (optional)	779.6505

Feed nozzle

Type	Diameter	Part-No.
Standard	0.8 mm	967.0329
	1.0 mm	967.0330
	1.2 mm	967.0331
	1.6 mm	967.0332

Accessories



Setting gauge ABITIG® MT

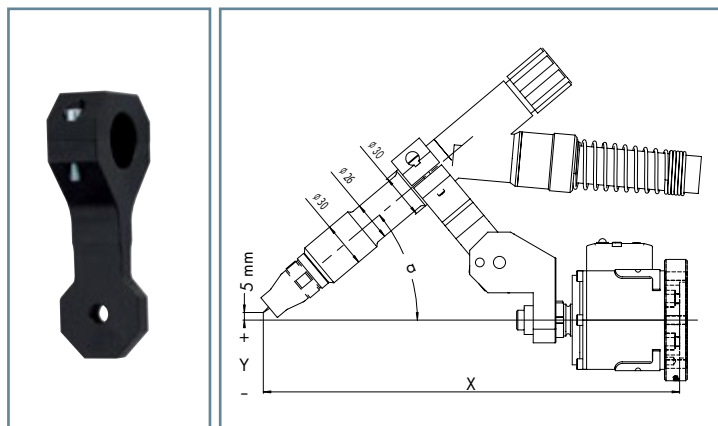
for torch type	Part-No.
ABITIG® MT 300W	778.1157

"ABITIG® MT" liquid cooled Holder & TCP Geometries

Clamp holder MT 26 for ABITIG® MT 300W

in connection with CAT2 cpl.

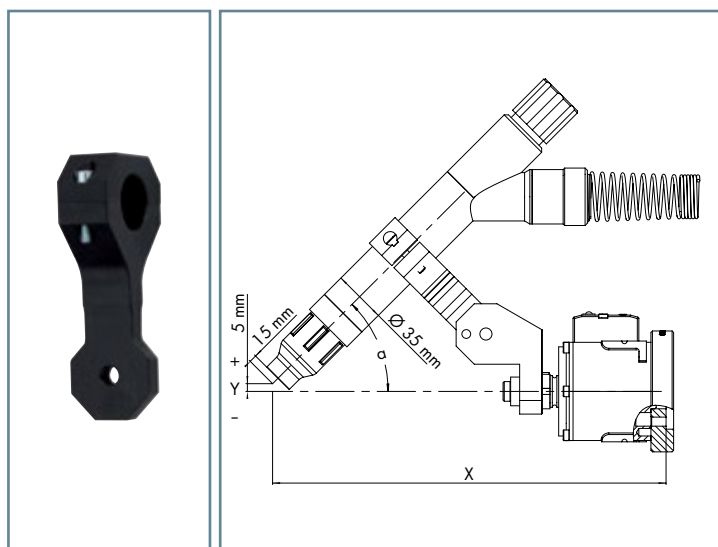
Torch type	X	Y	α	Part-No.
	(mm)			
ABITIG® MT 300W	245	0	40°	780.0258



Clamp holder MT 35 for ABITIG® MT 500W

in connection with CAT2 cpl.

Torch type	X	Y	α	Part-No.
	(mm)			
ABITIG® MT 500W	275	0	40°	780.0292



Robot Peripherals

System Solutions



Robot Mount "CAT2"

To stop collisions quickly ...

Application areas: Standard welding robot with external cable assembly

Page
77–80



Robot Mount "iCAT" and "iSTM"

Safety & movement in perfect harmony ...

Application areas: Hollow wrist robots with and without integrated collision software

Page
81–96



TCP Programming Aid "ABIDOT"

Robot programming to the point ...

Application areas: Welding robots from all current brands

Page
97–100



Electronic Welding Regulator "EWR"

Weld more efficiently – reduce shielding gas consumption ...

Application areas: Robot controlled MIG/MAG and TIG welding processes

Page
101–108



Wire Feeder System "MasterLiner"

State of the art wire feeding ...

Application areas: Robot controlled welding processes

Page
109–120



Torch Cleaning Station "BRS"

Connect & clean ...

Application areas: MIG/MAG welding torches from all common torch brands

Page
121–127

Robot Peripherals

Robot Mount “CAT2” & “CAT2-HL”



To stop collisions quickly ...

Faster robots, increasing dynamics, thinner and thinner metals with complex outlines can lead to a collision hazard for torch and workpiece. The robot mounts CAT2 and CAT2-HL protect against collisions with a great deal of precision and optimised resetting accuracy.

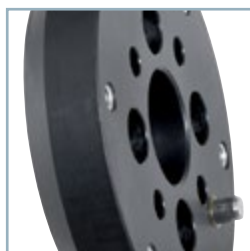
The wide range of accessories for the CAT2 and CAT2-HL offers numerous mounts and extensions for setting the required TCP.

Advantages that speak for themselves:

- Variable deflection in all directions
- Immediate stop with safety margin in case of collision
- Optimised resetting accuracy minimises line downtimes
- Precise switching points thanks to innovative switching behaviour
- Especially suitable for precise light gauge sheet metal applications
- Easy to service thanks to visual functional display for fast fault analysis
- Protected attachment screws for quick service replacement

Area of application:

Standard welding robot with cable assembly on the outside



Robot Mount "CAT2" & "CAT2-HL"

System Overview & Technical Data

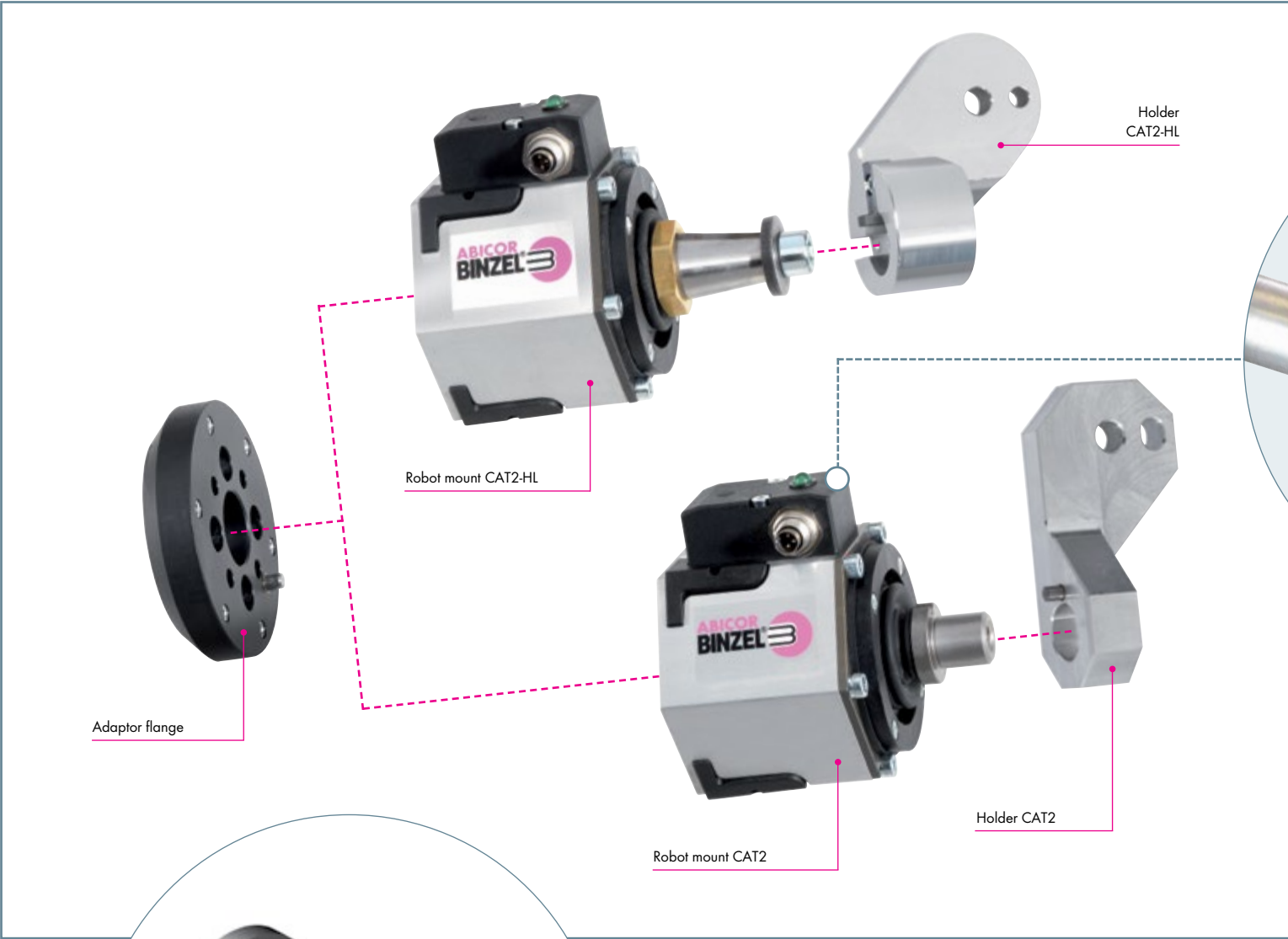


Figure 1:
Deflection

Figure 1:
Deflection of CAT2 and CAT2-HL

- Collision in direction of the X- or Y-axis
- Rotation about the Z-axis
- Collision in direction of the Z-axis

The release torque is defined by the spring types, depending on application and weight of the torch. There are five spring types available – see the following table:

Release force (N)		
Spring type	Release force	
	X-, Y-axis (N)	Z-axis (N)
M	80	535
L	85	925
LL	130	1325
XL	150	1540

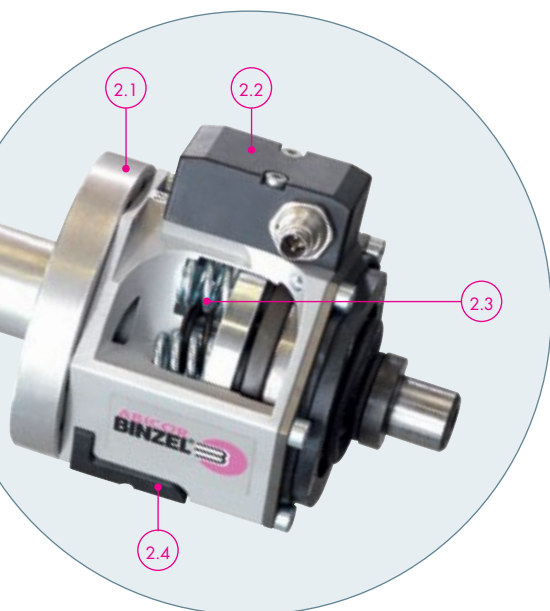
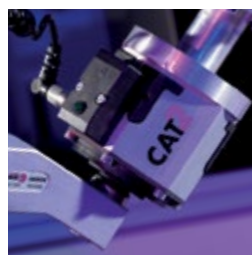


Figure 2:
Cross-section CAT2

Figure 2:
Cross-section CAT2

- 2.1 Adaptor flange for attachment to all standard robot types
- 2.2 Switch unit with green LED as visual function display for fast fault analysis
- 2.3 Compression spring, available in different spring types for different torches or weights
- 2.4 Attachment screws, protected for fast service replacement



Technical data:

Robot mounts CAT2 and CAT2-HL

Dimensions:	Corner width 75 mm; width across flats 65 mm; height 87 mm (robot flange to release flange)
Weight:	approx. 650 g approx. 850 g (inc. holder and flange)
Release force:	see deflection diagram (Fig. 1)
Maximum deflection:	– Deflection in the X and Y plane 10–14° depending on spring – Deflection in the Z plane 4–8 mm depending on spring
Triggering of the emergency switch:	– Rotation about the Z-axis 0.5° – 1° – Deflection in the X and Y plane approx. 1.5° – Deflection in the Z plane approx. 0.5–1 mm
Resetting accuracy:	< +/- 0.04 mm (at 300 mm distance to the robot flange)
Load capacity safety cut-out:	24 V DC, max. 100 mA

Robot Mount “CAT2” & “CAT2-HL”

Robot Mounts, Holder & Adaptor Flanges

Robot mount
CAT2-HL and CAT2



Description	Part-No.
1 Robot mount CAT2-HL (M)	780.2042
Robot mount CAT2-HL (L)	780.2041
Robot mount CAT2-HL (XL)	780.2040
2 Robot mount CAT2 (S) cpl. ¹	780.2131
Robot mount CAT2 (M) cpl. ¹	780.2100
Robot mount CAT2 (L) cpl. ¹	780.2121
Robot mount CAT2 (LL) cpl. ¹	780.2118
Robot mount CAT2 (XL) cpl. ¹	780.2132
Robot mount CAT2 (S)	780.2031
Robot mount CAT2 (M)	780.2001
Robot mount CAT2 (L)	780.2021
Robot mount CAT2 (LL)	780.2038
Robot mount CAT2 (XL)	780.2032

¹ cpl. with holder (780.0202) and liner (780.0201)

Holders &
accessories



Description	Part-No.
3 Holder CAT2-HL	780.0323
4 Holder CAT2	780.0202
not ill. Connector cable cpl.	780.0201
not ill. Universal TCP check tool for CAT2	780.0204.1
not ill. Protective sleeve CAT2	780.0261
not ill. Torch holder (see respective chapter)	

Adaptor flanges



Description	Version Plastic Part-No.	Version Aluminium Part-No.
ISO 9409-1-A31.5	780.0632	780.0532
ISO 9409-1-A40	780.0604	780.0504
ISO 9409-1-A50	780.0603	780.0503
ISO 9409-1-A63	780.0614	780.0514.1
ISO 9409-1-A80	780.0607	780.0507
ISO 9409-1-A100	780.0649	780.0549
ISO 9409-1-A125	780.0630	780.0530

Adaptor flanges can be delivered for all standard welding robots.
Please indicate the robot type.

Caution! For technical reasons, always use a plastic adaptor flange when using MIG/MAG welding torches of the ABIROB® A series.

Robot Peripherals

Robot Mount “iCAT”



Safety & movement in perfect harmony ...

iCAT – the robot mount for the latest generation of welding robots with integrated cable assembly feeding offers a high level of safety & movement for both air and liquid cooled welding torches.

Mechanical crash deflection by up to 10° in the event of a collision between the torch and the workpiece. The iCAT takes over the “buffer function” to avoid damage to the welding torch, peripheral equipment and robot. The integrated safety protection provides additional safety for the iCAT, stopping the robot immediately in the event of a “crash”.

