

ROBO



Product Catalogue 3.0



Content

MIG/MAG Welding Torch Systems	Page	7
■ MIG/MAG welding torch system "WH and WH-PP" air-cooled ROBO WH A360 / ROBO WH A500	Page	9-15
■ MIG/MAG welding torch system "WH and WH-PP" liquid-cooled ROBO WH 242 D / ROBO WH 290 / ROBO WH W500 / ROBO WH 652 D TS	Page	17-25
■ MIG/MAG welding torch system "ABIROB® W" liquid-cooled ABIROB® W300 / ABIROB® W500	Page	27-33
■ MIG/MAG welding torch system "ABIROB® A ECO" air-cooled ABIROB® A300 / ABIROB® A360 / ABIROB® A500	Page	35-42
■ MIG/MAG welding torch system "ABIROB® 350 GC" air-cooled ABIROB® 350 GC	Page	43-48
■ MIG/MAG welding torch system "ROBO Standard" liquid-cooled ROBO 455 D / ROBO 650 TS	Page	49-55
■ MIG/MAG welding torch system "TANDEM" liquid-cooled WH Tandem W800	Page	57-59
TIG Welding Torch Systems	Page	61
■ TIG welding torch system "ABITIG® WH" liquid-cooled ABITIG® WH 220 W / ABITIG® WH 400 W	Page	63-70
■ TIG welding torch system "ABITIG® MT" liquid-cooled ABITIG® MT 300 W	Page	71-77
PLASMA Welding Torch Systems	Page	79
■ PLASMA welding torch system "ABIPLAS® WELD CT" liquid-cooled ABIPLAS® WELD 150 CT 20 / ABIPLAS® WELD 250 CT 20 / ABIPLAS® WELD 250 MT	Page	81-87
Robot peripherals	Page	89
■ Robot mount "CAT2"	Page	91-94
■ Robot mount "iCAT"	Page	95-100
■ Robot mount "iSTM"	Page	101-106
■ Torch cleaning station "BRS-CCi" Front injector "TMS-VI" and Wire cutting fixture "DAV"	Page	107-112
■ Torch neck change system "ATS-ROTOR"	Page	113-115

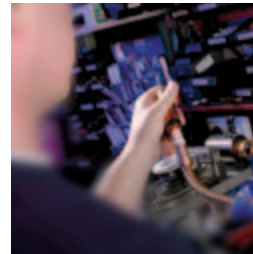
ABICOR BINZEL

About us ...



Top position on the global market.

With more than 850 employees, 33 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.



Alongside 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 internal sales, consultation and service network.

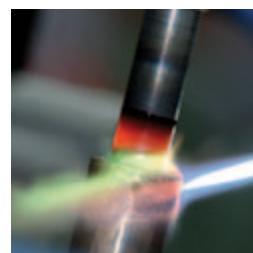
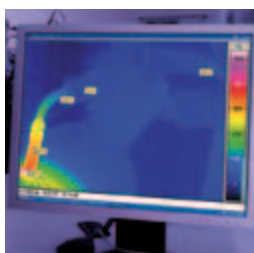
There are local teams available for consultation and support for the trade partners in every country.

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.



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:

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

Notes



MIG/MAG Welding Torch Systems

air and liquid-cooled



ROBO WH / ROBO WH-PP air and liquid-cooled

Quick adaptation to changing welding tasks ...

Capacity: to 550 A

Main areas of application: 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
9–25



ABIROB® W liquid-cooled

Robust & flexible ...

Capacity: to 500 A

Main areas of application: Commercial vehicle construction, earth-moving equipment, rail vehicle construction, shipbuilding, machine and steel construction

Degree of automation: Low Medium High

Page
27–33



ABIROB® A air-cooled

Simple & effective ...

Capacity: to 500 A

Main areas of application: Automobile construction, suppliers (Tier 1, Tier 2), bicycle industry, container construction, aerospace industry

Degree of automation: Low Medium High

Page
35–42



ABIROB® 350 GC air-cooled

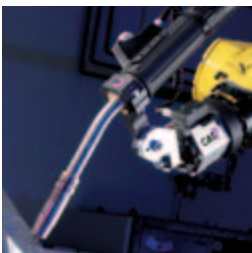
Sturdy, durable & economic ...

Capacity: to 350 A

Main areas of application: Automobile construction, 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: to 600 A

Main areas of application: Commercial vehicle construction, earth-moving equipment, rail vehicles, shipbuilding, container construction, machine and steel construction

Degree of automation: Low Medium High

Page
49–55



TANDEM WH liquid-cooled

Top-level power ...

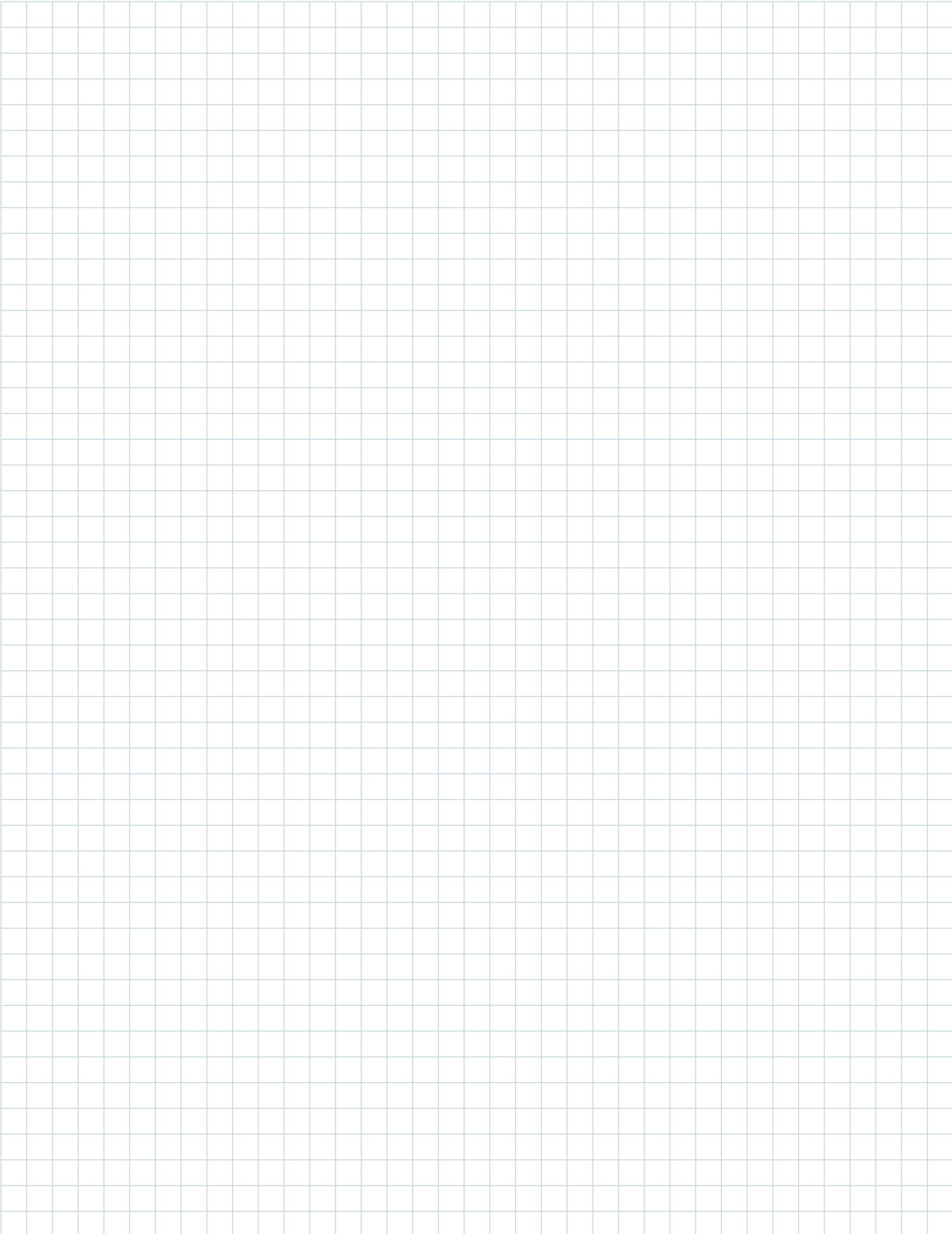
Capacity: to 2 x 400 A

Main areas of application: Suppliers (Tier 1, Tier 2), commercial vehicle construction, earth-moving equipment, rail vehicles, machine and steel construction

Degree of automation: Low Medium High

Page
57–59

Notes



MIG/MAG welding torch system

“WH and 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 fast 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
-----	--------	------

Typical areas of application:

- Automobile construction
- Suppliers (Tier 1, Tier 2)
- Commercial vehicle construction
- Earth-moving equipment
- Rail vehicle construction
- Shipbuilding
- Container construction
- Machine and steel construction
- 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

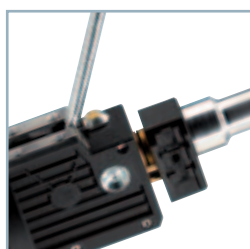
Robot interface:

- Conventional robot
(Cable assembly 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

* Definition of the degree of automation:

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

up to
360 A



“WH and WH-PP” air-cooled System overview and technical data

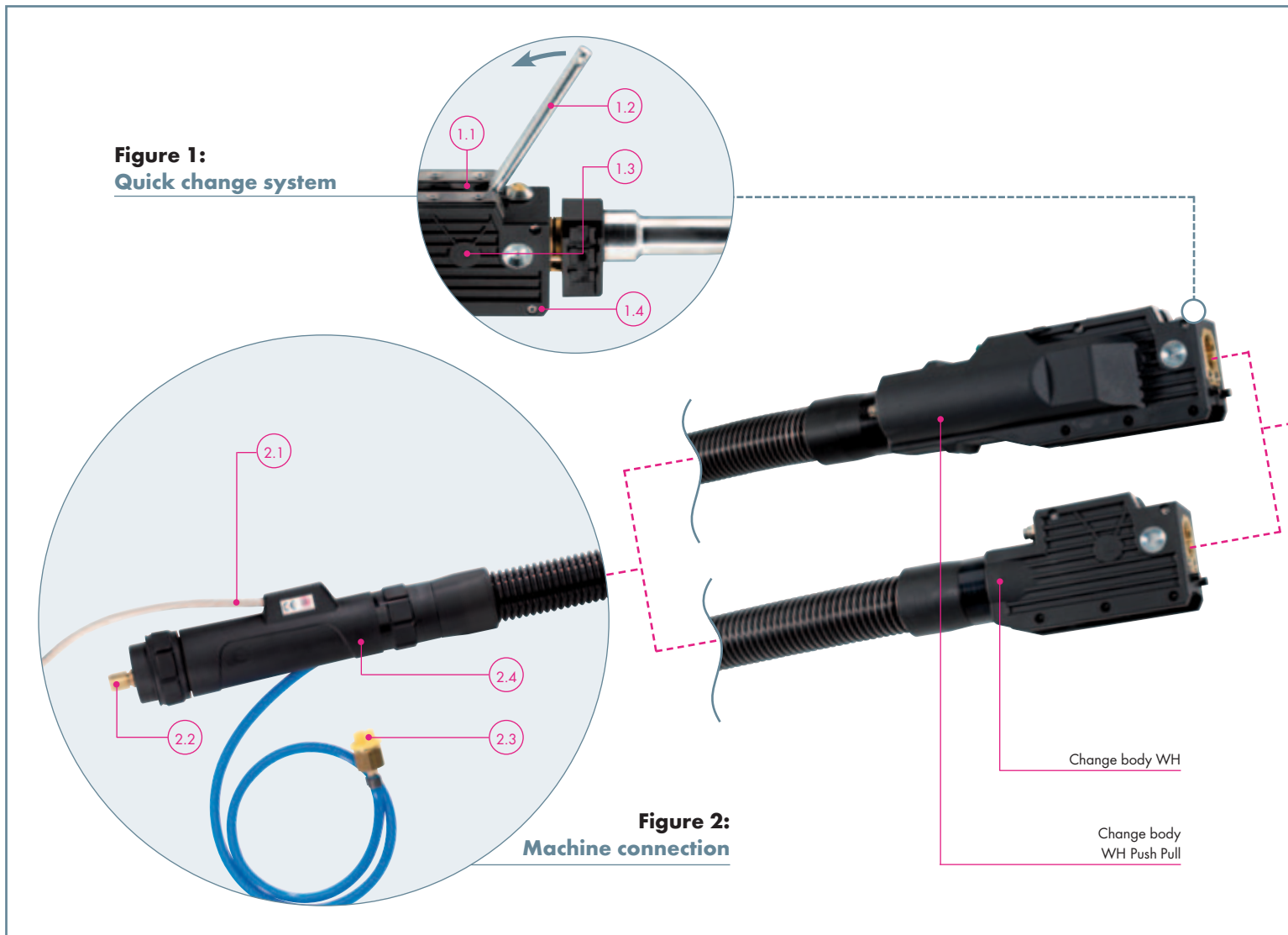


Figure 1:
Quick change system

- 1.1 Rubber seals prevent dust/spatter penetration
- 1.2 Tool for manual torch neck replacement (hand lever)
- 1.3 Integrated wire-cutting and positioning 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 bend-protection 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.