Advantages that speak for themselves:

- Extremely torsion-resistant cable assembly – rotatable through 400° (+/- 200°)
- Reliability & optimum line availability thanks to high resetting accuracy
- Reproducibility & long service life thanks to sturdy and straightforward design
- Great flexibility and optimum component access
- Reduction of maintenance costs since assembly and handling are easy
- The comprehensive protection against dust and welding spatter offers maximum reliability

■ Additional feature:

Optional airblast function through the cable assembly

Area of application:

For all applications where a mechanical cut-out is required



Robot Mount "iCAT"

System Overview & Technical Data

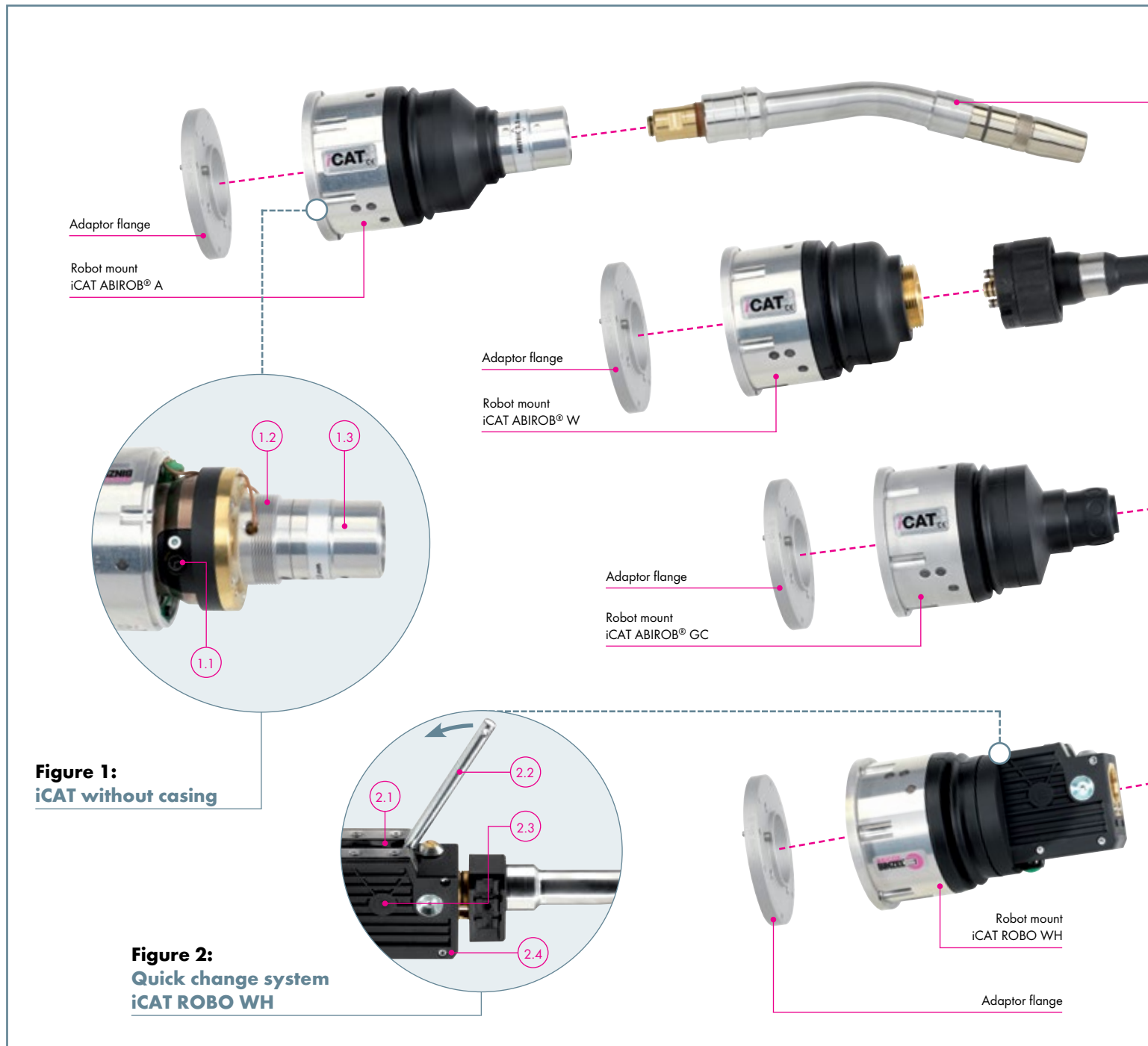


Figure 1:
iCAT ABIROB® A without casing

- 1.1 Clamping screw for safe clamping of the cable assembly
- 1.2 Thread for easy removal of the protective cap without tools being necessary
- 1.3 Torch seat for the corresponding torch necks of the torch systems ABIROB® A, ABIROB® W, ABIROB® GC and ROBO WH



Figure 2:
Quick change system iCAT ROBO WH

- 2.1 Rubber seals prevent dust/spatter penetration
- 2.2 Tool for manual torch neck replacement (hand lever)
- 2.3 Integrated wire-cutting function for torch neck replacement
- 2.4 Sturdy housing for change body



Technical data:
Robot mount iCAT

Dimensions:	Length 162 mm Ø 90 mm
Weight:	approx. 1600 g approx. 2100 g (inc. adaptor flange and torch)
Release force:	36 N* +/- 3 N (at 360 mm distance to the robot flange)
Maximum deflection:	– Deflection in the X- and Y-axis: approx. 10° – Deflection in the Z-axis: approx. 4 – 8 mm
Triggering the emergency-off switch:	– Deflection in the X- and Y-plane: approx. 0.7 – 1° – Deflection in the Z-plane: approx. 0.5 – 1°
Resetting accuracy:	< +/- 0.1 mm (at 300 mm distance to the robot flange)
Load capacity of safety cut-out:	24 v DC, max. 100 mA

The capacity data for the robot mount in connection with the corresponding torch necks can be found in the respective chapters.

* Further spring forces available on request.

Robot Mount “iCAT”

Cable Assemblies for Hollow Wrist Robots

1. Cable assemblies with connection over interface

Sectional view

2. Cable assemblies with direct connection to iCAT

Sectional view

1. Cable assemblies with connection over interface

Configuration	Cooling	Rating (at 100% DC)	suitable for torch type										optionally wire brake available
			ABIROB® A			ABIROB® W			ROBO	ROBO WH			
			300	360	500	300	500	600	350 GC	300	500	600	
BIKOX®	air	360 A CO ₂ 340 A Mixed gases ¹	✓	✓	✓	–	–	–	✓	–	–	–	no
BIKOX®-Hybrid assembly with central gas flow ²	liquid	360 A CO ₂ 340 A Mixed gases ¹	–	–	–	✓	✓	–	–	✓	✓	–	no

2. Cable assemblies with direct connection to iCAT³

Power water cable (single)	liquid	500 A Mixed gases ¹	-	-	-	-	✓	✓	-	-	✓	✓	yes
Power water cable (double)	liquid	600 A Mixed gases ¹	-	-	-	-	-	✓	-	-	-	✓	yes

¹ M21 (EN ISO 14175)

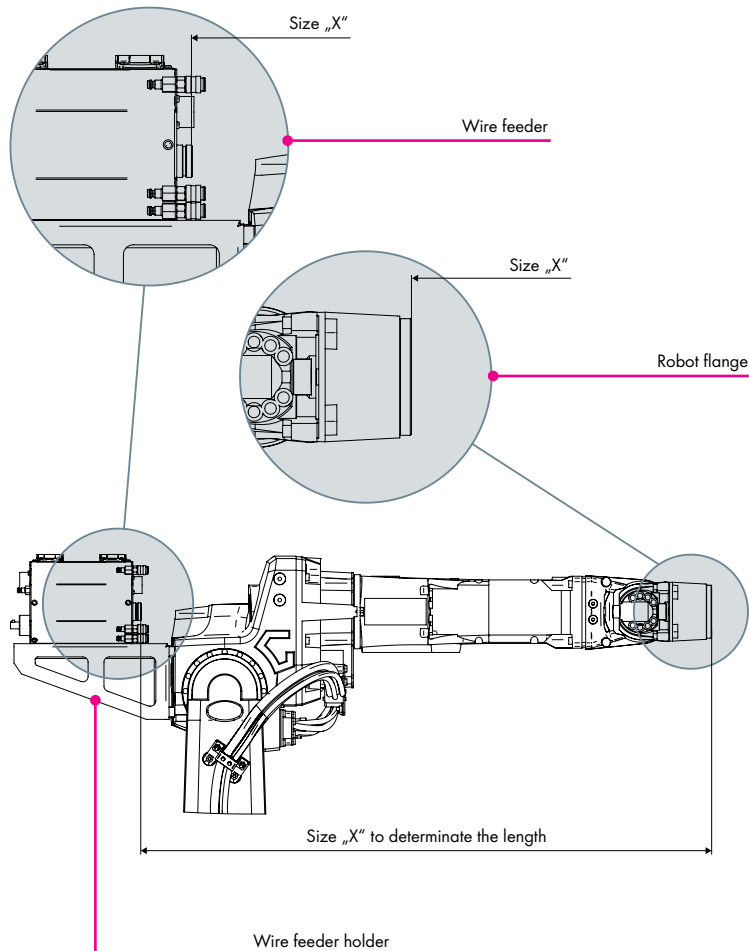
² **Hint:** Due to the central gas flow in the cable assembly not suitable for torch neck ABIROB® W600

³ **Hint:** The passage of the sixth axis at the hollow wrist robot must be at least 45 mm

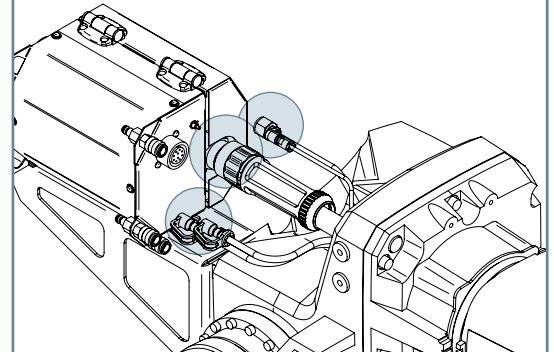
Robot Mount "iCAT"

How to order a Hollow Wrist Cable Assembly

Length determination cable assemblies



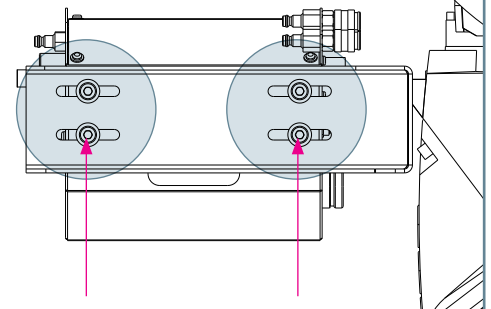
View of machine side connection



Hint:

Important for the configuration of the cable assembly is the correct indication of connections such as control line connectors, connections for coolant hoses, blowing out and so on.

View of wire feeder holder (view from below)



Hint:

For the length determination of the wire feeder it should be positioned in the middle of the elongate holes so that the length of the cable assembly has sufficient flexibility.

Important information for ordering hollow wrist cable assemblies (please fill in):

1. General Information:

Type and manufacturer of the robot:

Type and manufacturer of the wire feeder:

Welding torch system (e.g. ABIROB® A):

Control lines connector (e.g. Amphenol, open, etc. ...):

Size „X“ cable assembly (see above)

2. Desired additional functions:

☐ Blowing out function

☐ Gas nozzle sensor

☐ Wire brake

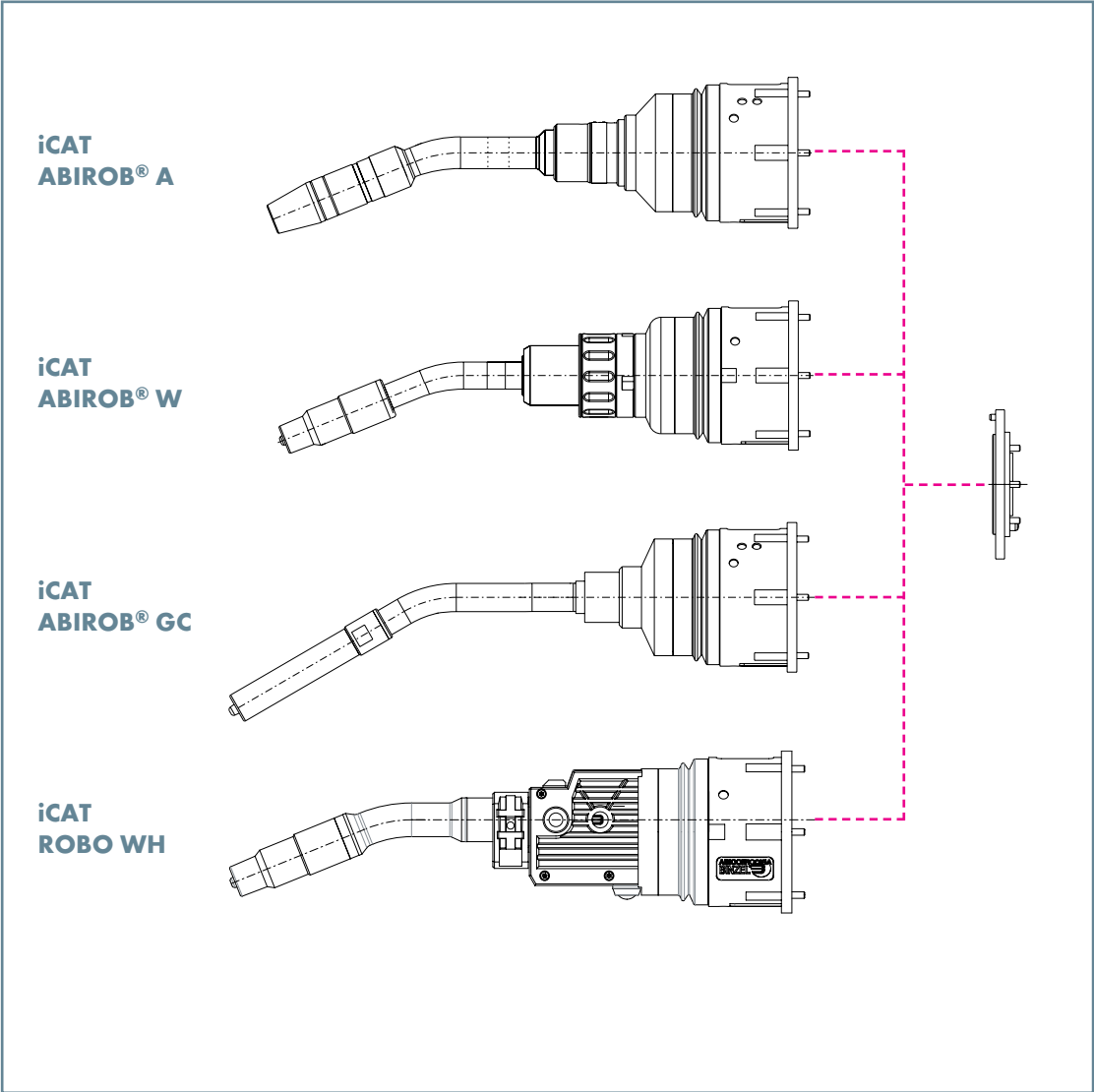
☐ Wire feeding button

3. Other information:

Robot Mount “iCAT”

Robot Mount & Adaptor Flanges

Robot mount iCAT



Description	Part-No.
Robot mount iCAT ABIROB® A cpl.	780.3101.1
Robot mount iCAT ABIROB® W cpl.	780.3130.1
Robot mount iCAT ABIROB® GC cpl.	780.3110.1
Robot mount iCAT ROBO WH	780.3150.1

Please note: The corresponding torch necks can be found in the respective chapters from page 7.

Adaptor flanges



Type	Description	Part-No.
Adaptor flange for YASKAWA®	EA1400N / SSA 2000 or EA1900N	780.0575.1
Adaptor flange for ABB®	IRB 1600 ID	780.0589.1
Adaptor flange for KUKA®	KR5 Arc HW	780.0590.1
Adaptor flange for FANUC®	Arc Mate iC Series	780.0583.1
Adaptor flange for OTC®	All B4 or AIIX B4L	780.0696.1

Adaptor flanges for other welding robots on request. Please indicate the robot type.

Robot Mount “iCAT”

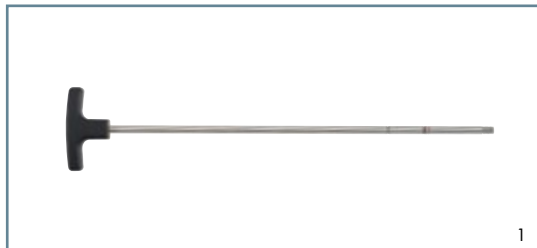
Liners & Accessories

Liners

Type	for connection type ¹	Wire-Ø	up to L=2.2 m	up to L=3.6 m
Liner steel	ABICOR BINZEL® Euro central connection	Ø 1.0-1.2	-	124.0146.1
Liner steel	Fronius®	Ø 1.0-1.2	124.0174	-
Liner steel	OTC®	Ø 1.0-1.2	124.0166	-
Liner steel	Panasonic®	Ø 1.0-1.2	124.0164	-

¹ Liners for further connection types are available on request.

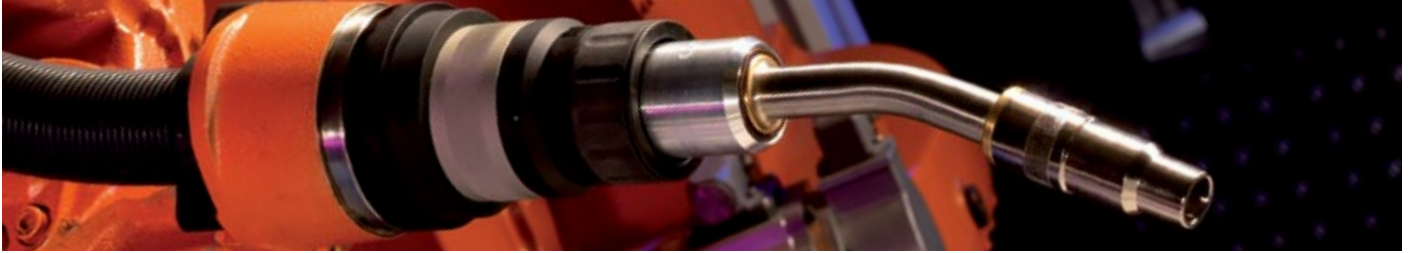
Accessories



Description	Part-No.
1 Insertion aid (for straightforward cable assembly attachment)	980.2153
not ill. Corrugated hose clamp cpl. (for KUKA® KR5 arc HW)	400.1407.1
Corrugated hose clamp cpl. (for KUKA® KR16 arc HW)	400.1428.1
Corrugated hose clamp cpl. (for YASKAWA® EA 1400 / EA 1900)	400.1153.1
Corrugated hose clamp cpl. (for OTC® Almaga Ax V4)	400.1363.1
Corrugated hose clamp cpl. (for REIS® RV 20/30)	400.1360.1
not ill. Protective tube (length specification required)	109.0074
not ill. Corrugated hose end piece NW36	500.0453
not ill. Protective hood (for iCAT)	191.0117

Robot Peripherals

Robot Mount “iSTM”



Sturdy and stable in a slim design ...

iSTM – the robot mount for welding robots with central media feeding through the center axis offers a high level of safety & flexibility for both air and liquid cooled welding torches.