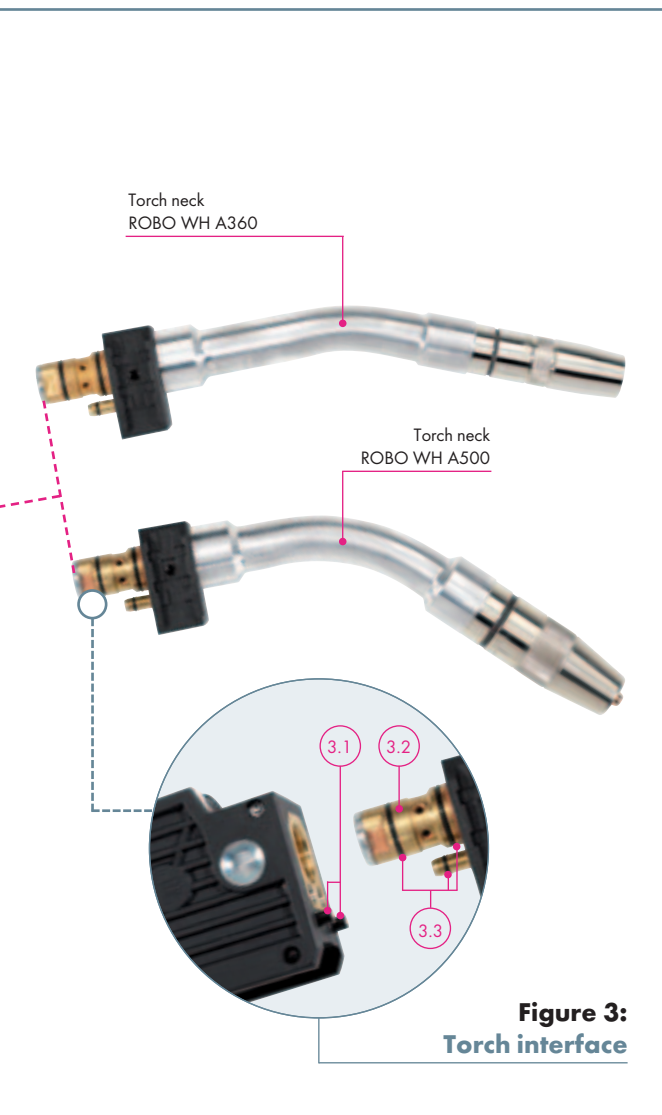
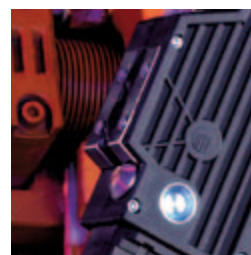
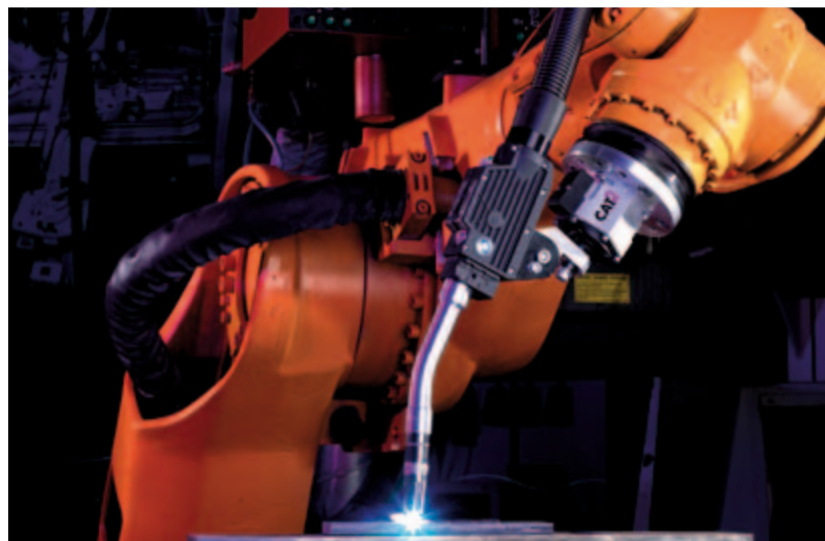


Figure 3:
Torch interface

Figure 3:
Torch interface

- 3.1 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 A 360

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 A 500

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 where 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.

"WH and WH-PP" air-cooled Torch necks & wear parts

ROBO WH A 360



Torch necks

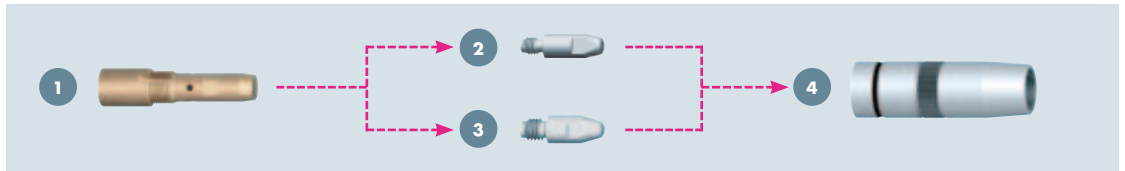
Features	Part-No.			
	0°	22°	35°	45°
Standard	962.1416	962.1410	962.1520	962.1411

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

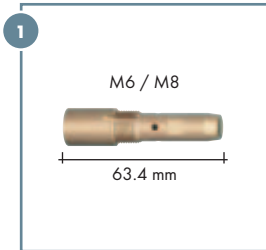
Neck liner

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
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 A 360



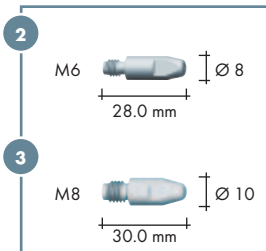
1 Contact tip holder (5 pcs.)



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

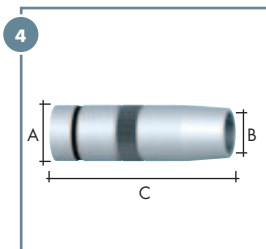
¹ Recommended for high amperages.

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

"WH and WH-PP" air-cooled Torch necks & wear parts

ROBO WH A 500



Torch necks

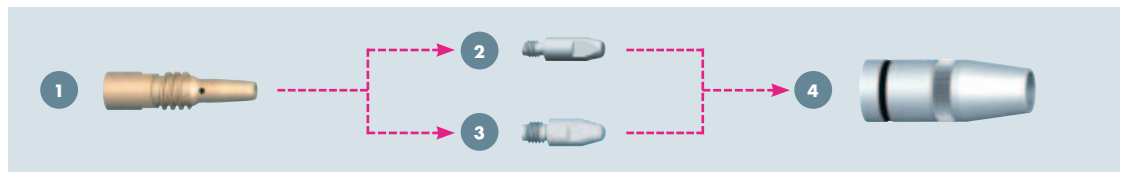
Features	Part-No.		
	0°	22°	45°
Standard	962.1504	962.1505	962.1506

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

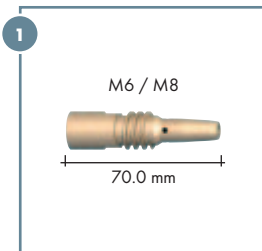
Neck liner

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

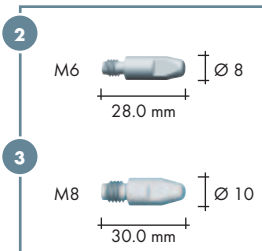
Wear parts for ROBO WH A 500



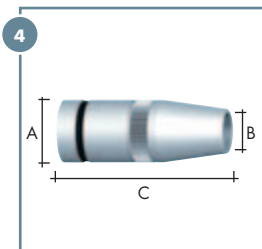
1 Contact tip holder (5 pcs.)



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

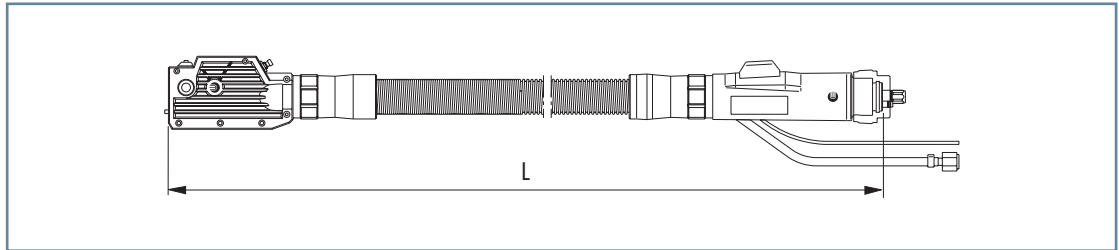
² Flush: Contact tip flush

³ Recess: Contact tip recessed

⁴ Stick-out: Contact tip protruding

“WH and WH-PP” air-cooled Cable assemblies & accessories

Cable assembly and connection types



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

Liners for Euro central connection¹

Type	Wire-Ø	to L=1.5 m ⁴	to L=3.15 m ⁴	10.0 m ⁵	Collet
Liner steel red ²	Ø 0.8-1.2	124.0145	124.0146	124.0159	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.

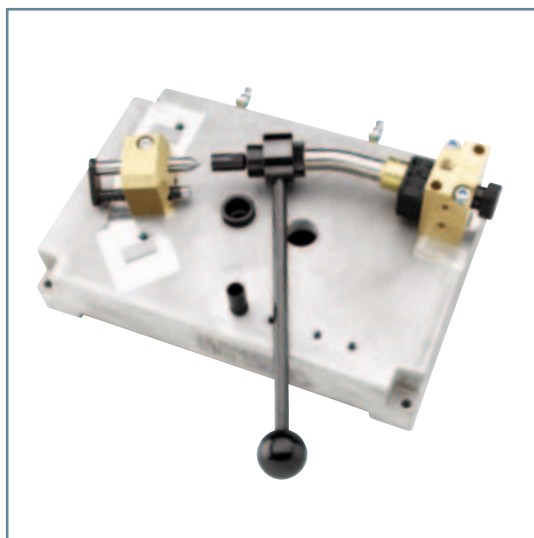
² Red and white steel liners (insulated) for the use of non-alloyed and low-alloyed steels. The totally insulated wire feed prevents damage caused by “micro-arcing” on the wire. This allows optimal current transfer inside the contact tip, improving the welding process. The insulated steel liner must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

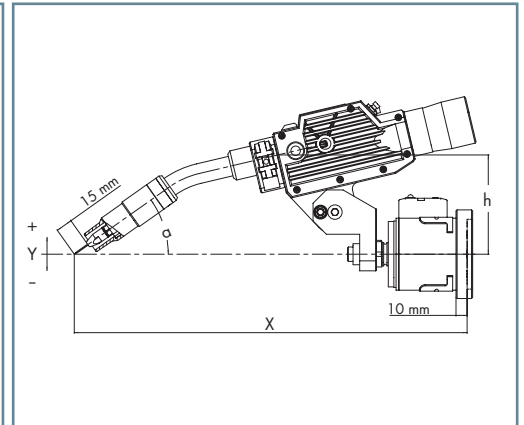
for torch type	Torch geometry	Part-No.
ROBO WH A	0°/22°/45°	837.0591

“WH and WH-PP” air-cooled Holder and TCP geometries

Torch holder for ROBO WH and WH-PP

in connection with CAT2 cpl.

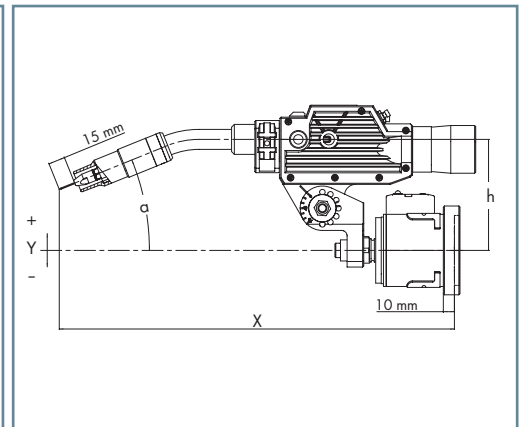
Torch type	Torch geometry	X	Y	h	α	Part-No.
ROBO	0°	407	0	83	20°	960.0026
WH A 360	22°	391	0	92	33°	960.0026
	35°	376	0	97	39°	960.0026
	45°	363	0	101	43°	960.0026
ROBO	0°	407	0	83	20°	960.0026
WH A 500	22°	391	0	92	33°	960.0026
	45°	363	0	101	43°	960.0026



Segment holder for ROBO WH and WH-PP¹

in connection with CAT2

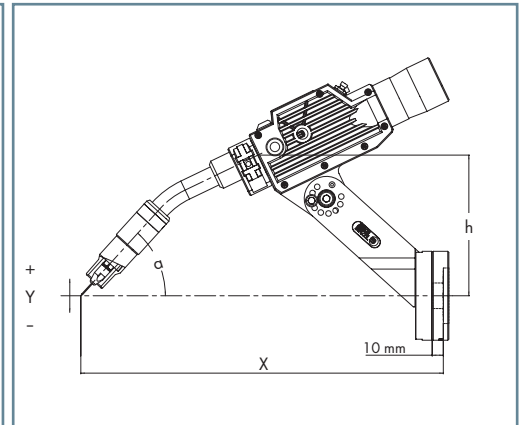
Torch type	Torch geometry	X	Y	h	α	Part-No.
ROBO	0°	402	100	100	0°	780.0146
WH A 360	22°	393	50	100	22°	780.0146
	35°	379	20	100	35°	780.0146
	45°	362	-6	100	45°	780.0146
ROBO	0°	402	100	100	0°	780.0146
WH A 500	22°	393	50	100	22°	780.0146
	45°	362	-6	100	45°	780.0146



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

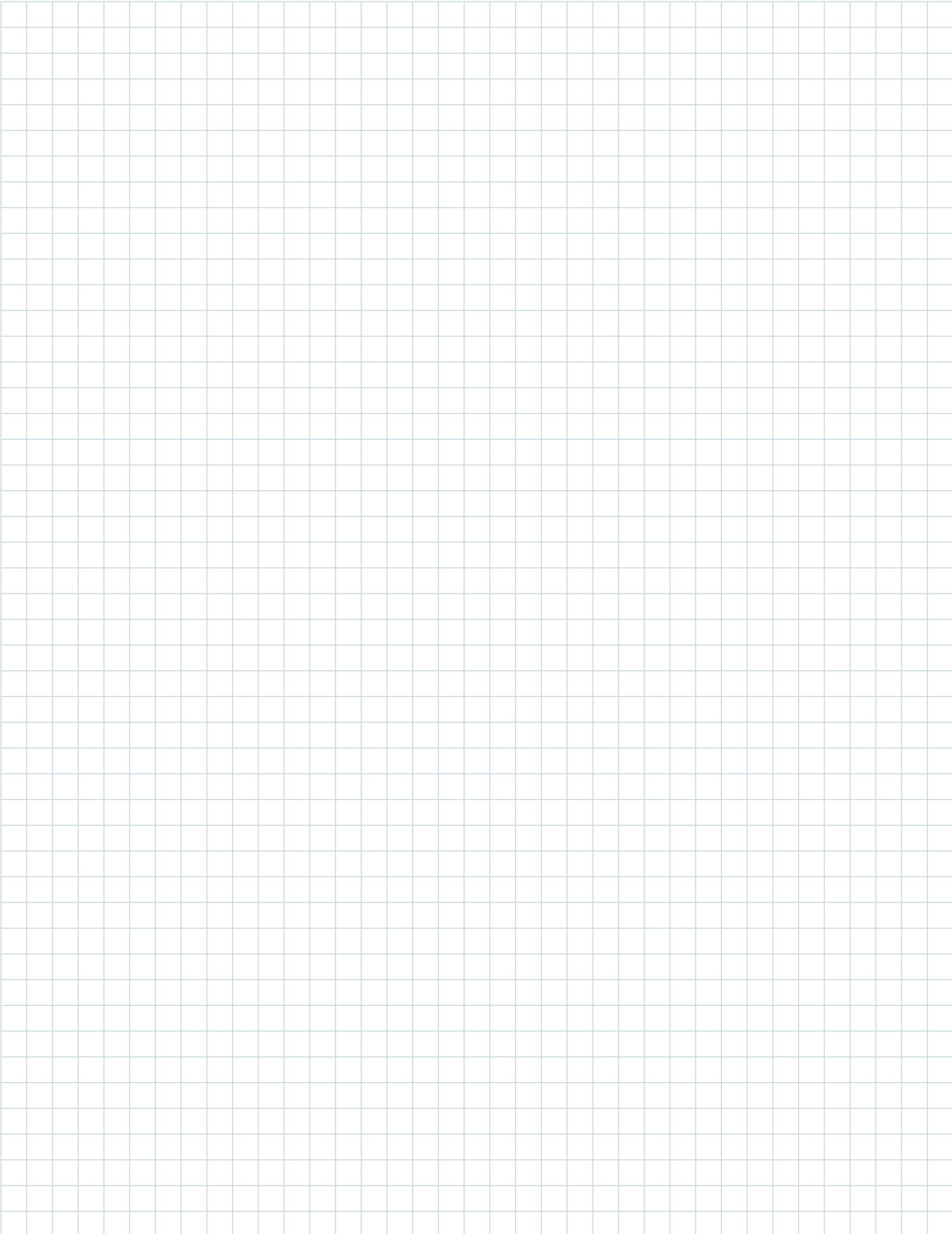


Further holders are available on request.

Please note: All the trademarks named in this brochure are the property of the respective companies.

¹ Holder adjustable in 15° steps.

Notes



MIG/MAG welding torch system "WH and WH-PP" liquid-cooled



"Quick adaptation to changing welding tasks ..."

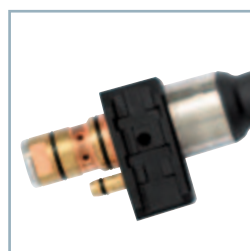
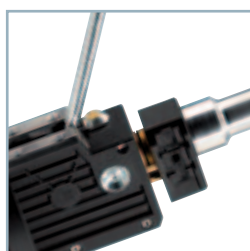
The liquid-cooled MIG/MAG neck change welding torch system WH / WH-PP enables the complete torch neck to be replaced either manually or automatically – thanks to the innovative interface technology on the change body. This means torches of the same design can be replaced in seconds for maintenance purposes, 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 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 fast 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 550 A

up to
550 A



Degree of automation:

Low

Medium

High

Typical areas of application:

- Automobile construction
- Suppliers (Tier 1, Tier 2)
- Commercial vehicle construction
- Earth-moving equipment
- Rail vehicle construction
- Shipbuilding
- Container construction
- Machine and steel construction
- 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 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

* 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)

“WH and WH-PP” liquid-cooled System overview and technical data

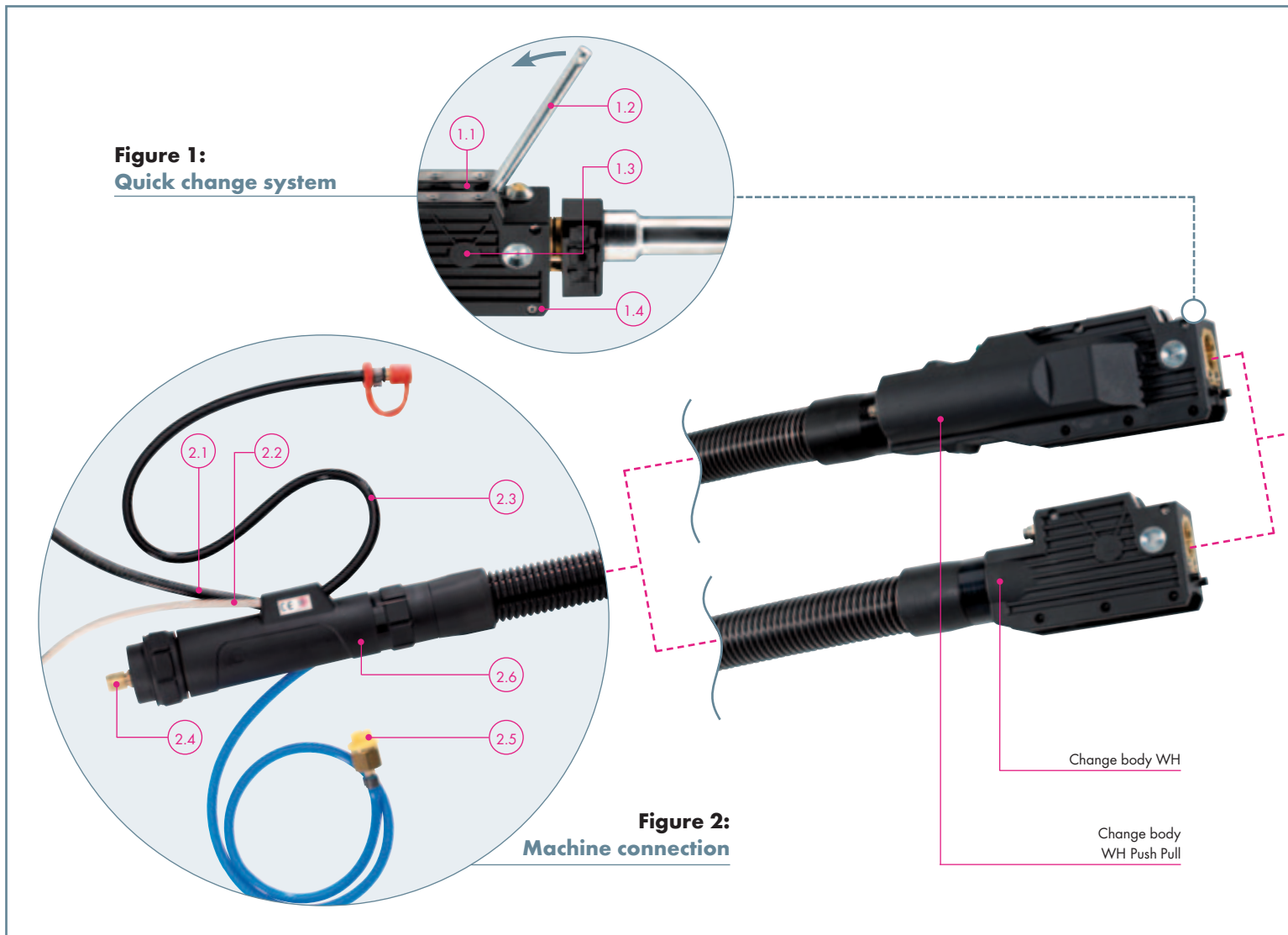


Figure 1:
Quick change system

- 1.1 Rubber seals prevent dust/spatter penetration
- 1.2 Tool for manual torch neck replacement (hand lever)
- 1.3 Integrated wire-cutting and positioning 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 bend-protection 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.