The iSTM system can be used in connection with the tried-and-trusted ABICOR BINZEL torch necks of the torch series ABIROB® A, ABIROB® W and ABIROB® GC. The slim yet sturdy and stable design reduces servicing costs since handling and assembly are extremely easy.

The robot mount was especially developed for hollow axis robots with integrated collision software.

Advantages that speak for themselves:

- Extremely torsion-resistant cable assembly – rotatable through 400° (+/- 200°)
- Great flexibility and optimum component access
- Maximum reliability thanks to comprehensive protection against dust and welding spatter

■ Additional feature:

Optional airblast and spraying function through the cable assembly

Area of application:

Hollow wrist robots with integrated collision software



Robot Mount “iSTM”

System Overview & Technical Data

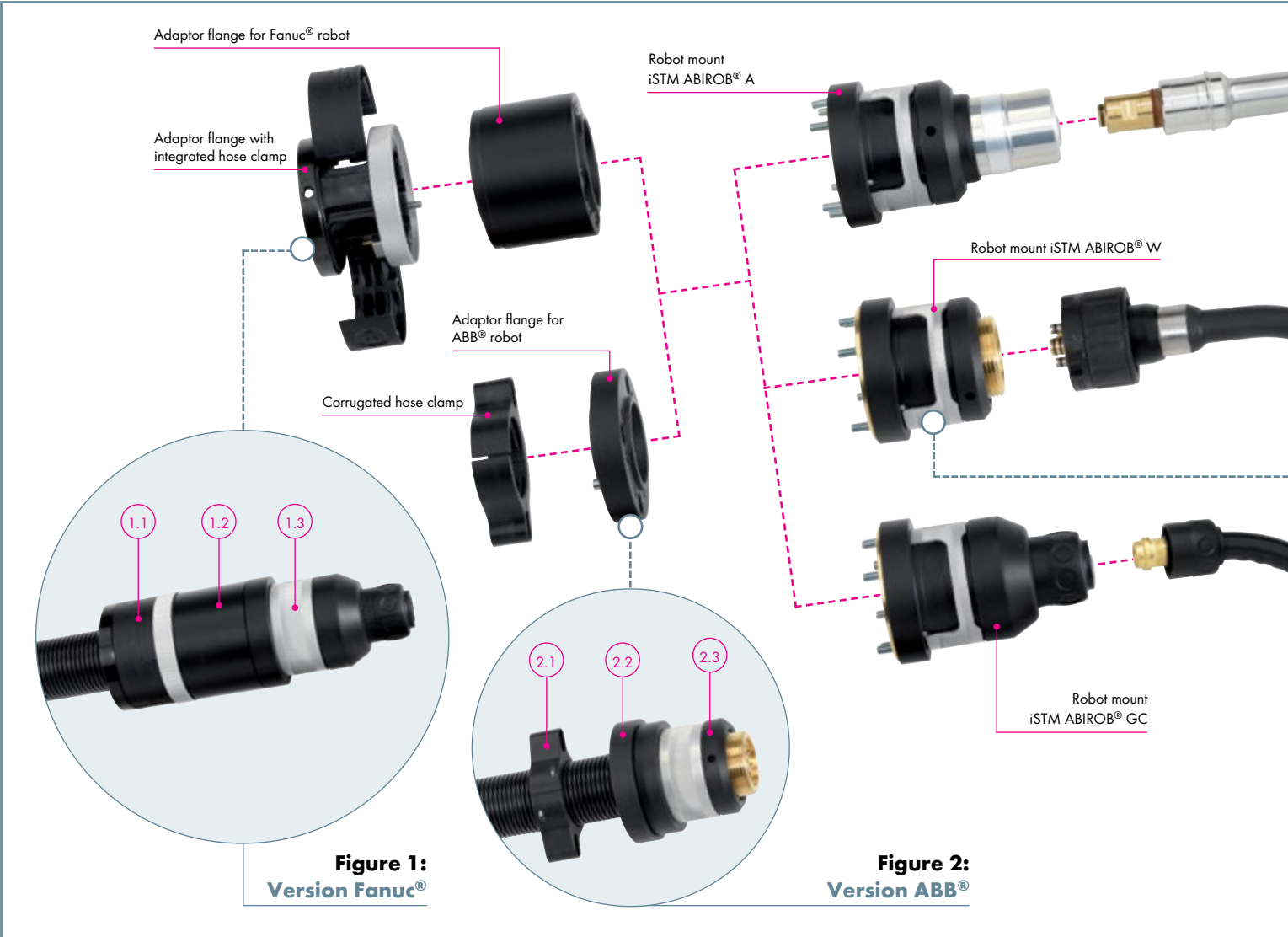


Figure 1:
Version Fanuc® with iSTM ABIROB® GC

- 1.1 Adaptor flange with integrated hose clamp
- 1.2 Adaptor flange for Fanuc® robot
- 1.3 Robot mount iSTM ABIROB® GC

Figure 2:
Version ABB® with iSTM ABIROB® W

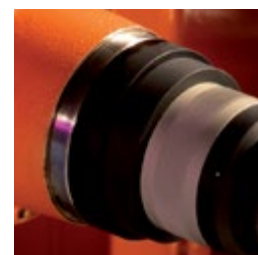
- 2.1 Corrugated hose clamp for ABB® robot
- 2.2 Adaptor flange for ABB® robot
- 2.3 Robot mount iSTM ABIROB® W



Figure 3:
iSTM open

Figure 3:
iSTM open

- 3.1 Clamping screw to hold the cable assembly in place safely
- 3.2 Control opening for checking the correct position of the cable assembly



Technical data (EN 60 974-7):

Dimensions: Length 109 mm
Ø 73 mm

Weight:

- without torch neck approx. 900 g
- with ABIROB® A300 approx. 1200 g
- with ABIROB® A360 approx. 1200 g
- with ABIROB® A500 approx. 1200 g
- with ABIROB® W500 approx. 1500 g
- with ABIROB® 350GC approx. 1200 g

Robot Mount “iSTM”

Cable Assemblies for Hollow Wrist Robots

1. Cable assemblies with connection over interface

Cable assembly is locked with clamping screws in the iSTM

Mounting direction

Sectional view

Airblast hose

Water hose

BIKOX®
(welding wire, inert gas, welding power)

Control line

2. Cable assemblies with direct connection to iSTM

Cable assembly is fixed with screws to the iSTM

Mounting direction

Sectional view

Airblast hose

Gas hose

Control line

Wire feeding hose

Power water cable

1. Cable assemblies with connection over interface

Configuration	Cooling	Rating (at 100% DC)	suitable for torch type										optionally wire brake available
			ABIROB® A			ABIROB® W			ROBO	ROBO WH			
			300	360	500	300	500	600	350 GC	300	500	600	
BIKOX®	air	360 A CO ₂ 340 A Mixed gases ¹	✓	✓	✓	–	–	–	✓	–	–	–	no
BIKOX®-Hybrid assembly with central gas flow ²	liquid	360 A CO ₂ 340 A Mixed gases ¹	–	–	–	✓	✓	–	–	✓	✓	–	no

2. Cable assemblies with direct connection to iCAT³

Power water cable (single)	liquid	500 A Mixed gases ¹	-	-	-	-	✓	✓	-	-	✓	✓	yes
Power water cable (double)	liquid	600 A Mixed gases ¹	-	-	-	-	-	✓	-	-	-	✓	yes

¹ M21 (EN ISO 14175)

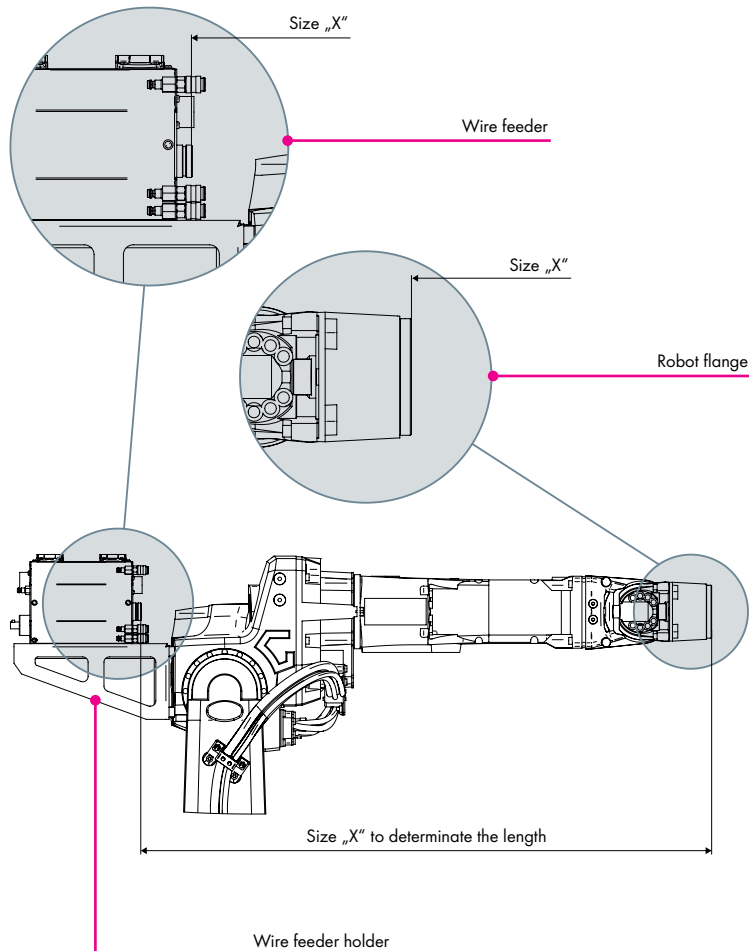
² **Hint:** Due to the central gas flow in the cable assembly not suitable for torch neck ABIROB® W600

³ **Hint:** The passage of the sixth respectively the first axis at the hollow wrist robot must be at least 45 mm

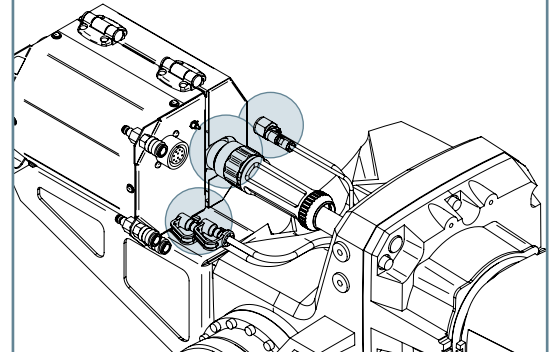
Robot Mount “iSTM”

How to order a Hollow Wrist Cable Assembly

Length determination cable assemblies



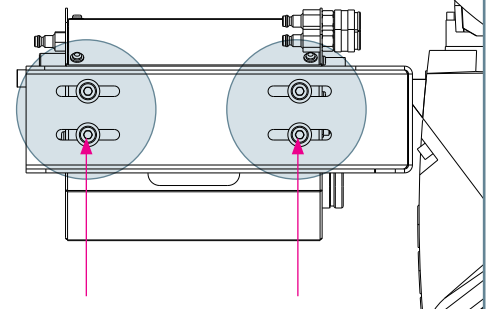
View at machine side connection



Hint:

Important for the configuration of the cable assembly is the correct indication of connections such as control line connectors, connections for coolant hoses, blowing out and so on.

View of wire feeder holder (view from below)



Hint:

For the length determination of the wire feeder it should be positioned in the middle of the elongate holes so that the length of the cable assembly has sufficient flexibility.

Important information for ordering hollow wrist cable assemblies (please fill in):

1. General Information:

Type and manufacturer of the robot:

Type and manufacturer of the wire feeder:

Welding torch system (e.g. ABIROB® A):

Control lines connector (e.g. Amphenol, open, etc. ...):

Size „X” cable assembly (see above)

2. Desired additional functions:

☐ Blowing out function

☐ Gas nozzle sensor

☐ Wire brake

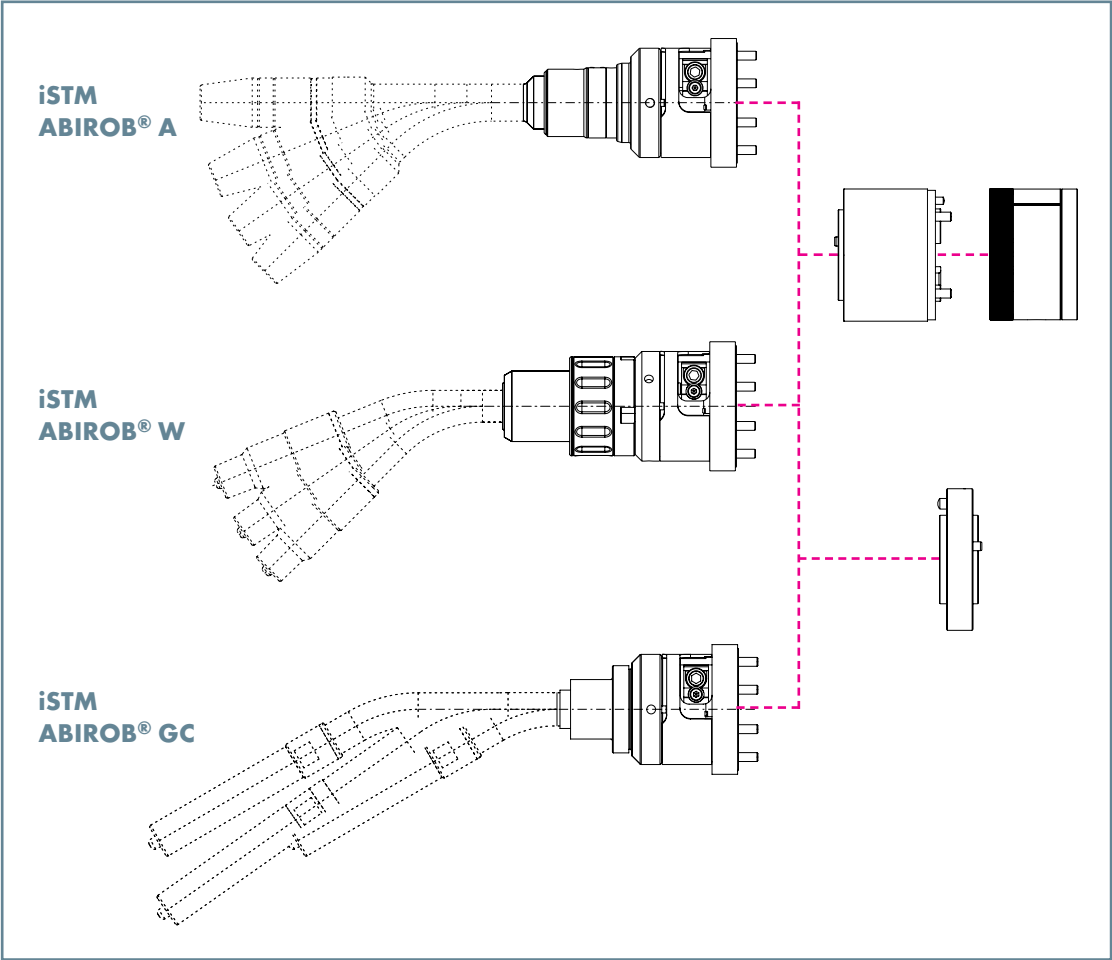
☐ Wire feeding button

3. Other information:

Robot Mount “iSTM”

Robot Mount & Adaptor Flanges

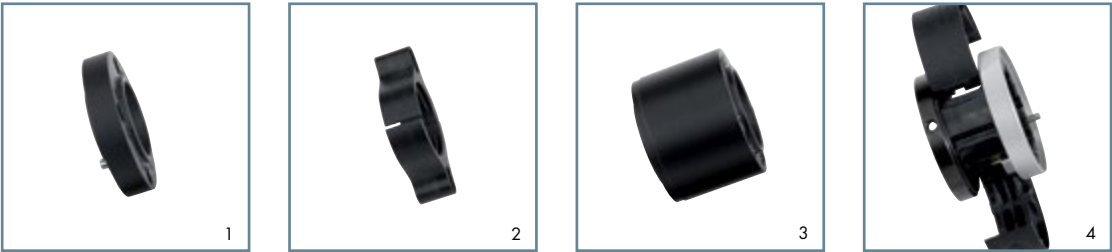
Robot mount iSTM



Description	Part-No.
Robot mount iSTM ABIROB® A cpl.	780.3200
Robot mount iSTM ABIROB® W cpl.	780.3210
Robot mount iSTM ABIROB® GC cpl.	780.3230

Please note: The corresponding torch necks can be found in the respective chapters from page 7.