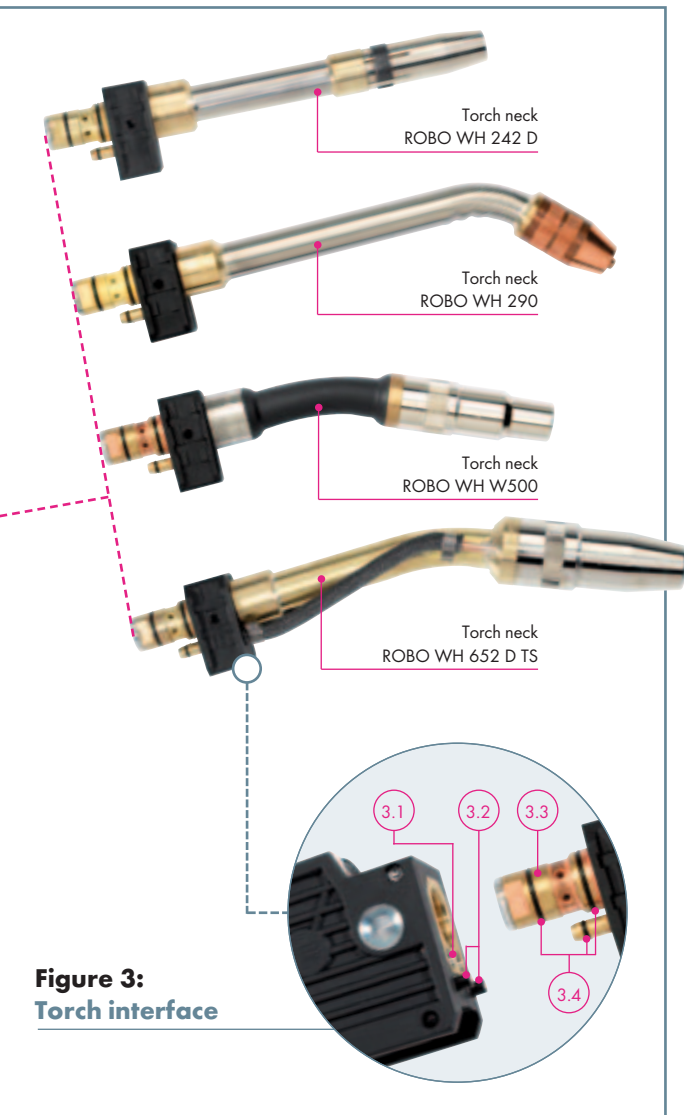
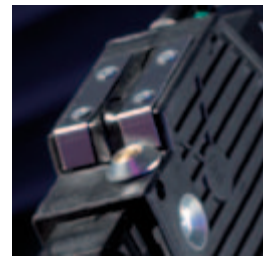
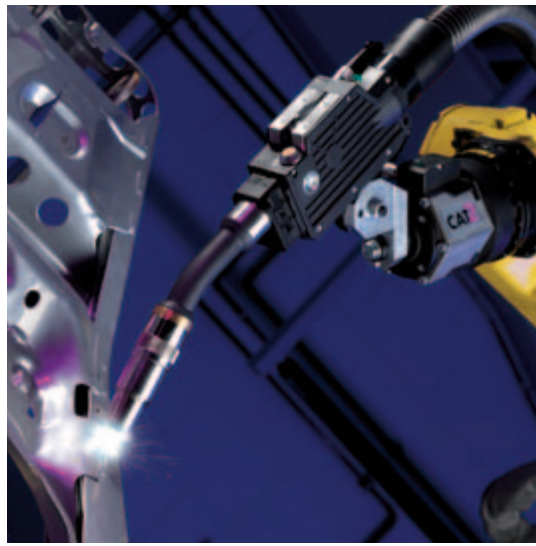


Figure 3:
Torch interface

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 242 D

Type of cooling: liquid-cooled
 Rating: 320 A CO₂
 280 A Mixed gases M21 (EN ISO 14175)
 Duty cycle: 100 %
 Wire-Ø: 0.8–1.2 mm
 Torch geometries: 0°/22°/45°

ROBO WH 290

Type of cooling: liquid-cooled
 Rating: 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 CO₂
 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 652 D TS

Type of cooling: liquid-cooled
 Rating: 550 A CO₂
 500 A Mixed gases M21 (EN ISO 14175)
 Duty cycle: 100 %
 Wire-Ø: 1.0–1.6 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.

"WH and WH-PP" liquid-cooled Torch necks & wear parts

ROBO WH 242 D



Torch neck

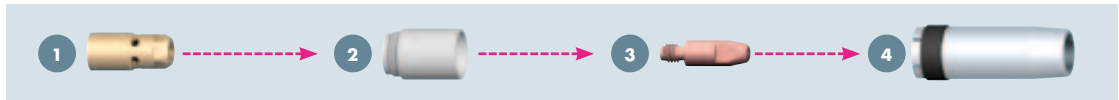
Features	Part-No.		
	0°	22°	45°
Standard	962.1314	962.1315	962.1316

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

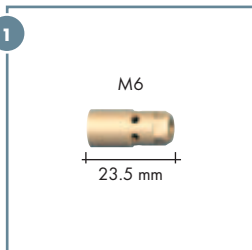
Neck liner

for	Torch geometry	Wire-Ø	Part-No.
Steel	0° / 22°	Ø 0.8-0.9	149.0073.5
		Ø 1.0-1.2	149.0077.5
Steel	45°	Ø 0.8-0.9	149.0075.5
		Ø 1.0-1.2	149.0079.5
Aluminium	0° / 22°	Ø 0.8-1.0	149.0085.5
		Ø 1.2-1.6	149.0090.5
Aluminium	45°	Ø 0.8-1.0	149.0087.5
		Ø 1.2-1.6	149.0092.5

Wear parts for ROBO WH 242 D

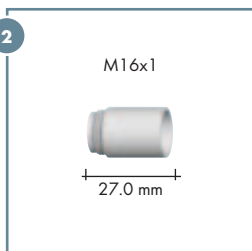


1 Contact tip holder (10 pcs.)



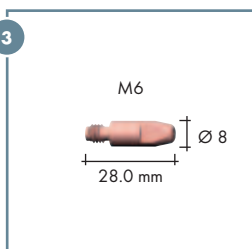
Type	Part-No.
M6 Brass	142.0149

2 Nozzle insulator (10 pcs.)



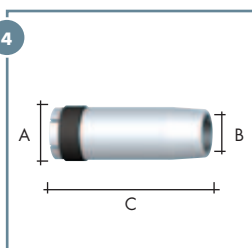
Type	Part-No.
Standard	146.0066

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) ¹	Ø 21.0	Ø 13.0	62.0 mm	145.0135
Recess (- 1.0 mm) ¹	Ø 21.0	Ø 15.5	62.0 mm	145.0090

¹ Recess: Contact tip recessed

"WH and WH-PP" liquid-cooled Torch necks & wear parts

ROBO WH 290



Torch neck

Features	Part-No.
Standard	962.0634

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

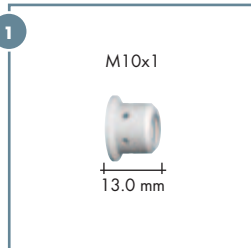
Neck liner

for	Wire-Ø	Part-No.
Steel	Ø 0.8-1.2	149.0004.5
Aluminium	Ø 0.8-1.2	149.0013.5

Wear parts for ROBO WH 290

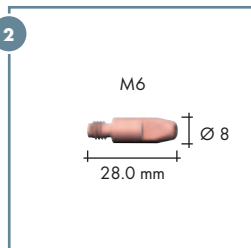


1 Gas diffuser (10 pcs.)



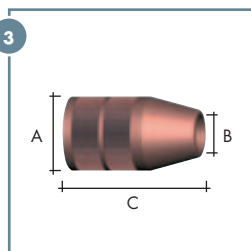
Type	Part-No.
Standard	962.0657
High temperature resistant (ceramic)	962.1341

2 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

3 Gas nozzle (10 pcs.)



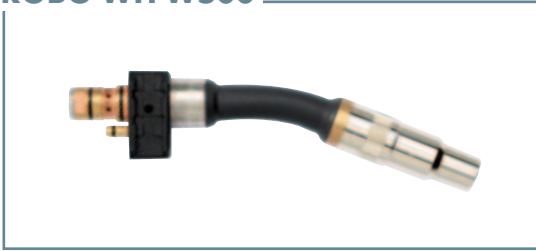
Type conical	Ø A	Ø B	Length C	Part-No.
Recess (-1.0 mm) ¹	Ø 25.0	Ø 13.0	48.5 mm	145.0564
Stick-out (+3.0 mm) ²	Ø 25.0	Ø 13.0	44.5 mm	145.0495
Stick-out (+3.0 mm) ²	Ø 25.0	Ø 15.5	44.5 mm	145.0494

¹ Recess: Contact tip recessed

² Stick-out: Contact tip protruding

"WH and WH-PP" liquid-cooled Torch necks & wear parts

ROBO WH W500



Torch neck

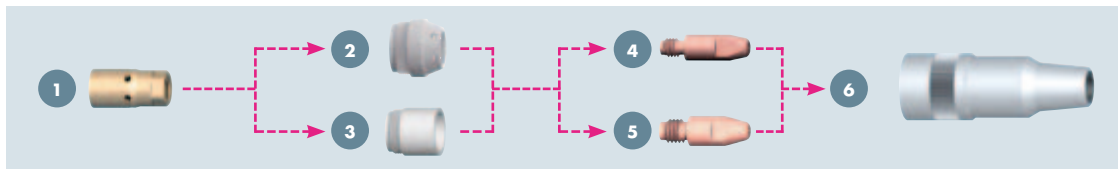
Features	Part-No.			
	0°	22°	35°	45°
Standard	962.1550.1	962.1549.1	962.1551.1	962.1532.1
with gas nozzle sensor*	962.1595.1	962.1596.1	962.1597.1	962.1598.1

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

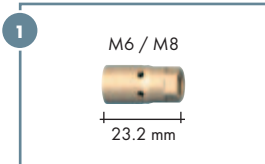
Neck liner

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



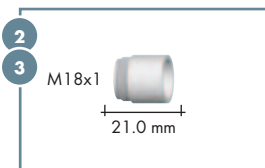
1 Contact tip holder (10 pcs.)



Type	Part-No.
M6 Copper ¹	142.0133
M6 Brass	142.0216.10
M8 Copper ¹	142.0151
M8 Brass	142.0117

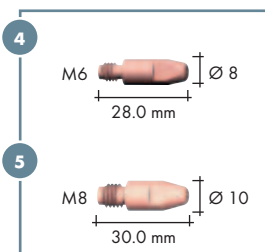
¹ Recommended for high amperages.

2 Gas diffuser 3 Nozzle insulator (10 pcs.)



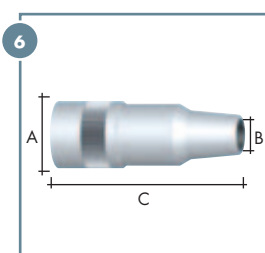
Type	Part-No.
Gas diffuser, standard (not ill.)	943.0284
Nozzle insulator, standard	146.0054
Nozzle insulator, resistant to high temperatures	146.0059

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

"WH and WH-PP" liquid-cooled Torch necks & wear parts

ROBO WH 652 D TS



Torch neck

Features	Part-No.		
	0°	22°	45°
Standard	962.1353	962.1365	962.1366
with gas nozzle sensor*	962.1374	962.1375	962.1376

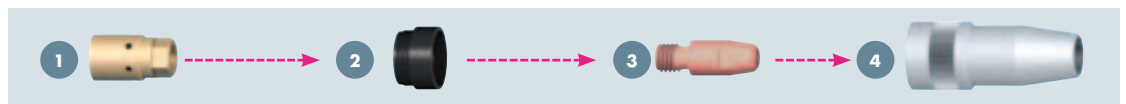
Wear parts and fittings are not included in the scope of delivery! Please order these separately and according to the application!

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

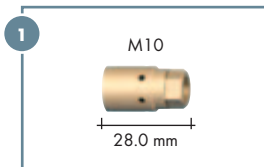
Neck liner

Torch geometry	Wire-Ø	Part-No.	
		for steel	for aluminium
0° / 22°	Ø 0.8-1.0	-	149.0088.5
	Ø 1.0-1.2	149.0080.5	149.0093.5
	Ø 1.4-1.6	149.0083.5	-
45°	Ø 0.8-1.0	-	149.0088.5
	Ø 1.0-1.2	149.0080.5	149.0093.5
	Ø 1.4-1.6	149.0083.5	-

Wear parts for ROBO WH 652 D TS



1 Contact tip holder (10 pcs.)



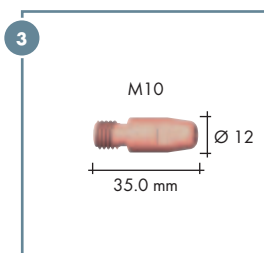
Type	Part-No.
M10 Brass	142.0145

2 Nozzle insulator (10 pcs.)



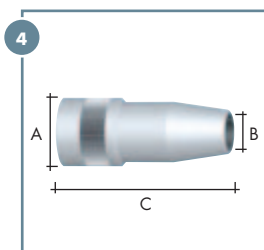
Type	Part-No.
Standard	146.0056
High temperature resistant (ceramic)	146.0068

3 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

4 Gas nozzle (10 pcs.)



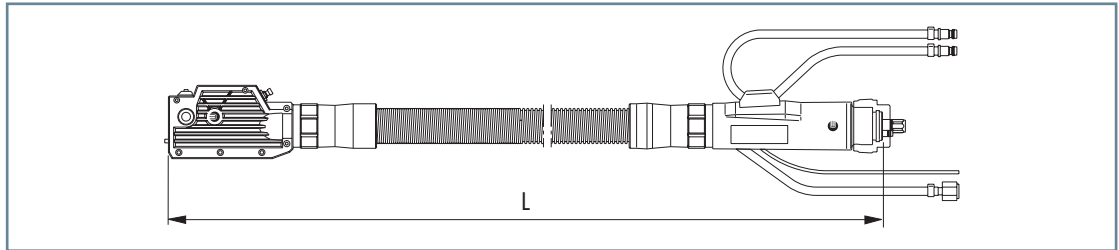
Type bottle form	Ø A	Ø B	Length C	Part-No.
Recess (-1.0 mm) ¹	Ø 34.0	Ø 18.0	84.0 mm	145.0574.10

Type conical	Ø A	Ø B	Length C	Part-No.
Recess (-1.0 mm) ¹	Ø 30.0	Ø 21.5	84.0 mm	145.0575.10

¹ Recess: Contact tip recessed

“WH and WH-PP” liquid-cooled Cable assemblies & accessories

Cable assemblies and connection types



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

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

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 3.20 m on request.

Liners for Euro central connection¹

Type	Wire-Ø	to L=1.65 m	to L=3.20 m	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

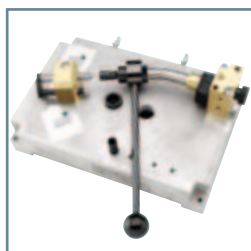
² Red and BSLblue steel liners (insulated) for the use of non-alloyed and low-alloyed steels. The totally insulated wire feed prevents damage caused by “micro-arcing” on the wire. This allows optimal current transfer inside the contact tube, improving the welding process. The insulated steel liner must 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

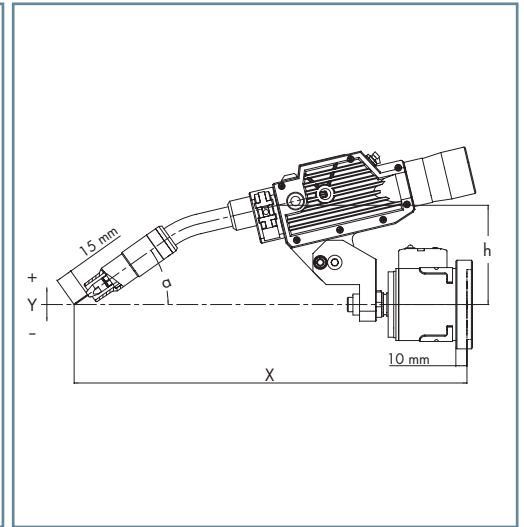
for torch type	Torch geometry	Part-No.
ROBO WH 242 D	0° / 22° / 45°	837.0020
ROBO WH 290	45°	837.0163
ROBO WH W500	0° / 22° / 45°	837.0692
ROBO WH W500	35°	837.0688
ROBO WH 652 D TS	0° / 22° / 45°	837.0099

“WH and WH-PP” liquid-cooled Holder and TCP geometries

Torch holder for ROBO WH and WH-PP

in connection with CAT2 cpl.

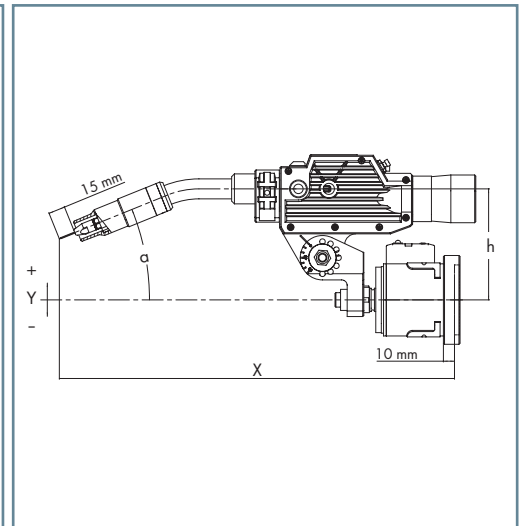
Torch type	Torch geometry	X	Y	h	α	Part-No.
		(mm)				
ROBO	0°	370	0	80	23°	960.0026
WH 242 D	22°	354	0	89	35°	960.0026
	45°	349	0	99	46°	960.0026
ROBO	0°	370	0	80	23°	960.0026
WH W500	22°	354	0	89	35°	960.0026
	35°	362	0	96	41°	960.0026
	45°	349	0	99	46°	960.0026
ROBO	45°	396	0	94	54°	960.0026
WH 290						
ROBO	0°	426	0	84	19°	960.0026
WH 652	22°	410	0	93	32°	960.0026
D TS	45°	382	0	102	43°	960.0026



Segment holder for ROBO WH and WH-PP¹

in connection with CAT2

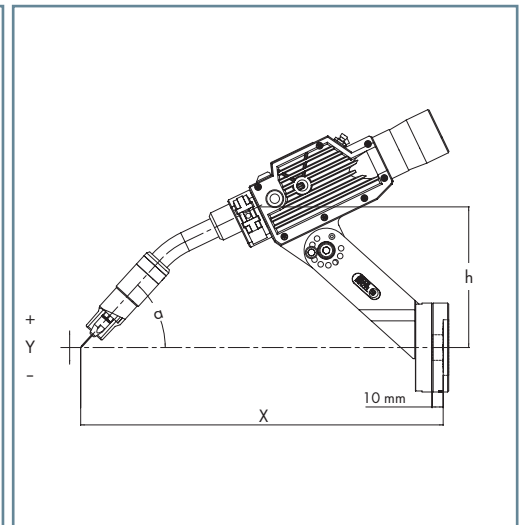
Torch type	Torch geometry	X	Y	h	α	Part-No.
		(mm)				
ROBO	0°	365	100	100	0°	780.0146
WH 242 D	22°	356	55	100	22°	780.0146
	45°	350	3	100	45°	780.0146
ROBO	0°	365	100	100	0°	780.0146
WH W500	22°	356	55	100	22°	780.0146
	35°	364	26	100	35°	780.0146
	45°	350	3	100	45°	780.0146
ROBO	45°	389	42	100	45°	780.0146
WH 290						
ROBO	0°	422	100	100	0°	780.0146
WH 652	22°	412	49	100	22°	780.0146
D TS	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	0°	354	37	127	26°	780.0360
WH 242 D	22°	327	0	127	48°	780.0360
	45°	288	-44	127	71°	780.0360
ROBO	0°	354	37	127	26°	780.0360
WH W500	22°	327	0	127	48°	780.0360
	35°	321	-30	127	61°	780.0360
	45°	288	-44	127	71°	780.0360
ROBO	45°	359	-30	127	71°	780.0360
WH 290						
ROBO	0°	405	12	127	26°	780.0360
WH 652	22°	374	-30	127	48°	780.0360
D TS	45°	319	-70	127	71°	780.0360

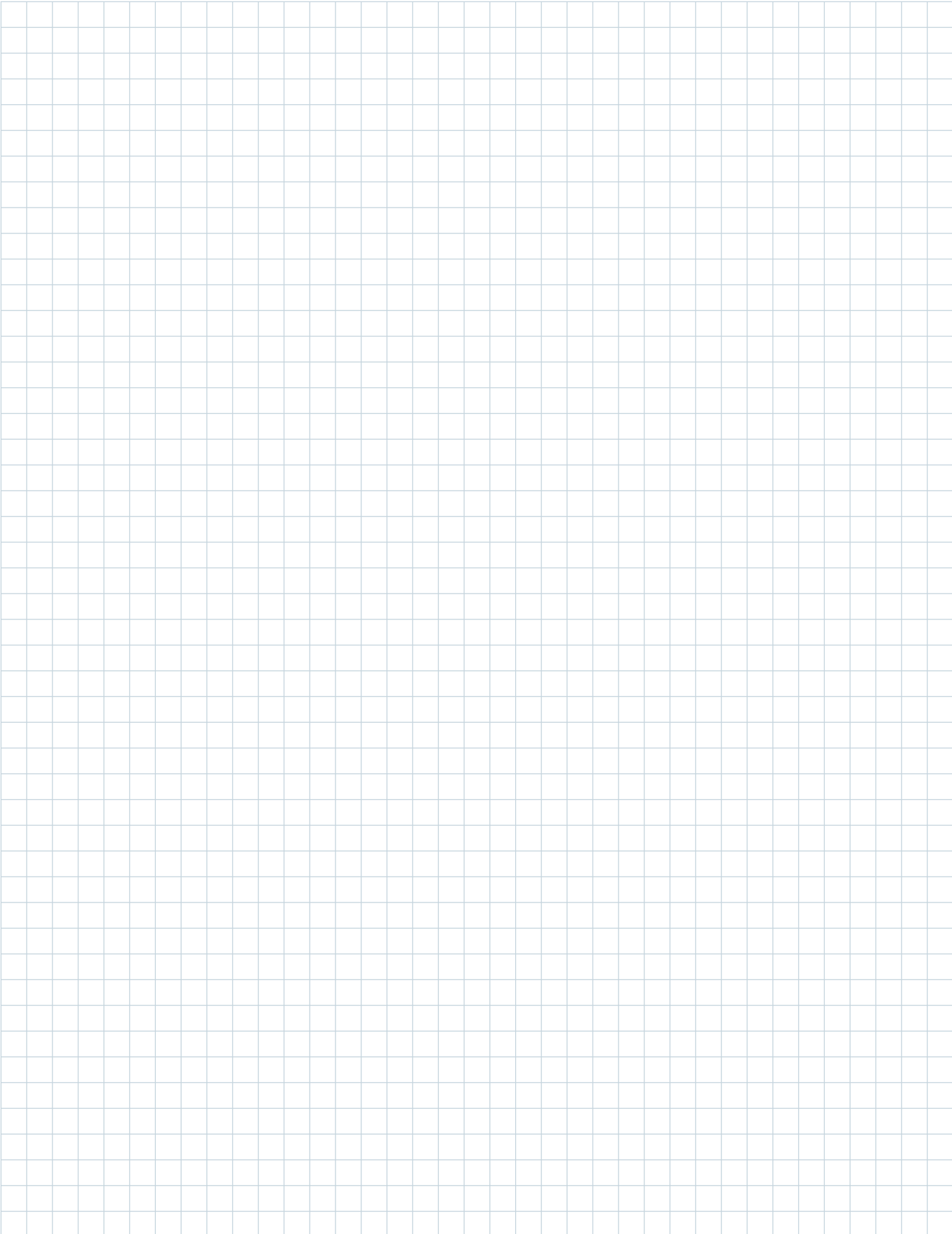


Further holders are available on request.

Please note: All the trademarks named in this brochure are the property of the respective companies.

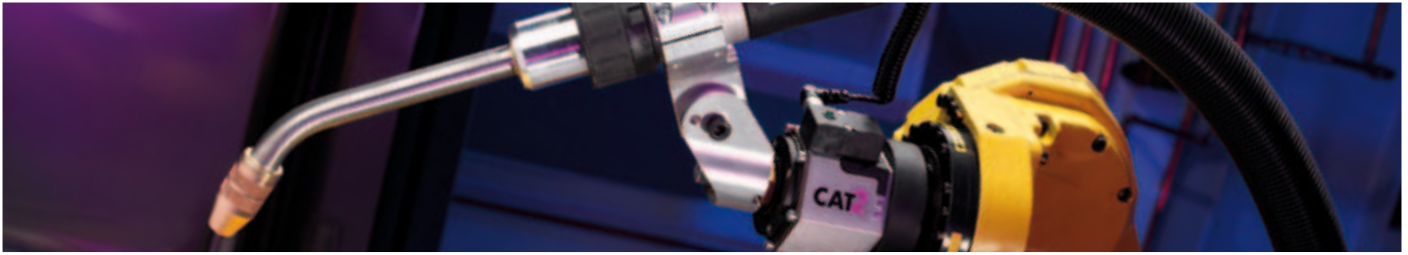
¹ Holder adjustable in 15° steps.