Adaptor flanges



Type	Description	Part-No.
1 Adaptor flange for ABB®	ABB® IRB 1600 ID	780.0678
2 Corrugated hose clamp	ABB® IRB 1600 ID	400.1194.1
3 Adaptor flange for Fanuc®	Fanuc® Arc Mate iC Series	780.0680
4 Adaptor flange with integrated hose clamp	Fanuc® Arc Mate iC Series	780.3220.1

Adaptor flanges for other welding robots on request. Please indicate the robot type.

Robot Mount “iSTM”

Liners & Accessories

Liners

Type	for connection type ¹	Wire-Ø	up to L=2.0 m
Liner steel	ABICOR BINZEL® Euro central connection	Ø 1.0-1.2	124.0145.1
Liner steel	Fronius®	Ø 1.0-1.2	124.0174
Liner steel	OTC®	Ø 1.0-1.2	124.0165
Liner steel	Panasonic®	Ø 1.0-1.2	124.0163.1

¹ Liners for further connection types are available on request.

Accessories



Description	Part-No.
1 Insertion aid (for straightforward cable assembly attachment)	980.2030
not ill. Protective tube (length specification required)	109.0074
not ill. Corrugated hose end piece NW36	500.0453

Robot Peripherals

TCP Programming Aid “ABIDOT”



Robot programming to the point ...

The programming aid ABIDOT is simply screwed onto the robot torch instead of the gas nozzle for the programming process. Four laser points project completely touchless the stick-out of the wire onto the product. Known problems like the bending of the wire while touching the workpiece are a thing of the past. This makes the programming process easier in many ways.

Wire stick-out can be adjusted with a scale on the ABIDOT. This facilitates maintaining the correct distance during programming, optimum wire position and penetration during welding.

The optimum TCP (Tool Center Point) is reached when all four laser LEDs combine to only a single focal point on the workpiece – really clever!

Advantages that speak for themselves:

- ABIDOT shortens programming times considerably
- ABIDOT increases weld quality through optimum positioning and consistent torch stand off
- ABIDOT reduces the costs for programming and offers savings through reduced rework and improved quality

Application areas:

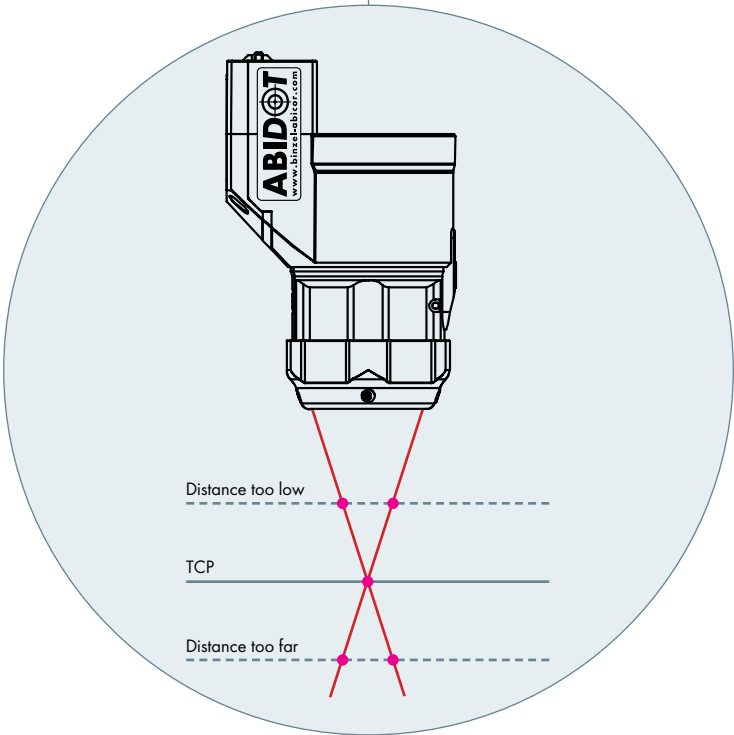
Welding robots from all current brands



TCP Programming Aid “ABIDOT”

System Overview & Technical Data

Figure 1:
Alignment TCP



LED charge status display

Protective cap



Figure 1:
Alignment TCP

The optimum torch position is reached when all four laser LED beams combine to only a single focal point on the workpiece. If two or more points are visible the torch is either too close to the workpiece or too far away.

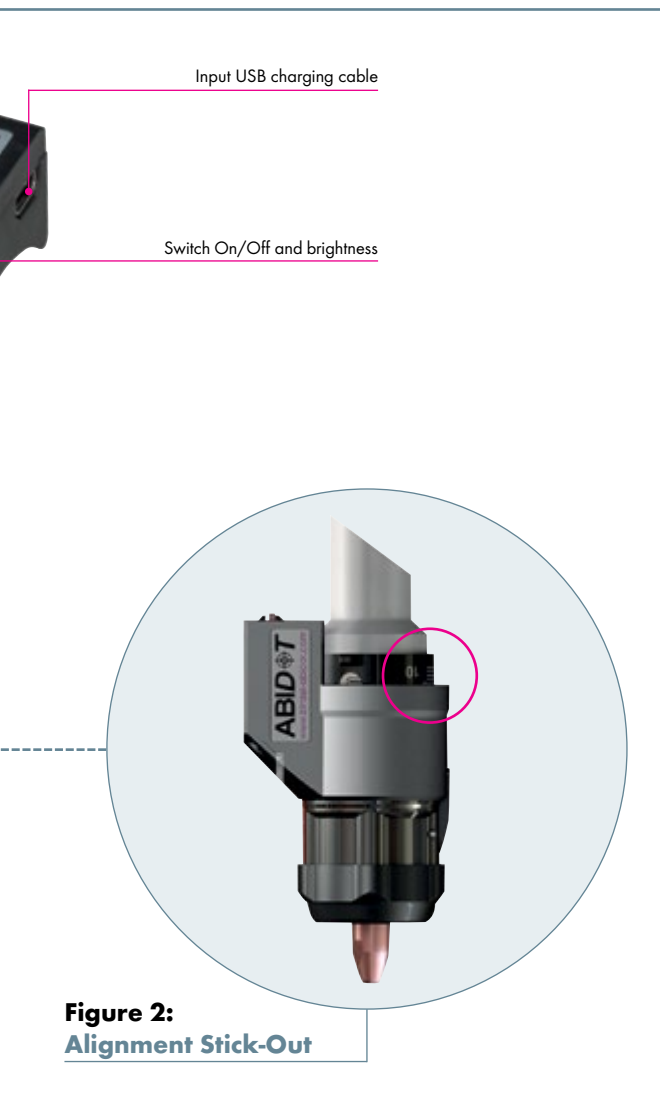


Figure 2:
Alignment Stick-Out

Wire stick-out – the “free end of the wire” – can be adjusted with a scale on the ABIDOT. This facilitates obtaining the correct distance during programming, the optimum wire position and penetration during welding.



Technical data:

ABIDOT

Laser protection class:	EN 60825-1: 2007 / 2M / 670 nm / 2.5 mW
Input:	100–240 V AC / 150 mA / 50–60 Hz
Output:	5 V DC / 500 mA
Protection class:	IP3X
Ambient temperature:	–10°C up to +40°C
Charging time:	approx. 30 minutes
Operating time:	approx. 7 hours
Relative air humidity:	up to 90 % at 20°C
Transport and storage:	–10°C up to +55°C
Charging station & power supply:	with micro USB connection

TCP Programming Aid "ABIDOT"

Order Overview

1 ABIDOT Complete unit

incl. adapter-sleeve,
power supply, charging
station, protective cap
(1 pc.)



Type	Part-No.
ABIDOT complete for A360	837.0884.1
ABIDOT complete for A500	837.0790.1
ABIDOT complete for W500	837.0791.1
ABIDOT complete for 65X TS	837.0792.1
ABIDOT complete for W600	837.0793.1
ABIDOT complete for ROBO 455D	837.0944.1
ABIDOT complete for FRONIUS® ROBACTA 5000	837.0943.1
ABIDOT complete for SKS®	837.0914.1

2 ABIDOT without adapter-sleeve, power supply, charging station (1 pc.)



Type	Part-No.
ABIDOT without equipment	837.0787.1

3 Adapter-sleeve (1 pc.)



Type	Part-No.
Adapter-sleeve for A360	837.0885.1
Adapter-sleeve for A500	837.0799.1
Adapter-sleeve for W500	837.0800.1
Adapter-sleeve for 65X TS	837.0801.1
Adapter-sleeve for W600	837.0802.1
Adapter-sleeve for ROBO 455D	837.0937.1
Adapter-sleeve for FRONIUS® ROBACTA 5000	837.0935.1
Adapter-sleeve for SKS®	837.0915.1

4 Charging station (1 pc.)



Type	Part-No.
Charging station	400.1415.1

5 Power supply (1 pc.)



Type	Part-No.
Power supply with micro USB connection	184.0393.1

6 Protective cap (1 pc.)



Type	Part-No.
Protective cap	400.1419.1

Robot Peripherals

Electronic Welding Regulator “EWR”



Weld more efficiently – optimise shielding gas consumption ...

Optimal use of all resources is essential for an economical and efficient welding process. However, options for optimisation of shielding gas consumption are often given too little consideration – primarily because of the difficulty of attributing and measuring them, as gases are not visible and tangible in the process.

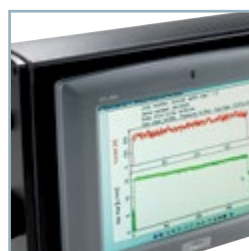
ABICOR BINZEL offers the electronic shielding gas regulator EWR (Electronic Welding Regulator). This system saves shielding gas at the same time as providing better gas coverage! Reliable, defined and verifiable.

Advantages that speak for themselves:

- High gas saving
- Increased process stability
- Longer lifetimes
- Reduced handling costs
- Standardised processes
- Less reworking

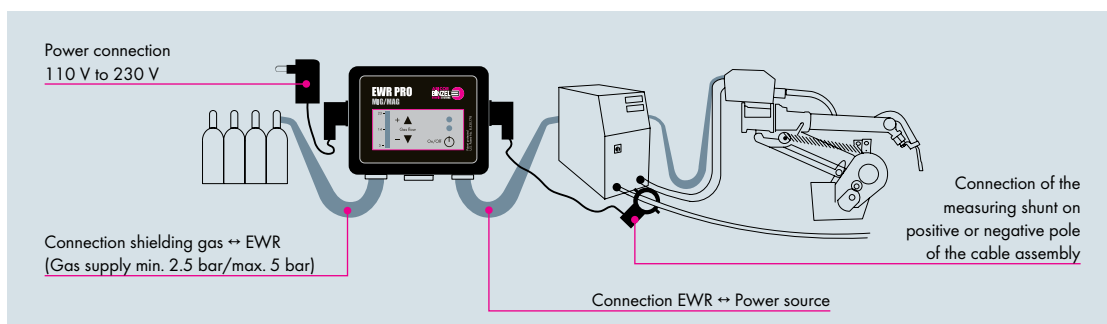
Application area:

Robot controlled MIG/MAG and TIG welding processes



Electronic Welding Regulator "EWR"

System Overview & Technical Data



"Plug & Play"

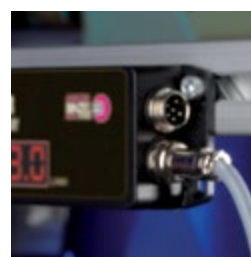
The installation of the EWR is done within minutes.
Save gas – quick and easy!

Installation of the EWR:

- Connection of the EWR between the gas supply and the power source
- Connection of the measuring shunt on the negative pole cable (or positive pole of the cable assembly)
- Ensure power supply connection



**Figure 2:
Welding Monitor**



**Figure 1:
EWR Control panel**

- 1.1 LED panel for visualisation of the preset gas flow
- 1.2 Buttons for preset of the required gas flow
- 1.3 LEDs for visualisation of the unit status
- 1.4 Button On/Off
- 1.5 Interface for additional options (only valid for EWR PRO MIG/MAG)

**Figure 2:
Welding Monitor***

- 2.1 Rugged housing
- 2.2 Interface for USB memory stick
- 2.3 Touchscreen
- 2.4 Connectors gas in / gas out

Technical data:

EWR BASIC/PRO MIG/MAG

Weight:	approx. 1.3 kg
Measurements LxWxH:	118x148x58 mm
Electrical connection:	24 V DC, 450 mA – 750 mA
Outgoing idle flow:	0.2–2.0 bar: 5.0–23.0 l/min
Flow rate:	5.0–30.0 l/min 10.6–63.0 cfh

In-/Outgoing pressure: The outgoing dynamic pressure can be set in a area of 0.2 to 2.0 bar in 0.2 bar steps.

The max. adjustable output dynamic pressure is corresponding to the input pressure minus 1.5 bar.

If pressure is below 2 bar the EWR shuts off.

Working range of measuring shunts:

Shunt ↔ Working range
150 A ↔ 45–150 A
300 A ↔ 90–300 A
500 A ↔ 150–500 A

* Pen for touchscreen, USB memory stick, power supply unit and three measuring shunts (300 A & 500 A) are included in the scope of supply.

Electronic Welding Regulator “EWR”

Functioning Principle

**Gas savings
up to 60 %**

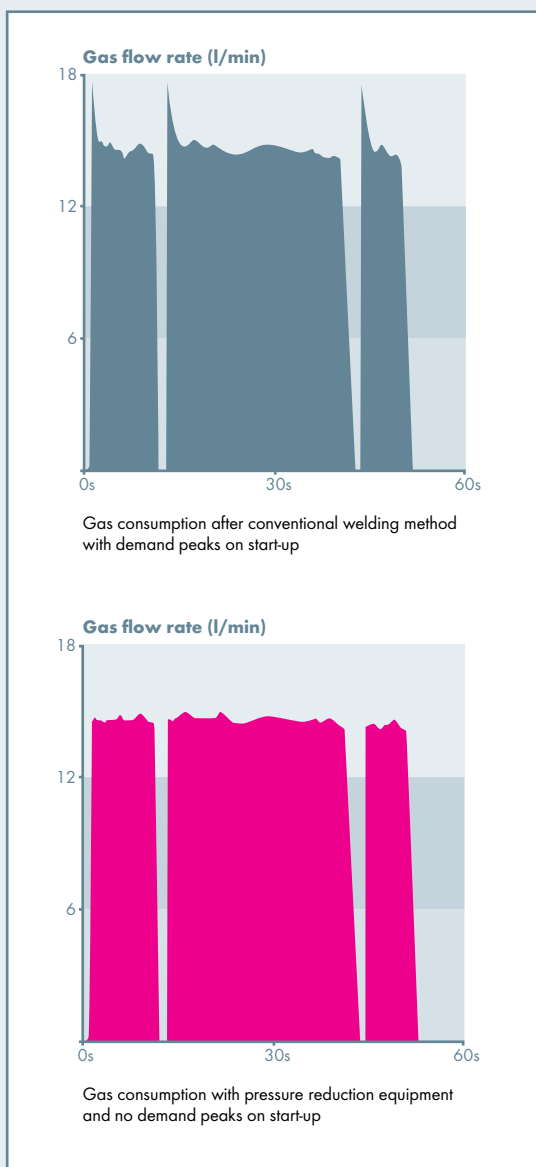
Four methods = save four times!

The EWR electronic shielding gas regulator combines four innovative methods of gas regulation. By combining all four methods, your gas consumption during the welding process can be regulated and reduced by an average of 40 % – ideally even by up to 60 %. Alongside the gas saving, there are other positive effects, for example the safer gas coverage at the start of the welding process.

1st method:

Avoiding demand peaks on arc start

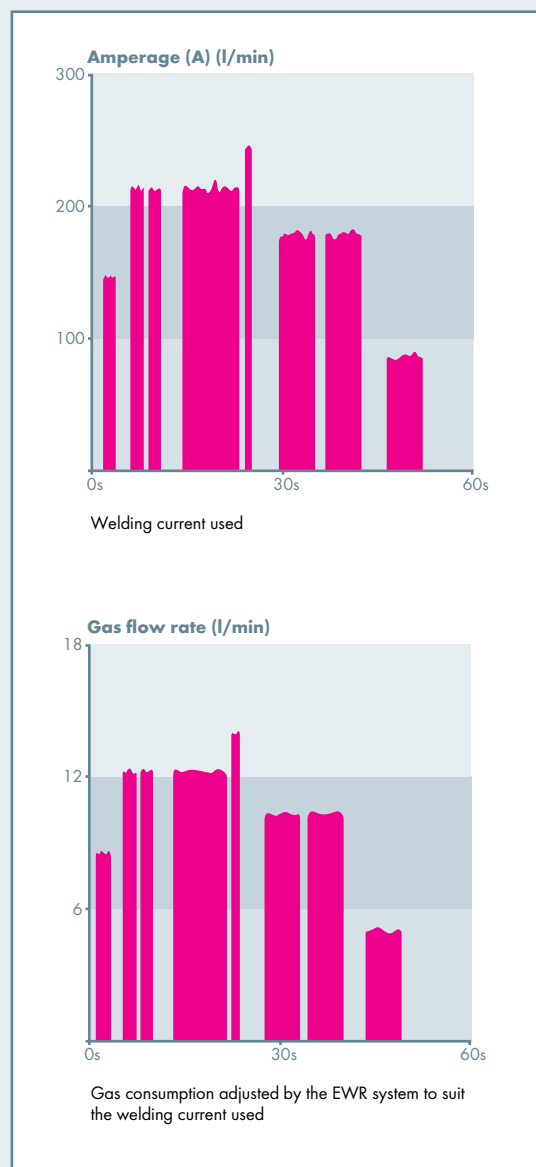
The EWR constantly regulates the gas flow, so no demand peaks occur even at the start of the welding process.