Notes



MIG/MAG welding torch system

"ABIROB® W" liquid-cooled



"Robust & flexible!"

Pure ROBO power! Liquid-cooled ABIROB® W welding torches – power ratings up to 500 A – are equipped with a 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
-----	--------	------

Typical areas of application:

- Commercial vehicle construction
- Earth-moving equipment
- Rail vehicle construction
- Shipbuilding
- Container construction
- Machine and steel construction
- 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 on the outside):
 - Robot mount CAT2 HL
 - 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 HL
 - 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® W” liquid-cooled System overview and technical data

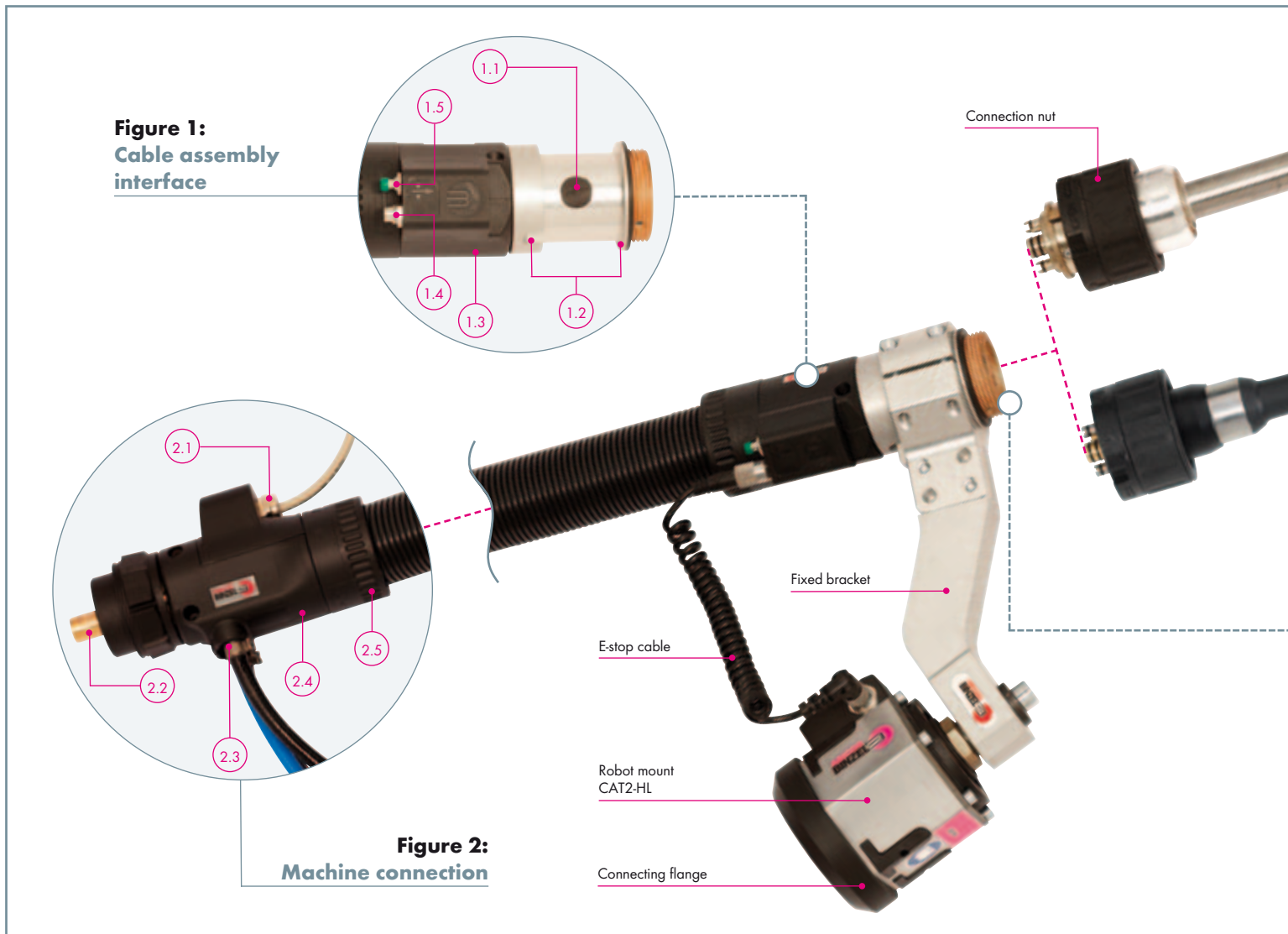


Figure 1:
Cable assembly interface

- 1.1 Connection for wire brake¹ (optional)
- 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 via gas nozzle. Ask your robot manufacturer for more details.

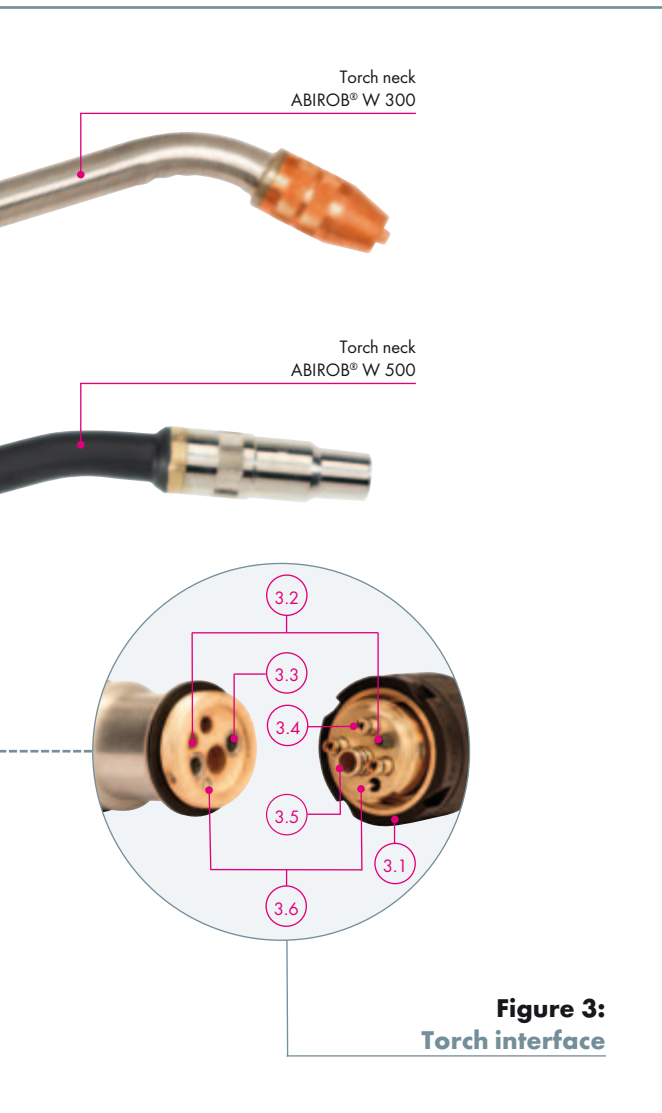
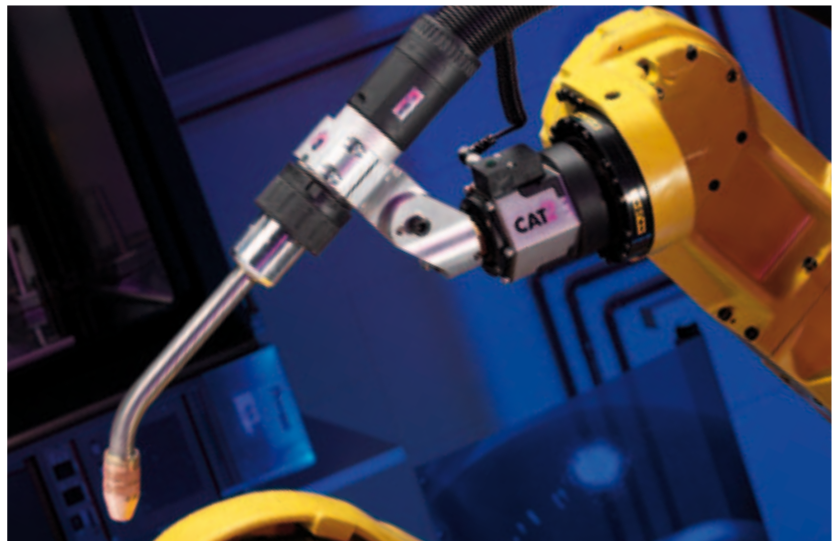


Figure 3:
Torch interface

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® W 300

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

ABIROB® W 500

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

Cable assembly ABIROB® W5H

Rating:	500 A
Body type:	Hybrid
Water flow:	1.9 l/min.
Gas flow:	25 l/min.

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® W" liquid-cooled Torch necks & wear parts

ABIROB® W 300



Torch neck

	Part-No.	
Features	22°	45°
Standard	782.0110.1	782.0111.1
with gas nozzle sensor*	782.0014	782.0015

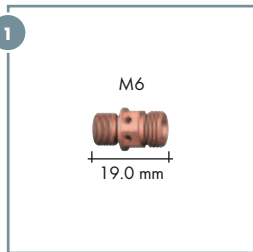
Wear parts and fittings are not included in the scope of delivery! Please order these separately and according to the application!

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

Wear parts for ABIROB® W300



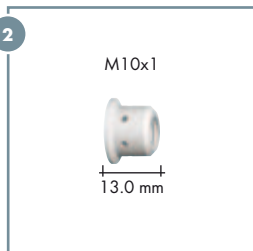
1 Contact tip holder (10 pcs.)



Type	Part-No.
M6 Copper ¹	785.5052

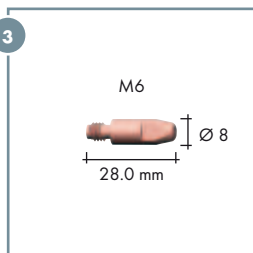
¹ Recommended for high amperages.

2 Gas diffuser (10 pcs.)



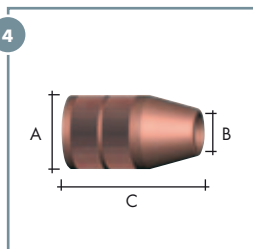
Type	Part-No.
Standard	962.0657
High temperature resistant (ceramic)	962.1341

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

"ABIROB® W" liquid-cooled Torch necks & wear parts

ABIROB® W 500



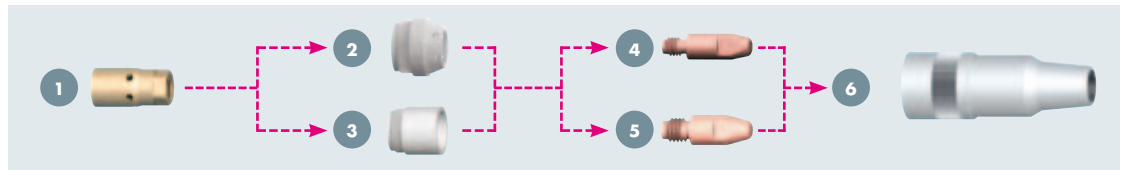
Torch neck

Features	Part-No.			
	0°	22°	35°	45°
Standard	782.0080.1	782.0076.1	782.0077.1	782.0078.1
Standard (+100 mm)	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 mm)	782.0088.1	782.0089.1	782.0090.1	782.0091.1

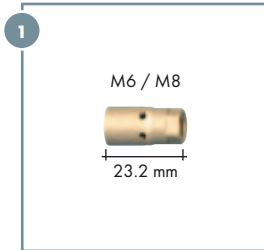
Wear parts and fittings are not included in the scope of delivery! Please order these separately and according to the application!

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

Wear parts for ABIROB® W500



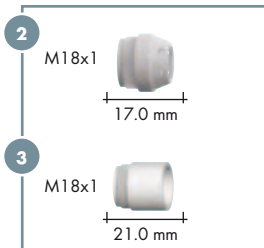
1 Contact tip holder (10 pcs.)



Type	Part-No.
M6 Copper ¹	142.0133
M6 Brass	142.0216.10
M8 Copper ¹	142.0151
M8 Brass	142.0117

¹ Recommended for high amperages.