2nd method:

Adjustment of the shielding gas quantity in relation to power consumption

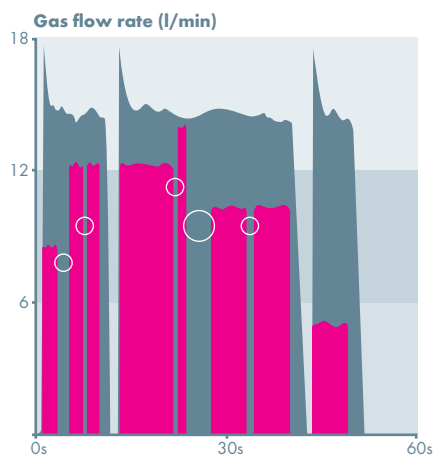
With the aid of a measuring shunt, the EWR records the current welding current and regulates the gas supply accordingly.



3rd method:

Extremely quick frequency valves

Due to frequency valves, which react extremely quickly, there is no loss of gas between opening and closing of the valve.



Comparison of the gas consumption with and without the EWR system

Legend:

- Gas consumption without EWR
- Gas consumption with EWR
- No loss of gas in between single starts

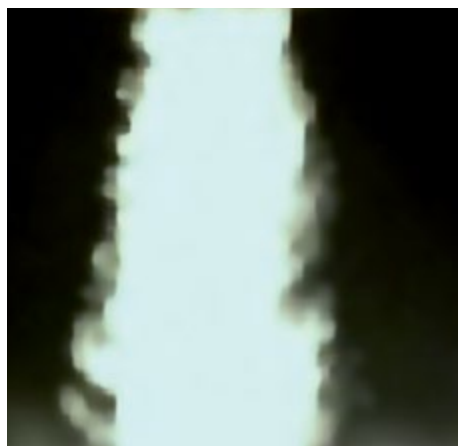
4th method:

Pulsing of the shielding gas at 60 Hz

The 60 Hz pulsing provides better gas coverage at the same gas flow rate.



Gas jet without using the EWR system

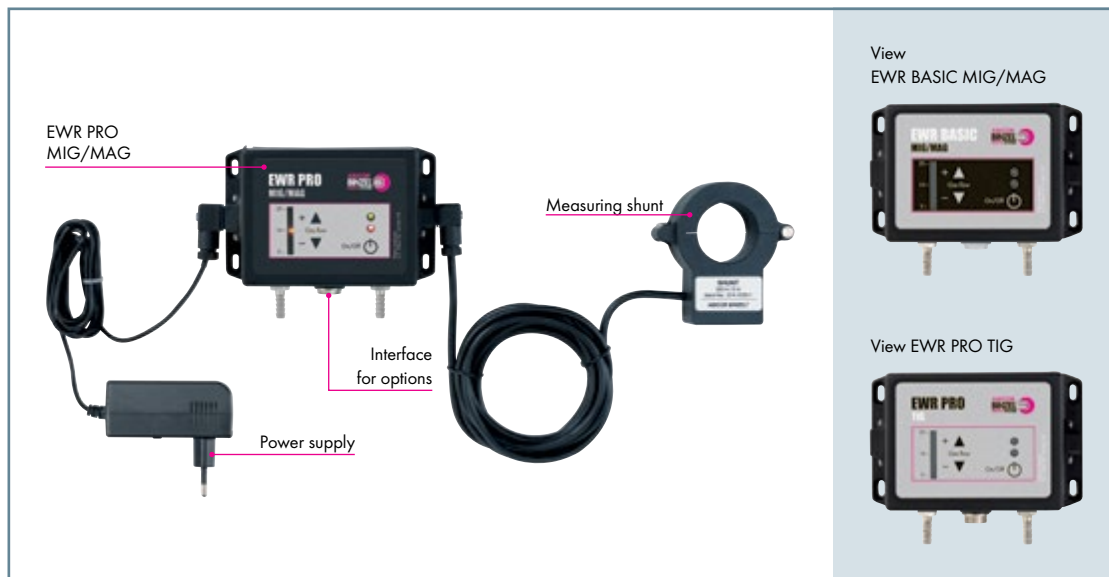


Gas jet with using the EWR system

Electronic Welding Regulator "EWR"

Order Options & Accessories

Scope of supply
EWR BASIC and
EWR PRO



Complete package

Type	Part-No.
EWR BASIC MIG/MAG complete package	514.0107.1
incl. power supply without key lock (230 V)*, measuring shunt (300 A/5 m)	
EWR PRO MIG/MAG complete package	514.1036.1
incl. power supply without key lock (230 V)*, measuring shunt (300 A/5 m)	
EWR BASIC MIG/MAG complete package	514.1019.1
incl. power supply without key lock (230 V)*, measuring shunt (500 A/5 m)	
EWR PRO MIG/MAG complete package	514.1020.1
incl. power supply without key lock (230 V)*, measuring shunt (500 A/5 m)	
EWR PRO TIG complete package	514.1021.1
incl. power supply without key lock (230 V)*, measuring shunt (150 A/3 m)	

* An alternative power supply with key lock is also available with all complete packages instead of the standard power supply without key lock.

Accessories
and options

Accessories

Type	for version	Part-No.
Measuring shunt 150 A/5 m	BASIC, PRO	514.0192.1
Measuring shunt 300 A/5 m	BASIC, PRO	514.1035.1
Measuring shunt 500 A/5 m	BASIC, PRO	514.1007.1
EWR holder	BASIC, PRO	514.1008.1
Power supply standard	BASIC, PRO	514.1023.1
Power supply with key lock ¹	BASIC, PRO	514.1014.1
Protective cap EWR	BASIC, PRO	514.1029.1

Options for EWR PRO MIG/MAG

EWR gas controller (gas flow control unit) ²	PRO	514.1004.1
EWR display ³	PRO	514.1013.1
Signal light ⁴	PRO	514.0126.1
Splitter ⁵	PRO	514.0143.1

¹ Prevents unwanted changing of the default settings

² Signal output to the robot at a disturbance

³ Visualizes the current gas consumption (l / min) during the welding process and shows error messages

⁴ Optical signal output at a disturbance

⁵ Enables the use of two options with EWR PRO MIG/MAG

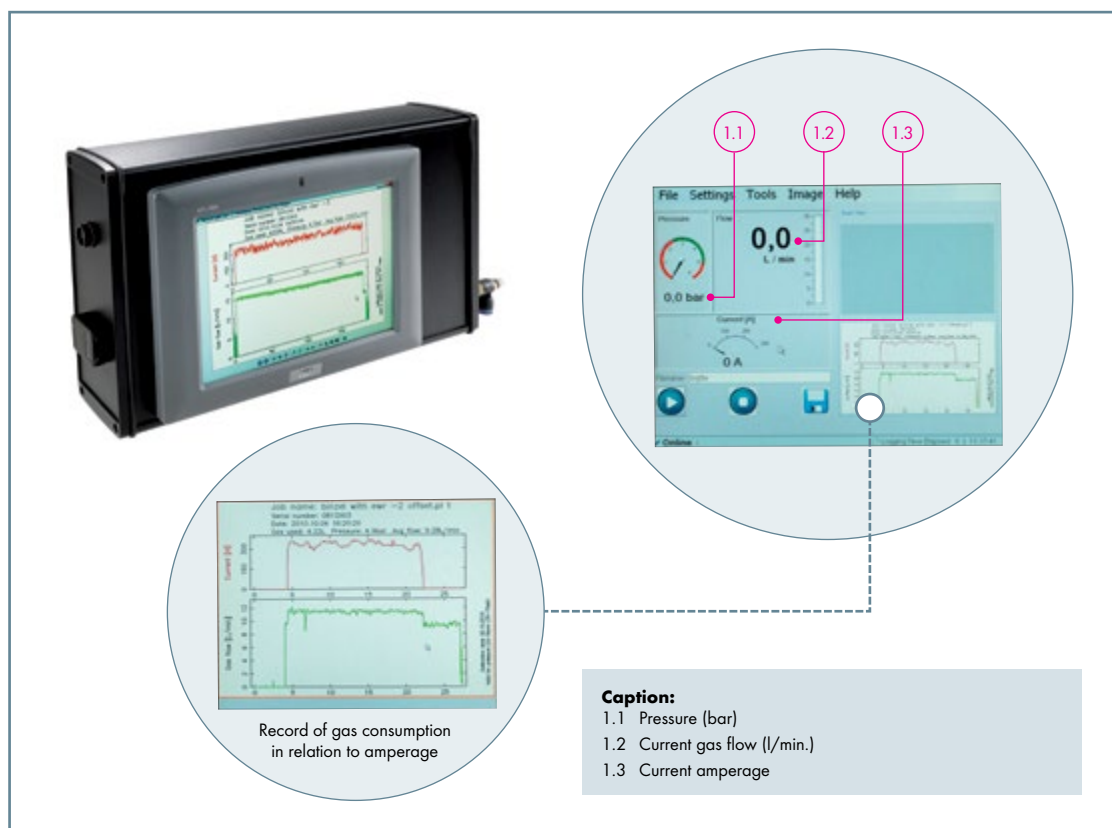
Electronic Welding Regulator “EWR”

Welding Monitor & Accessories

Welding Monitor

The welding monitor serves to measure the gas flow and current strength. The industrial computer based on Windows® XP works stand-alone, i.e. completely independently of the EWR. It is installed between the gas supply and the power source/EWR.

The measuring results transmitted by the measuring shunt are displayed in the form of diagrams and can be saved for the purposes of documentation. The data can be easily transferred via the integrated USB interface.



Complete package

Type

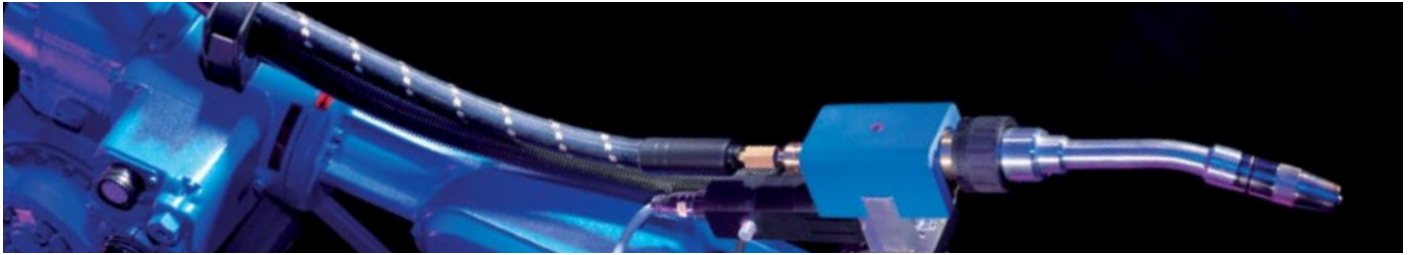
Welding Monitor incl. touch-stick, measuring shunt 150 A/5 m, 300 A/5 m and 500 A/5 m, power supply, USB memory stick and transport case

Part-No.

514.1001.1

Robot Peripherals

Wire Feeder System “MasterLiner”



Top-level wire feeding ...

The products of the MasterLiner series are setting new wire feeding standards. They are made up of individual segments, each turnable by 360°. Four small rollers in every single segment guarantee smooth wire feeding, with almost no resistance. This means – for example with laser applications – that no further wire feeders are required in addition to the master feeder, even over longer distances.

The MasterLiner system is available as MasterLiner and MasterLiner MAXI both in FLEX and HD versions. FLEX stands for flexible. This version is made up of a corrugated hose and connection system and enables a configuration of the exact required length. It can also be repaired in the field. This main advantage is saving time and money. The heavy-duty HD version is fitted with a resistant aramid-reinforced protection for extreme applications.

Arguments that speak for themselves:

- Low friction forces
- Long life time
- Ultrasonic cleaning
- Maintenance free and the overall system is prone to little interference
- Wire feeding over long distances and by only one wire feeder
- Suitable for all welding processes with wire feeding, including laser welding and brazing
- Suitable for all types of wire
- Easy and quick assembly and exchange possible by using quick connectors

Application area:

Robot controlled MIG/MAG, TIG, PLASMA and laser welding processes



Wire Feeder System „MasterLiner HD & FLEX“

System Overview & Technical Data

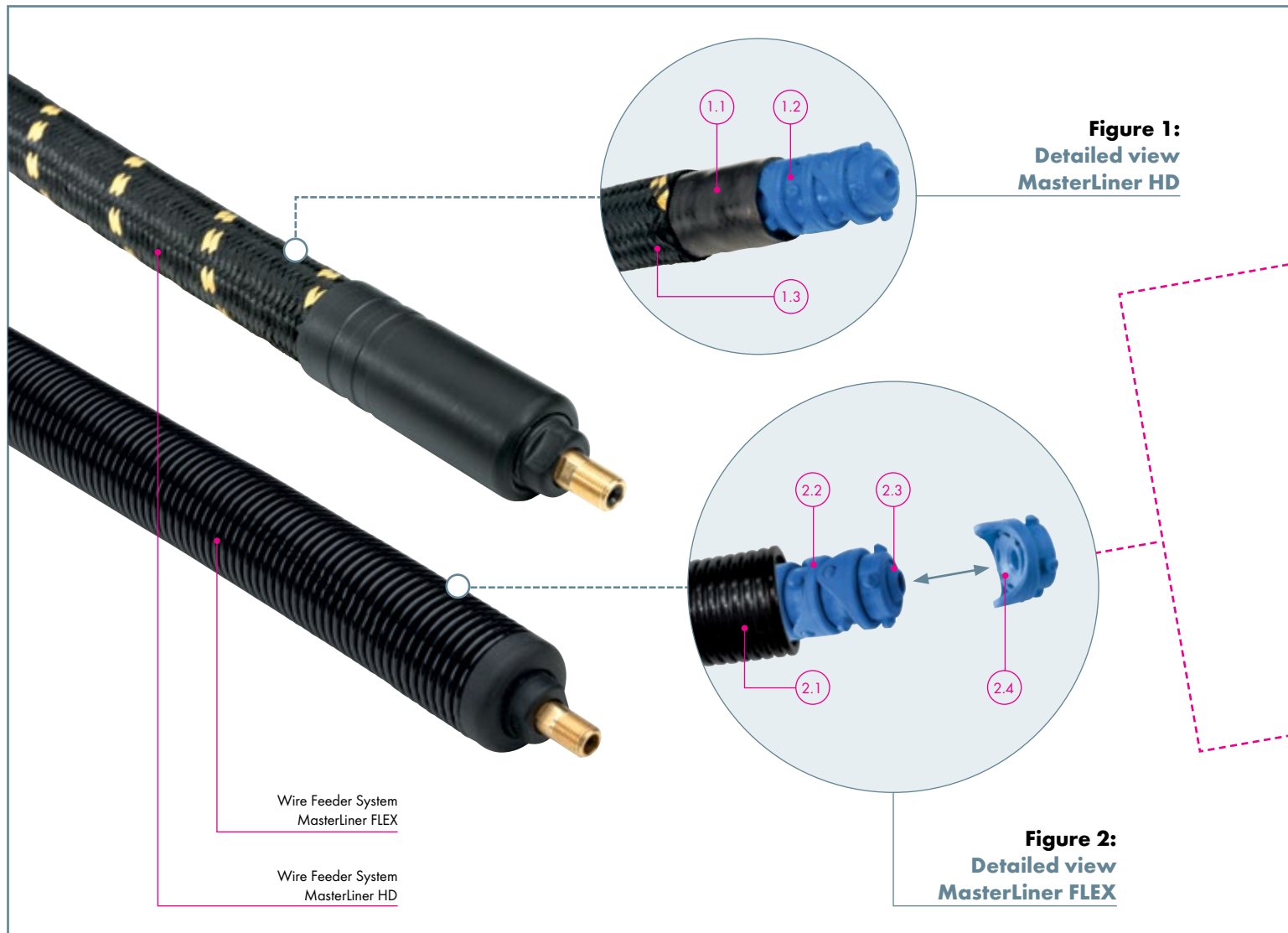


Figure 1:
Detailed view MasterLiner HD

- 1.1 Inner protective sheathing made of rubber – additional protection with high flexibility
- 1.2 MasterLiner with four rollers per segment for minimal friction and extremely short distance between the individual segments
- 1.3 Aramid fibre sheath – for optimum protection against external influences – with heat- and fireresistant fibres, that are characterized by great strength, high impact strength, excellent breaking strain, good vibration damping and resistance to acids and alkalis

Figure 2:
Detailed view MasterLiner FLEX

- 2.1 End fitting for a clean connection to the outer hose
- 2.2 MasterLiner with four rollers per segment for minimal friction and extremely short distance between the individual segments
- 2.3 Side convex (no fixed rolling direction)
- 2.4 Side concave (no fixed rolling direction)

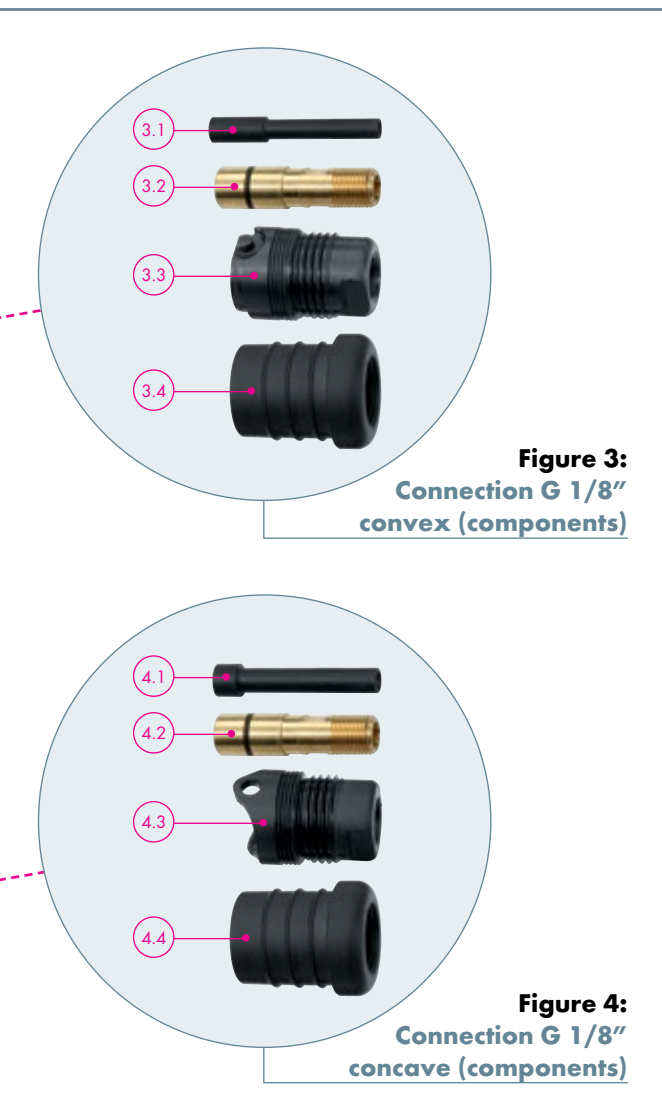
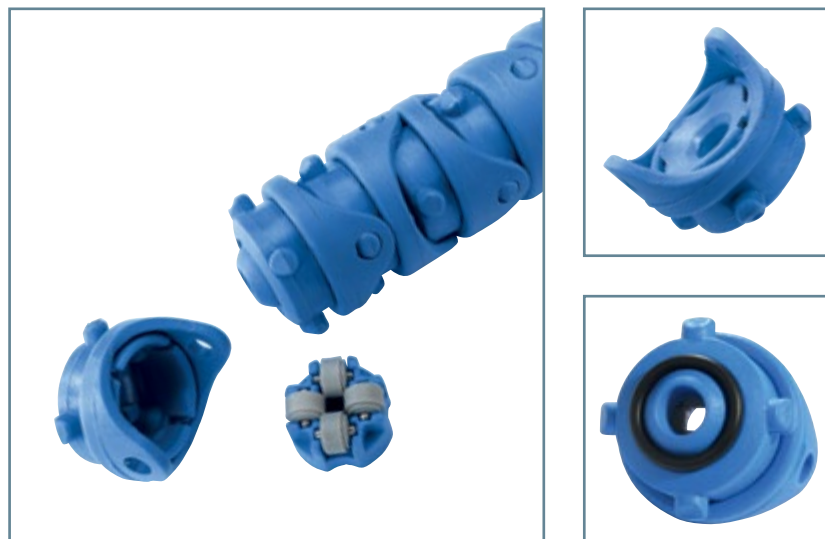


Figure 3:
Connector G 1/8" convex (components)

- 3.1 Long wire guide tube – easy to replace
- 3.2 Sturdy brass connection G 1/8"
- 3.3 Connection MasterLiner convex
- 3.4 End fitting for a clean connection to the outer hose

Figure 4:
Connector G 1/8" concave (components)

- 4.1 Long wire guide tube – easy to replace
- 4.2 Sturdy brass connection G 1/8"
- 4.3 Connection MasterLiner concave
- 4.4 End fitting for a clean connection to the outer hose



Technical Data:
MasterLiner HD:

Outer Ø:	30.0 mm
Wire Ø:	max. 1.2 mm
Weight:	approx. 400 g/m (without connections, with aramid coating)
Recommended length (max.):	25.0 m
Bend radius (min.):	150 mm
Flexibility/tensile strength:	1.500 N
Connection:	G 1/8" and optional G 1/4" (on request)

MasterLiner FLEX:

Outer Ø:	22.0 mm (without outer hose) 34.0 mm (with outer hose)
Wire Ø:	max. 1.2 mm
Weight:	approx. 250 g/m (without outer hose) approx. 400 g/m (with outer hose)
Recommended length (max.):	25.0 m
Bend radius (min.):	150 mm
Flexibility/tensile strength:	600 N
Connection:	G 1/8" and optional G 1/4" (on request)

Wire Feeder System „MasterLiner MAXI HD & FLEX“

System Overview & Technical Data

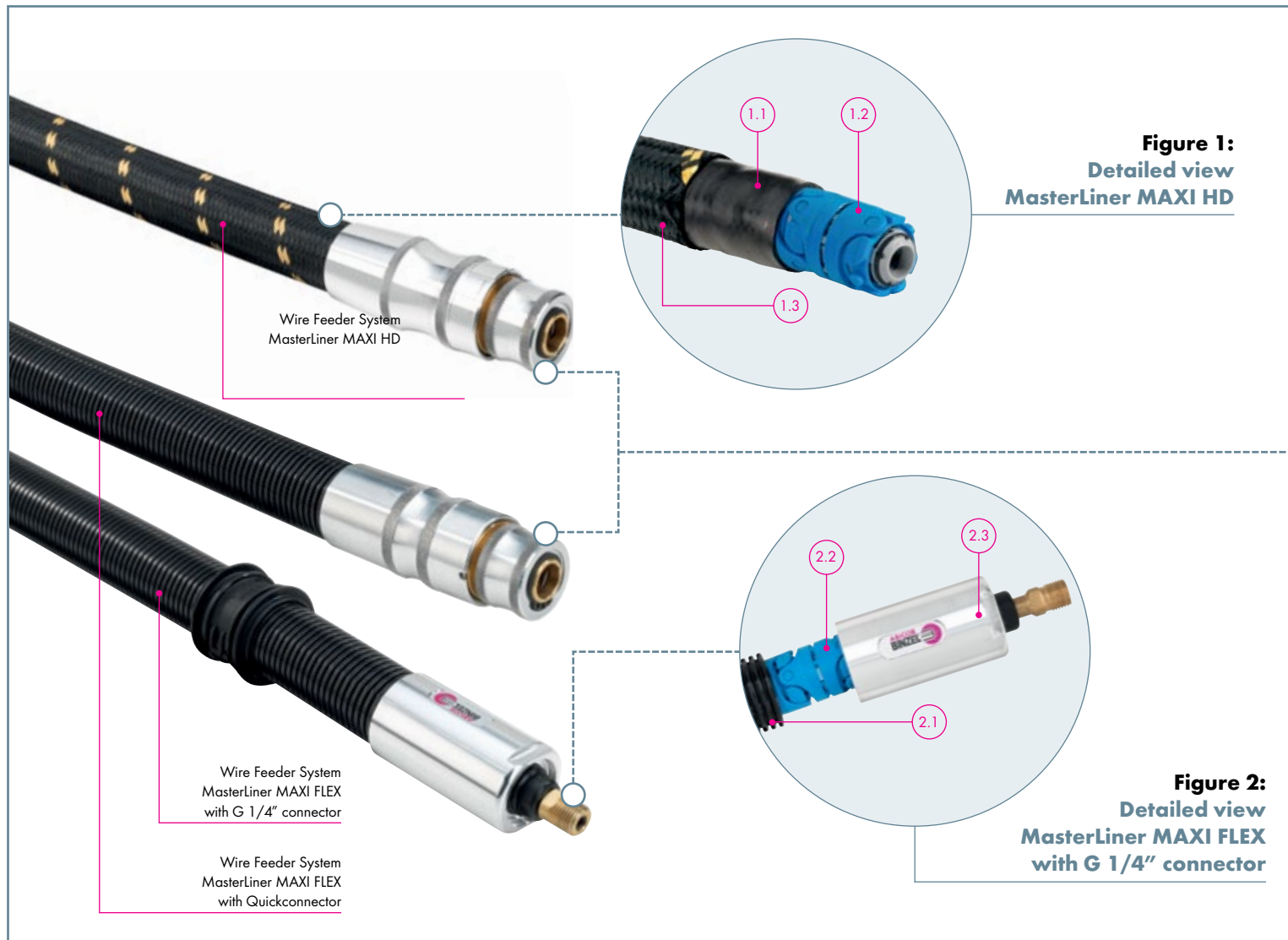


Figure 1:
Detailed view MasterLiner MAXI HD

- 1.1 Inner protective sheathing made of rubber – additional protection with high flexibility
- 1.2 MasterLiner with four rollers per segment for minimal friction and extremely short distance between the individual segments
- 1.3 Aramid fibre sheath for optimum protection against external influences

Figure 2:
Detailed view MasterLiner MAXI FLEX with G 1/4" connector

- 2.1 Outer hose for optimum protection coupled with high flexibility; can be cut to size as required
- 2.2 MasterLiner with four rollers per segment for minimal friction and extremely short distance between the individual segments
- 2.3 Connector G 1/4"

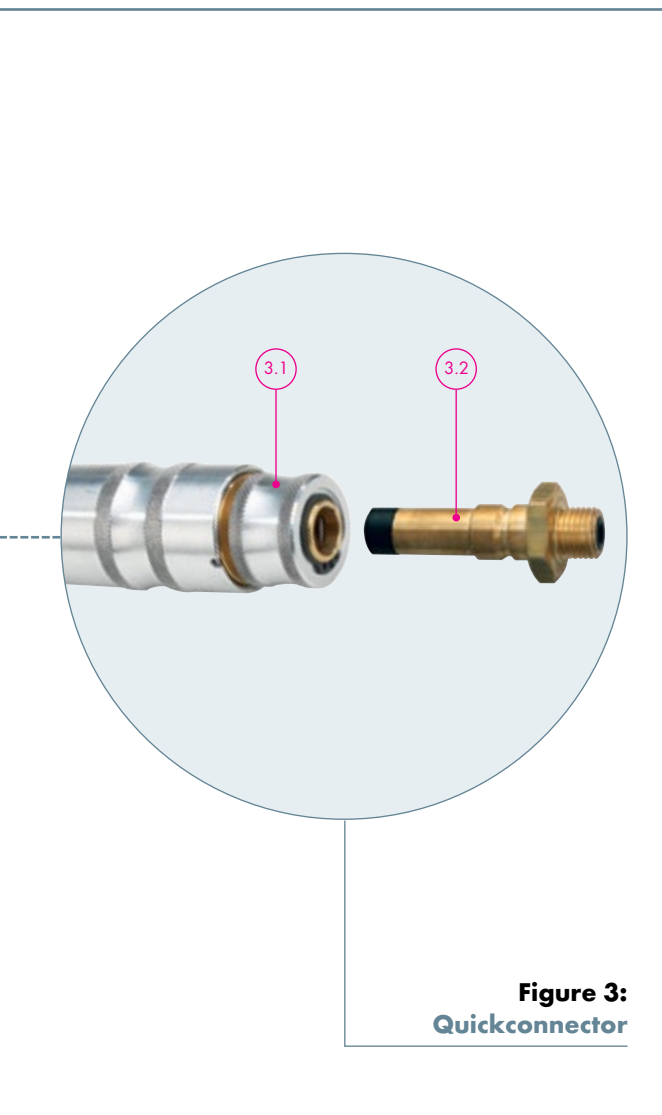


Figure 3:
Quickconnector

Figure 3:
Detailed view Quickconnector

- 3.1 Quickconnector for MasterLiner MAXI FLEX & HD for fast tool-free assembly and disassembly via spring-loaded locking mechanism that can be saved by turning the outer sleeve against accidental pulling
- 3.2 Connector G 1/4" for Quickconnector



Technical Data:

MasterLiner MAXI HD:

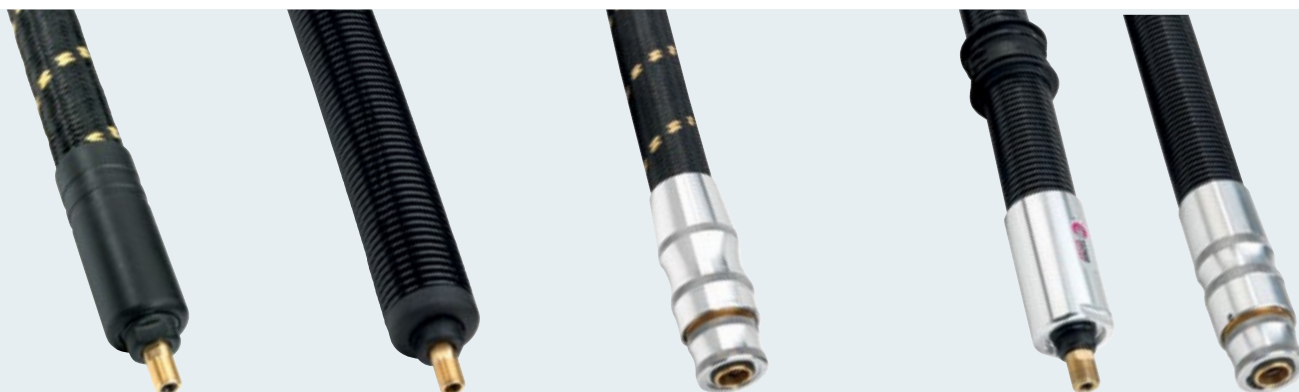
Outer Ø:	32.0 mm
Wire Ø:	1.2 mm bis 4.0 mm
Weight:	approx. 540 g/m (without connections, with aramid coating)
Recommended length (max.):	30.0 m
Bend radius (min.):	150 mm
Flexibility/tensile strength:	1.500 N
Connection:	Quickconnector

MasterLiner MAXI FLEX:

Outer Ø:	27.0 mm (without outer hose) 34.0 mm (with outer hose)
Wire Ø:	1.2 mm bis 4.0 mm
Weight:	approx. 460 g/m (without outer hose) approx. 610 g/m (with outer hose)
Recommended length (max.):	30.0 m
Bend radius (min.):	150 mm
Flexibility/tensile strength:	600 N
Connection:	G 1/4" or Quickconnector

Wire Feeder System "MasterLiner"

Complete Set



1. Complete Set MasterLiner HD

Connection:
G 1/8"

Properties

Feeding of wire sizes up to 1.2 mm and aramid-reinforced protection for extreme applications

2. Complete set MasterLiner FLEX

Connection:
G 1/8"

Properties

Feeding of wire sizes up to 1.2 mm and easy assembling of the required length and also repairing directly in the field

3. Complete set MasterLiner MAXI HD

Connection:
Quickconnector

Properties

Feeding of wire sizes from 1.2 mm and comfortable Quickconnector

4. Complete set MasterLiner MAXI FLEX

Connection:
G 1/4" or Quickconnector

Properties

Individual and easy to configure with two different connections for selection and feeding of wire sizes from 1.2 mm to 4.0 mm

1. Complete set MasterLiner HD

Type	Length*	Part-No.
MasterLiner HD cpl. with connector G 1/8"	5.0 m	155.0065.1
	6.0 m	155.0066.1
	8.0 m	155.0067.1
	10.0 m	155.0068.1

2. Complete set MasterLiner FLEX

MasterLiner FLEX cpl. with connector G 1/8"	5.0 m	155.0124.1
	6.0 m	155.0125.1
	8.0 m	155.0127.1
	10.0 m	155.0129.1

3. Complete set MasterLiner MAXI HD

MasterLiner MAXI HD cpl. with Quickconnector	5.0 m	155.0184.1
	6.0 m	155.0185.1
	8.0 m	155.0187.1
	10.0 m	155.0189.1

4. Complete set MasterLiner MAXI FLEX

MasterLiner MAXI FLEX cpl. with connector G 1/4"	5.0 m	155.0154.1
	6.0 m	155.0155.1
	8.0 m	155.0156.1
	10.0 m	155.0157.1
MasterLiner MAXI FLEX cpl. with Quickconnector	5.0 m	155.0197.1
	6.0 m	155.0198.1
	8.0 m	155.0199.1
	10.0 m	155.0200.1

* Further lengths on request.