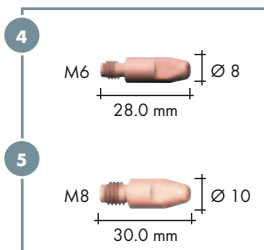
2 Gas diffuser 3 Nozzle insulator (10 pcs.)



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

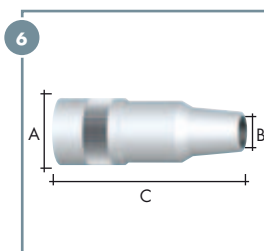
² Recommended for applications with galvanized materials in conjunction with gas nozzles 145.0553 and 145.0568.

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

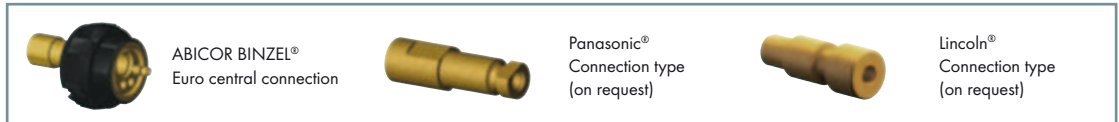
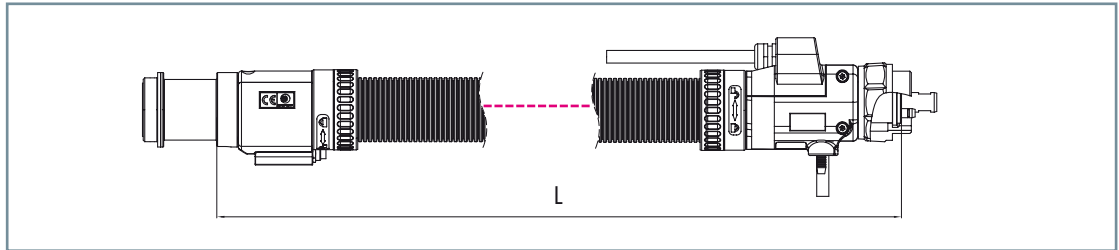
Type conical	Ø A	Ø B	Length C	Part-No.
Recess (-1.1 mm) ³	Ø 27.0	Ø 15.5	75.5 mm	145.0553.10
Stick-out (+2.4 mm) ⁴	Ø 27.0	Ø 15.5	72.5 mm	145.0568.10

³ Recess: Contact tip recessed

⁴ Stick-out: Contact tip protruding

“ABIROB® W” liquid-cooled Cable assemblies & accessories

Cable assembly ABIROB® W5H and connection types



Cable assemblies ABIROB® W5H

with connection type	Length	Part-No.
ABICOR BINZEL®	1.10 m	782.1014.1
Euro central connection	1.20 m	782.1015.1
	1.25 m	782.1016.1
	1.30 m	782.1017.1
	1.35 m	782.1018.1
	1.45 m	782.1019.1

Cable assemblies ABIROB® W5H

with connection type	Length	Part-No.
ABICOR BINZEL®	1.50 m	782.1020.1
Euro central connection	1.60 m	782.1021.1
	1.65 m	782.1022.1
	2.65 m	782.1023.1
	3.15 m	782.1024.1

Cable assembly lengths of over 3.15 m available on request. These are delivered with power/water cable. 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	Wire-Ø	to L=1.5 m ⁴	to L=3.15 m ⁴	10.0 m ⁵	Collet
Liner steel red ²	Ø 0.8-1.2	124.0145	124.0146	124.0159	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.

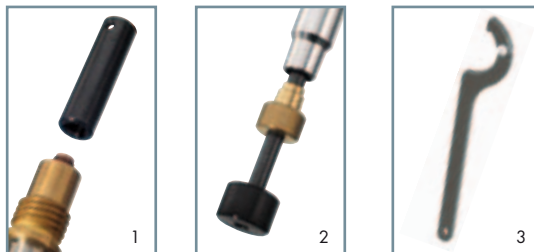
² Red and white steel liners (insulated) for the use of non-alloyed and low-alloyed steels. The totally insulated wire feed prevents damage caused by “micro-arcing” on the wire. This allows optimal current transfer inside the contact tube, improving the welding process. The insulated steel liner must 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 the inner tube)	191.0085
2 Alignment tool (to align inner tube with outer tube)	191.0090.1
3 Pin wrench (to unscrew the counternut)	191.0115



Alignment jig

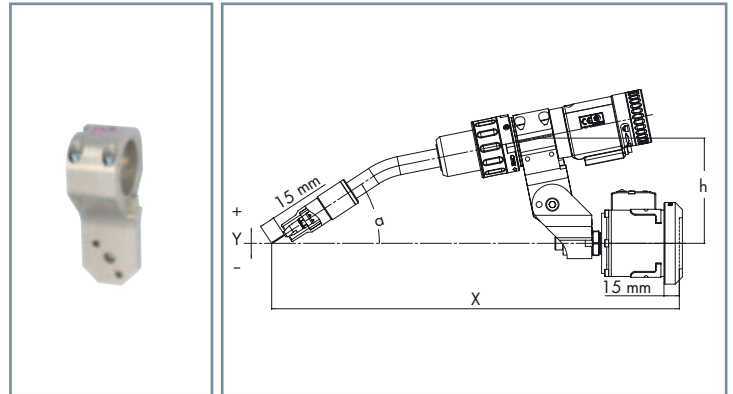
for torch type	Torch geometry	Part-No.
ABIROB® W 500	0°/22°/ 35°/45°	837.0589.1
ABIROB® W 500 (+100 mm)	0°/22°/ 35°/45°	837.0735.1
ABIROB® W 300	22°/45°	837.0484.1

"ABIROB® W" liquid-cooled Holder and TCP geometries

CAT2-HL holder for ABIROB® W

in connection with CAT2-HL cpl.

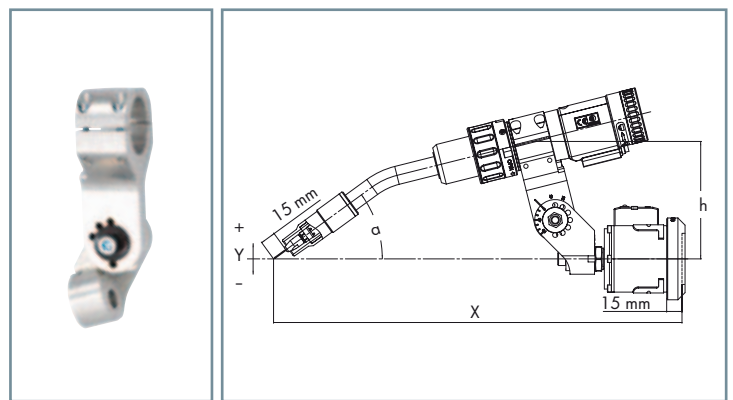
Torch type	Torch geometry	X	Y	h	a	Part-No.
ABIROB®	22°	399	0	103	33°	780.0430.1
W 500	35°	383	0	104	40°	780.0430.1
	45°	370	0	105	45°	780.0430.1
ABIROB®	22°	499	0	104	30°	780.0430.1
W 500	35°	484	0	105	39°	780.0430.1
(+100 mm)	45°	470	0	105	45°	780.0430.1
ABIROB®	22°	437	0	102	36°	780.0430.1
W 300	45°	416	0	104	53°	780.0430.1



Segment holder for ABIROB® W¹

in connection with CAT2-HL

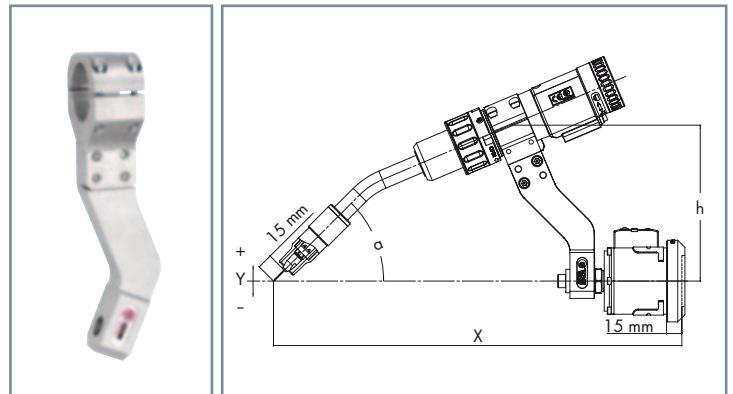
Torch type	Torch geometry	X	Y	h	a	Part-No.
ABIROB®	22°	400	0	115	36°	780.0433.1
W 500	35°	383	0	117	43°	780.0433.1
	45°	368	0	118	48°	780.0433.1
ABIROB®	22°	497	-24	115	36°	780.0433.1
W 500	35°	475	-51	115	49°	780.0433.1
(+100 mm)	45°	453	-70	115	59°	780.0433.1
ABIROB®	22°	440	+10	115	36°	780.0433.1
W 300	45°	413	-19	115	59°	780.0433.1



Fixed bracket for ABIROB® W

in connection with CAT2-HL

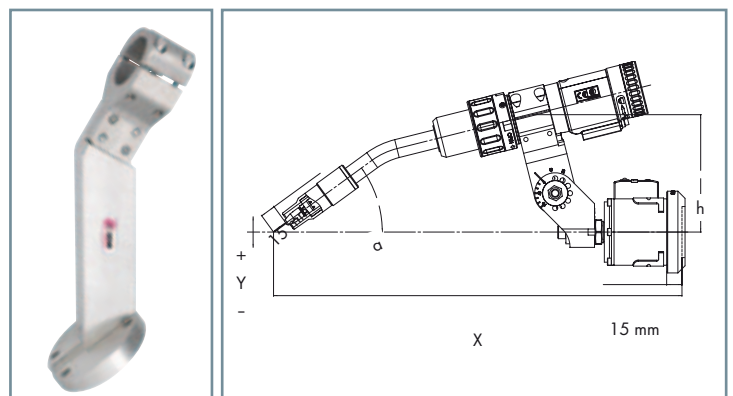
Torch type	Torch geometry	X	Y	h	a	Part-No.
ABIROB®	22°	400	0	153	45°	780.0414.1
W 500	35°	400	0	125	45°	780.0420.1
	45°	400	0	126	50°	780.0422.1
ABIROB®	22°	500	0	192	45°	780.0438.1
W 500	35°	500	0	142	45°	780.0440.1
(+100 mm)	45°	500	0	134	50°	780.0442.1
ABIROB®	22°	400	0	149	45°	780.0444.1
W 300	45°	400	0	90	50°	780.0446.1



RTM holder for ABIROB® W

for robots with collision software

Torch type	Torch geometry	X	Y	h	a	Part-No.
ABIROB®	22°	400	0	153	45°	780.0449.1
W 500	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
W 500	35°	500	0	142	45°	780.0457.1
(+100 mm)	45°	500	0	105	45°	780.0453.1
ABIROB®	22°	400	0	149	45°	780.0459.1
W 300	45°	400	0	90	50°	780.0461.1