Wire Feeder System “MasterLiner”

Components for individual configuration

Components for an individual configuration of the MasterLiner system



Components MasterLiner HD¹

Components MasterLiner FLEX

Components MasterLiner MAXI FLEX

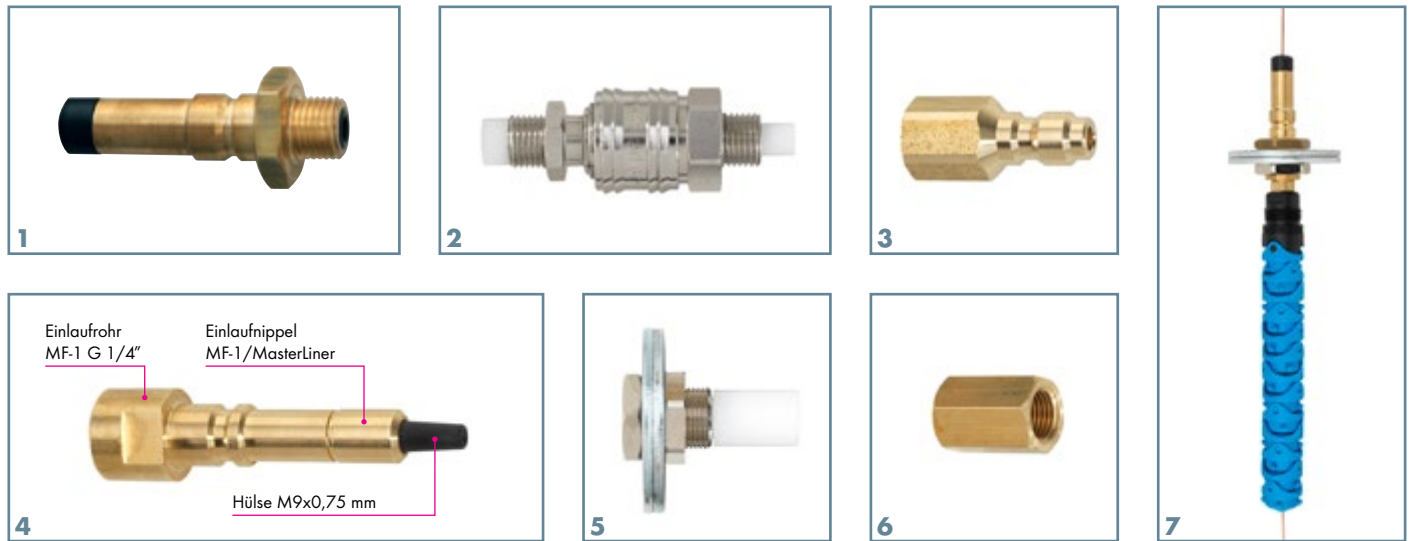
No.	Type	Part-No.
1	End fitting for MasterLiner HD	155.0092.1
2	MasterLiner basic (50 m container) ²	155.0096.50
3	Brass connector G 1/8" (without o-ring)	155.0089.1
n/s	O-ring for brass connector	155.0093.5
4	Connector convex	155.0091.1
5	Connector concave	155.0095.1
6	Wire guide tube convex	155.0087.1
7	Wire guide tube concave	155.0088.1
8	End cap for outer hose	155.0090.1
9	Outer hose (50 m container)	109.0076
n/s	Hook-and-loop tape, blue, 1 m	191.0128.1
9	Outer hose (50 m container)	109.0076
10	MasterLiner MAXI basic (50 m container) ²	155.0141.50
11	Connector G 1/4" cpl.	155.0147.1
12	Quickconnector cpl.	155.0195.1

¹ The variants of MasterLiner HD are only available in prefabricated lengths.

² Further lengths on request.

Wire Feeder System "MasterLiner"

Connections



Connection MasterLiner ↔ wire feeder

No.	Description	Part-No.
1	Connection G 1/4" for Quickconnector	155.0167.1
n/s	Connection 11.5 mm (suitable e. g. for EWM®)	783.5208.1
	Connection 12.2 mm (suitable e. g. for Lincoln®)	155.0084.1
	Connection 13.0 mm (suitable e. g. for Fronius®)	783.5209.1
2	Quick coupling G 1/4" cpl.	783.5207.1
3	Adaptor G 1/4" auf Quickconnector (suitable e. g. for Fronius® or Parker®)	155.0159.1
n/s	Wire inlet MasterLiner to MF-1	783.5222.1
	Wire inlet G 1/4" to M-Drive	155.0158.1
	Inlet tube G 1/4" to M-Drive	155.0161.1

Connection MasterLiner ↔ Masterfeeder MF-1

n/s	Inlet tube MF-1 G 1/8"	881.1253.1
4	Inlet tube MF-1 G 1/4"	155.0160.1
n/s	Inlet nipple MF-1/MasterLiner	131.0035.1
	Sleeve M9x0.75 mm (for inlet tube MF-1)	881.1096.1

Connection MasterLiner FLEX/MAXI FLEX ↔ Dome connector

n/s	Dome connector PG29 ¹	155.0103.1
	Nut PG29	155.0106.1

Connection MasterLiner ↔ Dome connector with quick coupling

5	Dome connector G 1/4"	783.5205.1
2	Quick coupling G 1/4" cpl.	783.5207.1
6	Adaptor MasterLiner G 1/8" to G 1/4"	783.5233.1
	Adaptor MasterLiner MAXI G 1/4" to G 1/4"	155.0162.1

Connection MasterLiner MAXI with Quickconnector ↔ Dome connector

7	MasterLiner MAXI HD/FLEX dome connector cpl.	155.0171.1
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¹ Only for MasterLiner HD – clamp with rubber directly on the outer aramid fabric.

Wire Feeder System “MasterLiner”

Accessories

Wire end sensor

The wire-end sensor – positioned between the wire drum and the wire feeder hose (e.g. MasterLiner) – signals an upcoming end of the wire in the wire drum. Due to a simple and non-contact detection of the wire-end and clear LED-display the replacement of the wire drum can be carried out timely. The intensity of the sensibility can be continuously adjusted by potentiometer and guarantees easy handling.

Technical Data:

Ring diameter: Ø 5 mm
 Supply voltage: 10–30 volt
 Current carrying capacity: max. 200 mA
 Current consumption: < 15 mA 24 V DC
 Temperature range: -20 to +60 °C
 Protection class: IP 65
 Connector: H (M12)



Type

Wire end sensor with LED signal
 Control cable

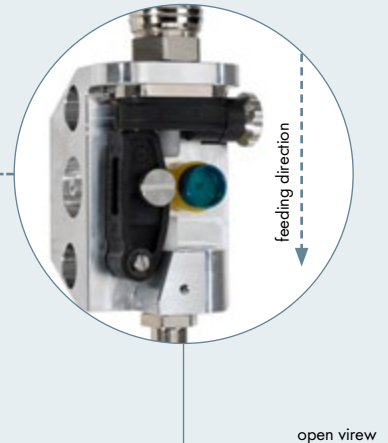
Part-No.

881.3225.1
 101.0168.1

Wire inching tool

The wire inching tool allows that the wire can be threaded quickly and easy from the wire drum into the wire feeder hose directly. Manual and time-consuming threading is no longer necessary. Recommended especially for longer distances.

With the connectors a quick and easy integration into the respective wire-feeding-system is possible. The threading device must remain in the wire feeding system after threading with open counter pressure roller.



Type

Wire inching tool

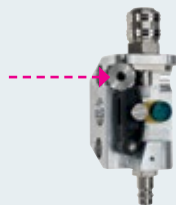
Part-No.

881.3238.1

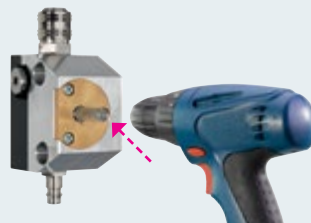
Manual



Step 1:
Thread wire



Step 2:
Set contact pressure



Step 3:
Feeding the wire by
electric screwdriver



Step 4:
Remove drive roll
and fix outside



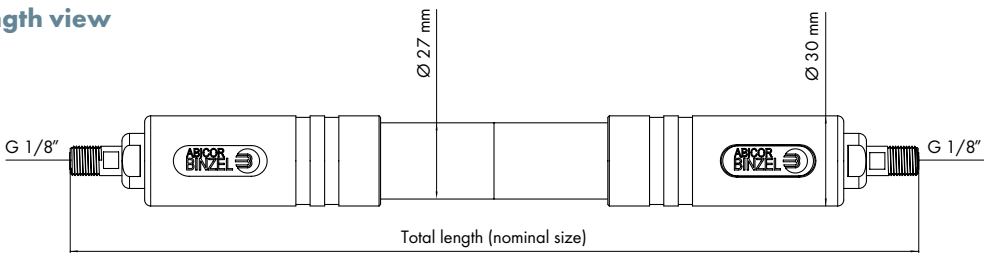
Step 5:
Fix rocker with
housing cover

Wire Feeder System “MasterLiner”

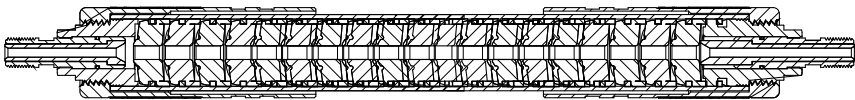
Length and sectional views

Wire Feeder System
MasterLiner HD
with Connector
G 1/8"

Length view

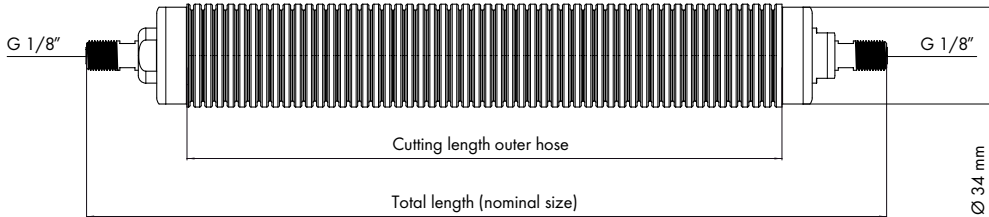


Sectional view

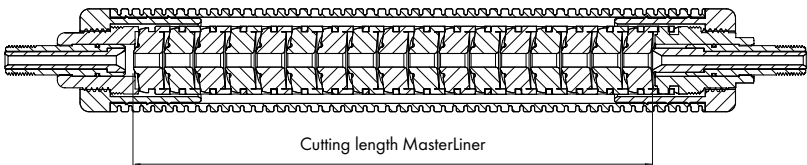


Wire Feeder System
MasterLiner FLEX
with Connector
G 1/8"

Length view



Sectional view

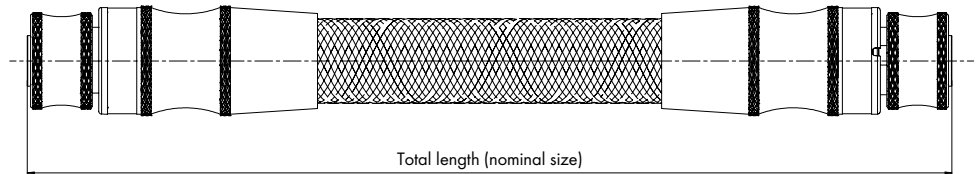


Wire Feeder System „MasterLiner MAXI“

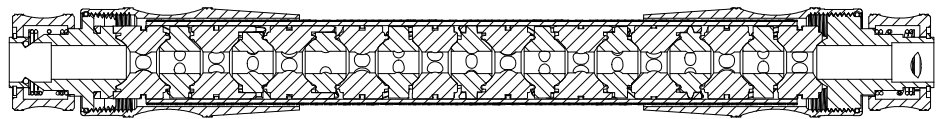
Length and sectional views

Wire Feeder System
MasterLiner MAXI
HD with Quickcon-
nector

Length view

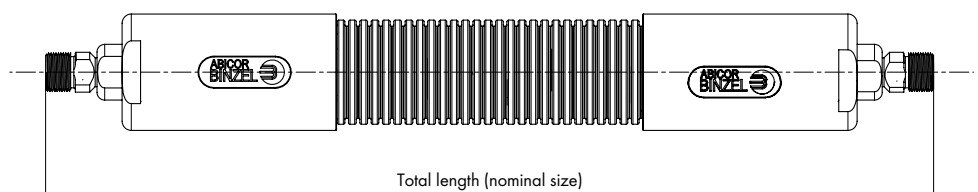


Sectional view

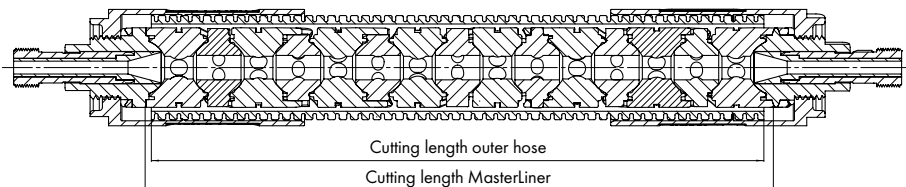


Wire Feeder System
MasterLiner MAXI
FLEX with Connec-
tor G 1/4"

Length view

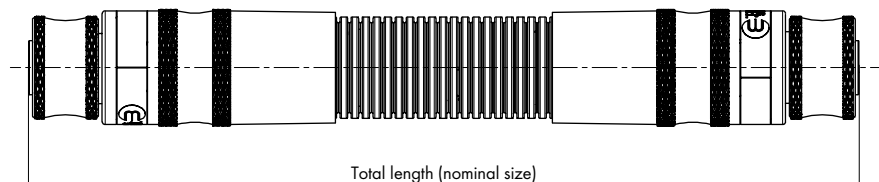


Sectional view

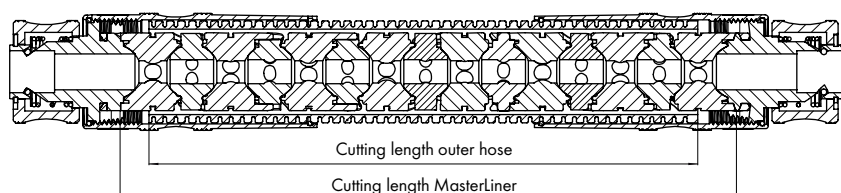


Wire Feeder System
MasterLiner MAXI
FLEX with Quick-
connector

Length view



Sectional view



Robot Peripherals

Torch Cleaning Station "BRS"



Connect & Clean ...

ABICOR BINZEL torch cleaning stations – the complete solution for reliable automatic servicing of torch heads. Quick and easy to install, just "Connect & Clean ...", the compact torch cleaning stations BRS stand for top reliability. Combined in a single station, no less than three systems guarantee optimally timed processes and an increase in plant availability. Many further features such as mounting stand and drip pan reduce installation costs.

1. Torch cleaning station

- Precise and effective cleaning for almost all robot welding torches
- Tried-and-trusted cutter principle, suitable even for heavy spatter adhesion
- Precise clamping of the gas nozzle fixes the torch in place during the cleaning process

2. Front injector "TMS-VI"

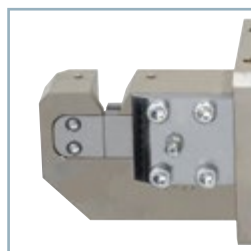
- Direct economical spraying of anti-spatter agent reduces welding spatter adhesion and extends service intervals
- Clean environment thanks to encapsulated nozzle design and collecting pan for soiled residual oil
- Precise clamping of the gas nozzle fixes the torch in place during the cleaning process

3. Wire cutting fixture "DAV"

- The combined clamping and shearing action guarantees precise cutting quality and ensures optimum arc-ignition as well as exact TCP measurement
- Long service life thanks to sturdy design
- Precise wire length for touch sensing

Application area:

MIG/MAG welding torches for all common torch brands



Torch Cleaning Station "BRS"

System Overview & Technical Data

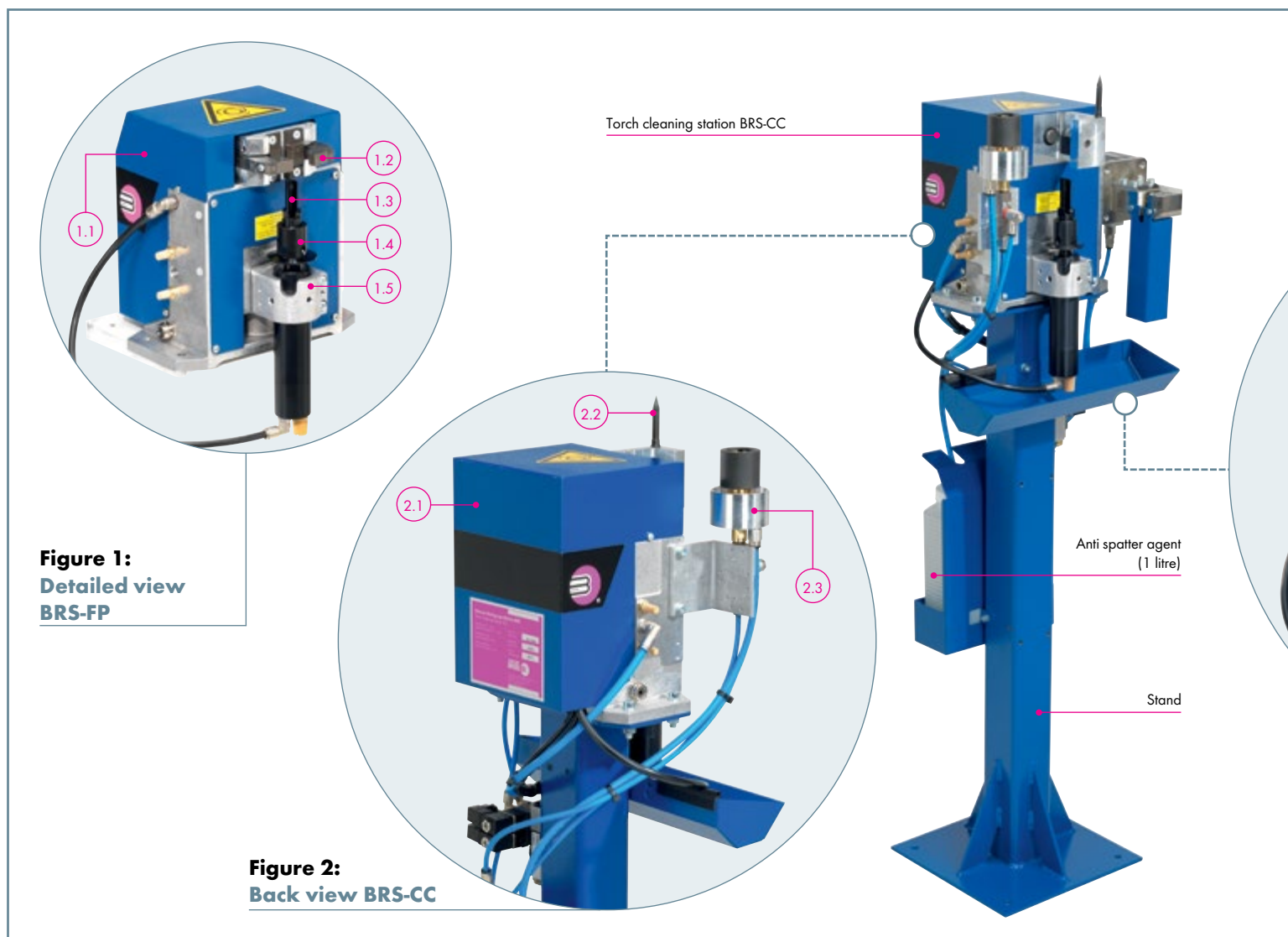


Figure 1:
Detailed view BRS-FP

- 1.1 PCB (inside)
for programmed work processes
- 1.2 Clamping brackets
- 1.3 Reamers for different torch makes
- 1.4 Reamer fitting, interchangeable
- 1.5 Guide block, stroke 50 mm

Figure 2:
Back view BRS-CC

- 2.1 Cover
- 2.2 Test/TCP tip
- 2.3 Injector for the direct economical spraying of
anti-spatter agent reduces spatter adhesion
and extends servicing intervals

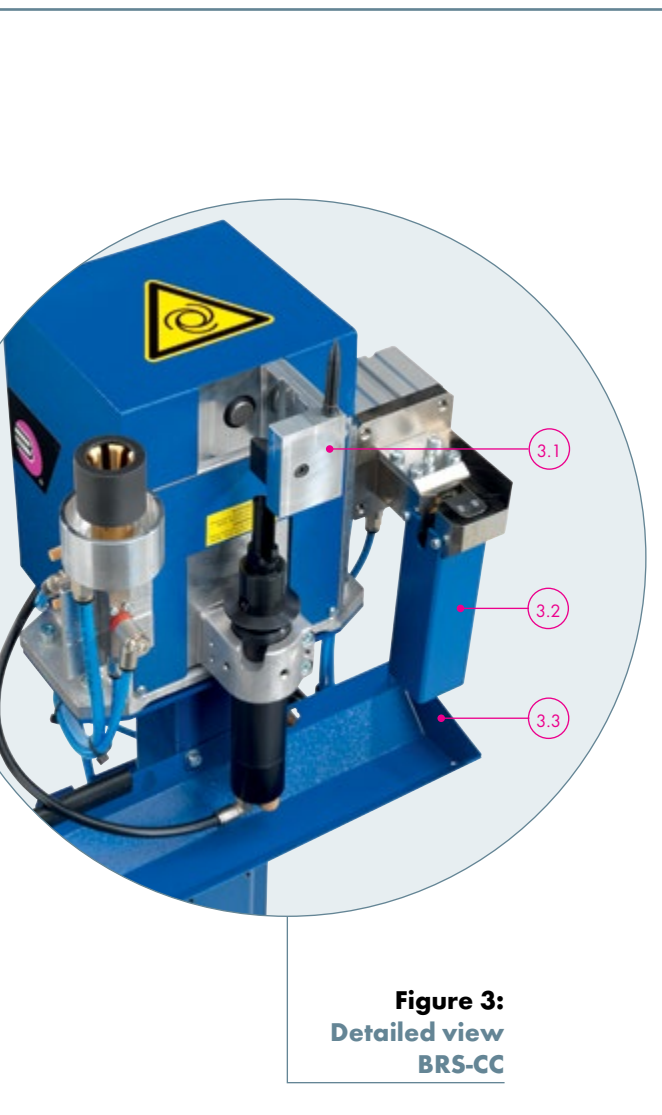


Figure 3:
Detailed view
BRS-CC

Figure 3:
Detailed view BRS-CC

- 3.1 Prism for different torch/gas nozzle types
- 3.2 Wire cutting fixture "DAV" for a constant free wire end and better arc-start/touch sensing performance properties
- 3.3 Drip and wire cutting collection pan



Technical data:

General data

Total weight:	approx. 16 kg (incl. TMS-VI and DAV)
Ambient temperature:	+ 5 °C to + 50 °C
Air consumption:	approx. 380 l/min.
Pneumatic motor (Nominal speed):	– with lubricated air: approx. 650 rpm – with non-lubricated air: approx. 550 rpm

Pneumatic connection – manifold block

Compressed air supply:	G 1/4
Clear width:	min. Ø 6 mm
Nominal pressure:	6 bar
Operating pressure:	6–8 bar

Electrics – terminal block

Control:	4 inputs for triggering the 5/2 directional control valves
Control voltage:	24 V DC
Power consumption:	4.5 W
Output:	1 output from inductive proximity switch (pnp)
Operating voltage:	10 – 30 V DC
Tolerated residual ripple:	$V_{ss} < 10\%$
Continuous current:	max. 200 mA
Current consumption:	approx. 4 mA (24 V)
Drop in voltage:	approx. 1.2 V (200 mA)

Front injector "TMS-Vi"

Capacity of the bottle:	1 litre
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Wire cutting fixture "DAV"

Cutting rate at 6 bar:	– Solid wire: up to 1.6 mm – Flux cored wire: up to 3.2 mm
Cutting time:	0.5 sec.

Torch Cleaning Station "BRS"

Order Summary

Torch cleaning station "BRS"



No.	Type	Description	Part-No.
1	BRS-CC cpl.	with DAV / with stand	831.0490
	BRS-CC	without DAV / with stand	831.0550
	BRS-CC	with DAV / without stand	831.0580
	BRS-CC	standard (without accessories)	831.0570
2	BRS-LC	standard (without accessories)	831.0300
3	BRS-FP	standard (without accessories)	831.0260

Torch Cleaning Station "BRS"

Accessories

Front injector "TMS-VI"



Technical data:

Pneumatic connection

Operating pressure: 5–10 bar
Compressed air supply: Clear width Ø 4 mm

5/2 directional control valve

Compressed air supply: G 1/8"
Nominal flow: approx. 650 l/min.
Control: 24 V DC
I max. ≤ 1.1 A
I nom. = 220 mA

Description	Part-No.
Front injector "TMS-VI"	830.1110
Solenoid valve* pilot-controlled (NW 10) 24 V DC / 42 V AC	832.0005
Anti-spatter agent (1 litre)	192.0056

*Optional for airblast function through the cable assembly.

Wire cutting fixture "DAV"



Technical data:

Wire cutting fixture "DAV"

Operating pressure: 6–8 bar
Compressed air supply: Clear width Ø 4 mm
Cutting rate at 6 bar: Solid wire 1.6 mm
Flux cored wire 3.2 mm
Weight: 2700 g

Extension set

Comprising: 5/2 directional control valve, device socket, threaded connectors, plastic pipe (1 m) and silencer
Operating pressure: 6–8 bar
Compressed air supply: G 1/8"
Nominal flow: approx. 650 l/min.
Control: 24 V DC
I max. ≤ 1.1 A
I nom. = 220 mA
Weight: 265 g

Description	Part-No.
Wire cutting fixture "DAV" cpl.	839.0020
Replacement blade	839.0024
Replacement static blade	839.0026
Extension set	839.0035.1

Torch Cleaning Station "BRS"

Cutters & Clamping Prisms

Torch series ABIROB® 350 GC

Torch type	with gas nozzle	Outer-Ø (mm)	NW (mm)	Length (mm)	with contact tip		Clamping prism Part-No.	Cutter Part-No.
	Type				Type	Size		
ABIROB® 350GC	145.0557	20.0	15.5	89.5	M6	Ø 8	831.0313	831.0491.1
	145.0558	20.0	12.0	89.5	M6	Ø 8	831.0313	831.0555.1
	145.0573	20.0	13.0	89.5	M6	Ø 8	831.0313	831.0420.1

Torch series ABIROB® A

ABIROB® A300	145.0671.5	22.0	14.4	36.0	M6	Ø 8	831.0371	831.0709.1
ABIROB® A360	145.0599	22.0	12.0	68.0	M6	Ø 8	831.0371	831.0604.1
	145.0600	22.0	12.0	70.0	M6	Ø 8	831.0371	831.0604.1
	145.0601	22.0	12.0	65.0	M6	Ø 8	831.0371	831.0604.1
	145.0595	22.0	14.0	68.0	M6	Ø 8	831.0371	831.0592.1
	145.0596	22.0	14.0	70.0	M6	Ø 8	831.0371	831.0618.1
	145.0597	22.0	14.0	65.0	M6	Ø 8	831.0371	831.0593.1
	145.0618	22.0	14.0	68.0	M6	Ø 8	831.0371	831.0592.1
	145.0619	22.0	14.0	65.0	M6	Ø 8	831.0371	831.0593.1
	145.0592	22.0	16.0	68.0	M6	Ø 8	831.0371	831.0487.1
	145.0593	22.0	16.0	70.0	M6	Ø 8	831.0371	831.0487.1
	145.0594	22.0	16.0	65.0	M6	Ø 8	831.0371	831.0589.1
ABIROB® A500	145.0589	28.0	13.0	75.0	M6	Ø 8	831.0318	831.0180.1
	145.0590	28.0	13.0	77.0	M6	Ø 8	831.0318	831.0180.1
	145.0591	28.0	13.0	72.0	M6	Ø 8	831.0318	831.0169.1
	145.0586	28.0	14.0	75.0	M6	Ø 8	831.0318	831.0592.1
	145.0587	28.0	14.0	77.0	M6	Ø 8	831.0318	831.0618.1
	145.0588	28.0	14.0	72.0	M6	Ø 8	831.0318	831.0593.1
	145.0580	28.0	16.0	75.0	M8	Ø 10	831.0318	831.0488.1
	145.0581	28.0	16.0	77.0	M8	Ø 10	831.0318	831.0488.1
	145.0582	28.0	16.0	72.0	M8	Ø 10	831.0318	831.0591.1
	145.0583	28.0	16.0	75.0	M8	Ø 10	831.0318	831.0488.1
	145.0584	28.0	16.0	77.0	M8	Ø 10	831.0318	831.0488.1
	145.0585	28.0	16.0	72.0	M6	Ø 8	831.0318	831.0591.1

Torch series ABIROB® W

ABIROB® W300	145.0495	25.0	13.0	44.5	M6	Ø 8	831.0316	831.0169.1
	145.0564	25.0	13.0	48.5	M6	Ø 8	831.0316	831.0180.1
	145.0494	25.0	15.5	44.5	M6	Ø 8	831.0316	831.0576.1
ABIROB® W500	145.0479	25.0	13.0	75.5	M8	Ø 10	831.0316	831.0368.1
	145.0556	25.0	13.0	77.5	M8	Ø 10	831.0316	831.0368.1
	145.0466	25.0	15.5	72.0	M8	Ø 10	831.0316	831.0216.1
	145.0568	25.0	15.5	72.5	M8	Ø 10	831.0316	831.0216.1
	145.0553	25.0	15.5	75.5	M8	Ø 10	831.0316	831.0023.1
	145.0544	25.0	15.5	75.5	M8	Ø 10	831.0316	831.0023.1
ABIROB® W600	145.0480	25.0	15.5	77.0	M8	Ø 10	831.0316	831.0023.1
	145.0689.5	34.0	18.0	92.0	M12	Ø 12	831.0362	831.0162.1
	145.0686.5	34.0	21.5	92.0	M12	Ø 12	831.0362	831.0746.1
	145.0687.5	34.0	21.5	86.0	M12	Ø 12	831.0362	831.0763.1
	145.0688.5	34.0	21.5	95.0	M12	Ø 12	831.0362	831.0764.1

Torch series ROBO Standard

Torch type	with gas nozzle Type	Outer-Ø (mm)	NW (mm)	Length (mm)	with contact tip Type	Size	Clamping prism Part-No.	Cutter Part-No.
ROBO 455D	145.0134	25.0	13.0	67.5	M8	Ø 10	831.0316	831.0413.1
	145.0106	25.0	15.5	64.5	M8	Ø 10	831.0316	831.0216.1
	145.0089	25.0	15.5	67.5	M8	Ø 10	831.0316	831.0023.1
	145.0164	25.0	15.5	67.5	M8	Ø 10	831.0316	831.0023.1
ROBO 650TS	145.0574	30.0	18.0	84.0	M10	Ø 12	831.0319	831.0587.1
	145.0575	30.0	21.5	84.0	M10	Ø 12	831.0319	831.0547.1
	145.0578	30.0	18.0	78.0	M10	Ø 12	831.0319	on request

Torch series ROBO WH

ROBO WH 242D	145.0135	21.0	13.0	62.0	M6	Ø 8	831.0314	831.0564.1
	145.0090	21.0	15.5	62.0	M6	Ø 8	831.0314	831.0563.1
ROBO WH W500	145.0479	25.0	13.0	75.5	M8	Ø 10	831.0316	831.0368.1
	145.0556	25.0	13.0	77.5	M8	Ø 10	831.0316	831.0368.1
	145.0466	25.0	15.5	72.0	M8	Ø 10	831.0316	831.0216.1
	145.0568	25.0	15.5	72.5	M8	Ø 10	831.0316	831.0216.1
	145.0553	25.0	15.5	75.5	M8	Ø 10	831.0316	831.0023.1
	145.0544	25.0	15.5	75.5	M8	Ø 10	831.0316	831.0023.1
	145.0480	25.0	15.5	77.0	M8	Ø 10	831.0316	831.0023.1
ROBO WH W600	145.0689.5	34.0	18.0	92.0	M12	Ø 12	831.0362	831.0162.1
	145.0686.5	34.0	21.5	92.0	M12	Ø 12	831.0362	831.0746.1
	145.0687.5	34.0	21.5	86.0	M12	Ø 12	831.0362	831.0763.1
	145.0688.5	34.0	21.5	95.0	M12	Ø 12	831.0362	831.0764.1

The standard clamping prisms and cutters listed here cannot be used in conjunction with the torch cleaning station BRS-FP. Please submit a separate request for these.

Our product range:

■ MIG/MAG

- Welding torches
- Machine and special torches
- Push-Pull welding torches
- Fume extraction torches
- Central adaptor system

■ TIG

- Welding torches
- Machine and special torches

■ PLASMA

- Cutting torches
- Welding torches
- Machine and special torches

■ ROBOTIC SYSTEMS

- Robot torches MIG/TIG/Plasma
- Electronic welding regulator
- Laser heads
- Seam tracking sensors
- Robot mounts
- Wire cutting station DAV
- Torch cleaning station
- Wire feeding systems

■ Welding accessories

- Fume extraction systems
- Coolers
- Welding cable plug and socket
- Anti-spatter spray and paste
- and so on ...



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