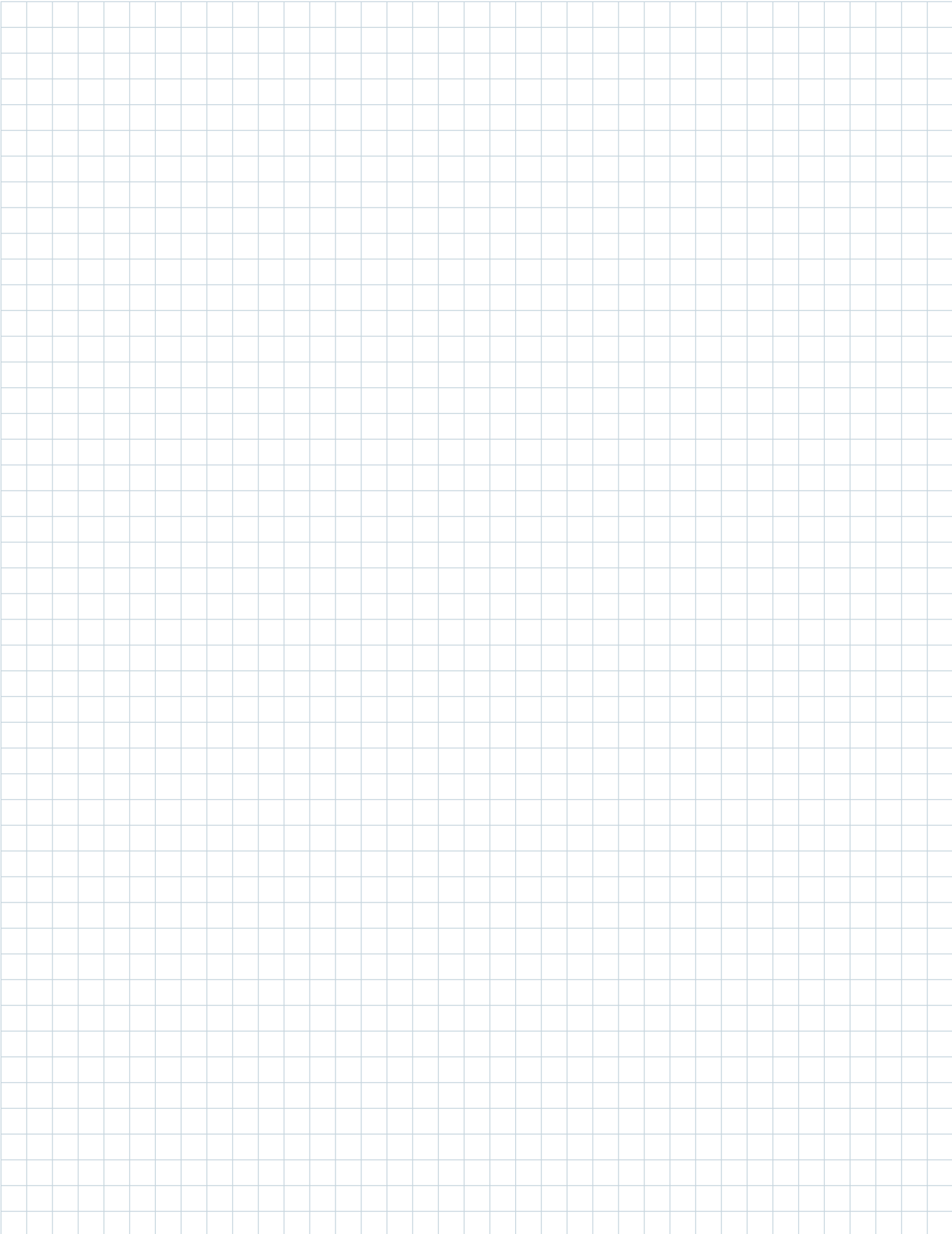


Further holders are available on request.

Please note: All the trademarks named in this brochure are the property of the respective companies.

¹ Holder adjustable in 15° steps.

Notes



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 system, the torch system allows a simple and fast change of cable assembly 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 fast change of the cable assembly with constant TCP

Degree of automation:

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

Typical areas of application:

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

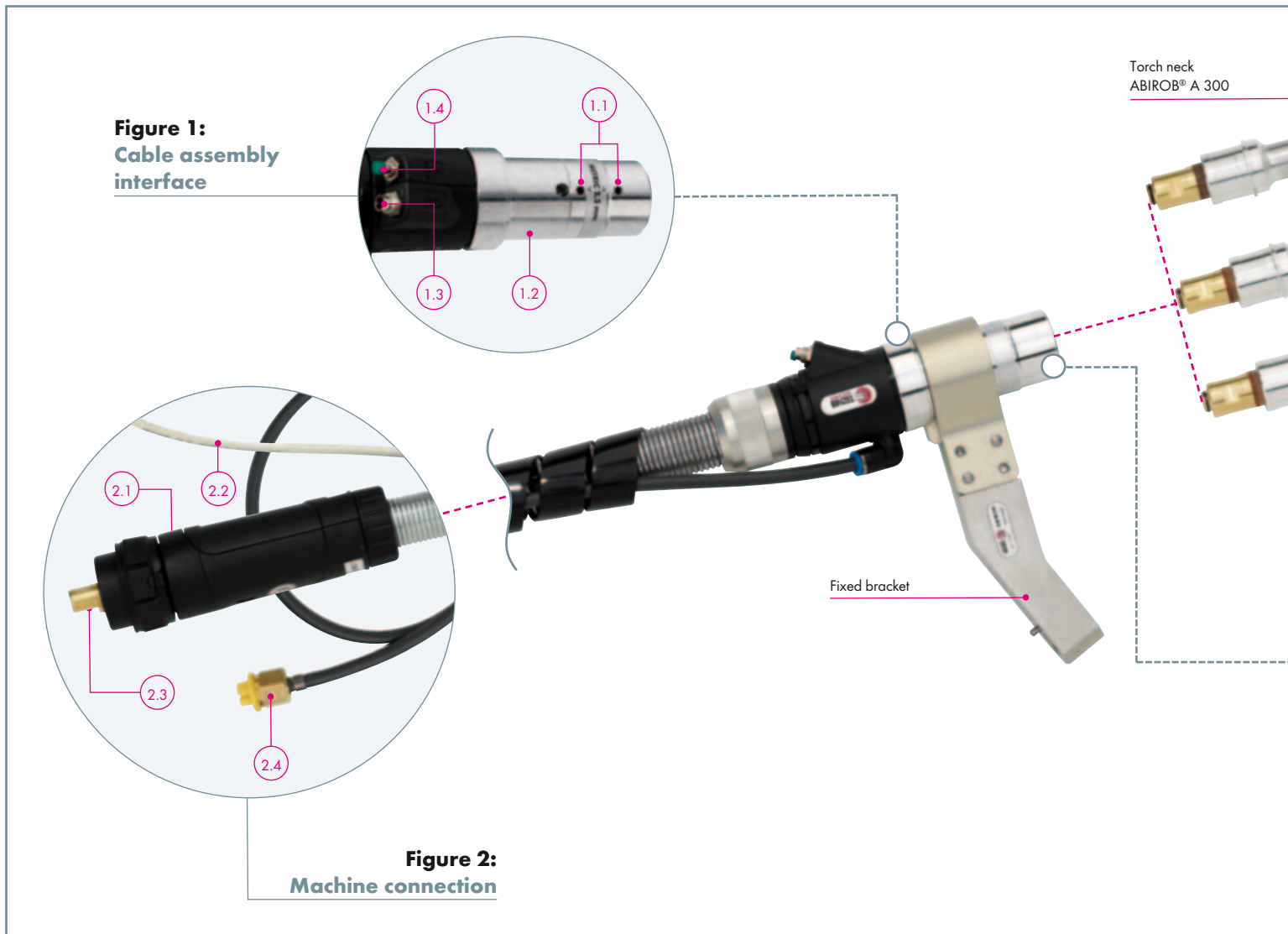


Figure 1:
Cable assembly interface

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

Gas nozzle sensor on request.

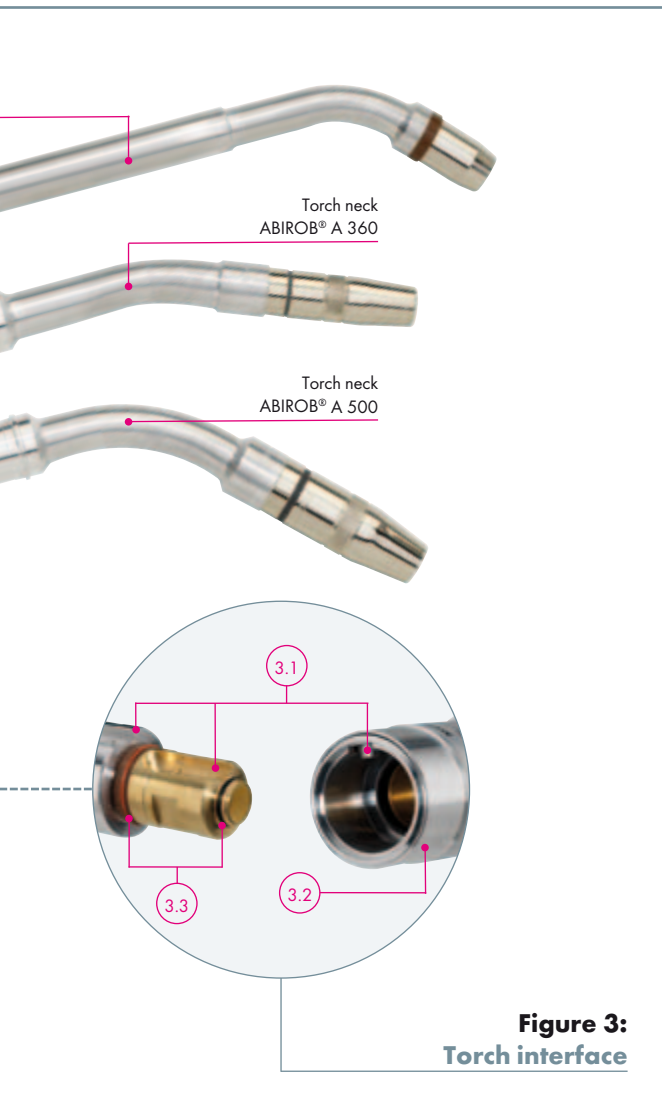
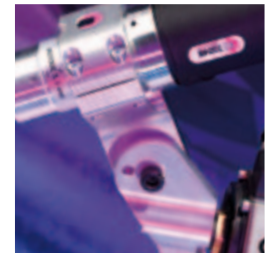


Figure 3:
Torch interface

Figure 3:
Torch interface

- 3.1 Fast and simple 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® A 300

Type of cooling: air-cooled
 Rating: 300 A CO₂
 250 A Mixed gases M21 (EN ISO 14175)
 Duty cycle: 100 %
 Wire-Ø: 0.8-1.4 mm
 Torch geometries: 45°

ABIROB® A 360

Type of cooling: air-cooled
 Rating: 360 A CO₂
 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® A 500

Type of cooling: air-cooled
 Rating: 500 A CO₂
 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® A 300

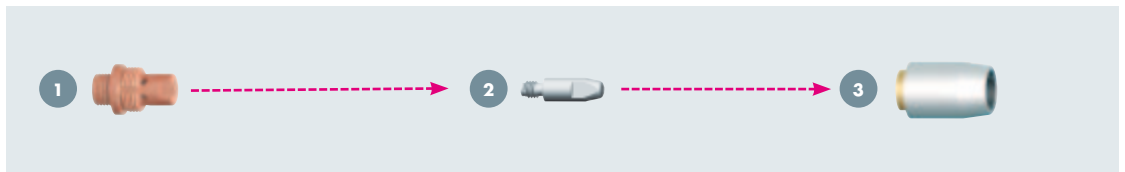


Torch necks

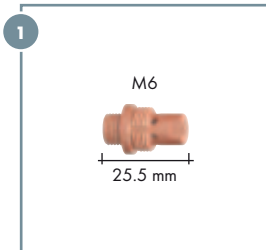
Features	Part-No.
Standard	980.1146.1

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® A 300

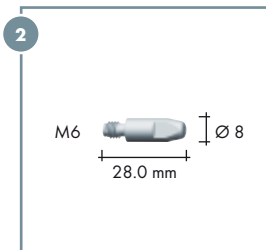


1 Contact tip holder (10 pcs.)



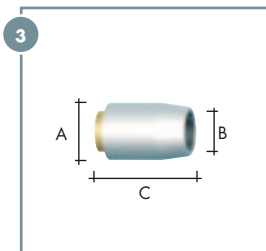
Type	Part-No.
M6 Brass	142.0171

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.)



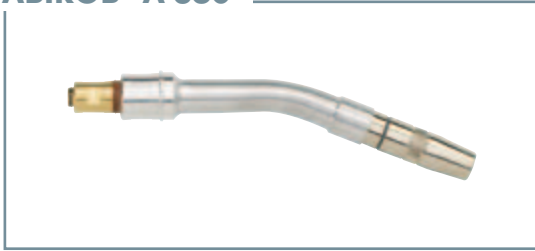
Type bottle form	Ø A	Ø B	Length C	Part-No.
Flush ¹	Ø 22.0	Ø 14.4	32.0 mm	145.0671.5
Stick-out (+3.0 mm) ²	Ø 22.0	Ø 14.4	29.0 mm	145.0677.5

¹ Flush: Contact tip flush

² Stick-out: Contact tip protruding

"ABIROB® A ECO" air-cooled Torch necks & wear parts

ABIROB® A 360

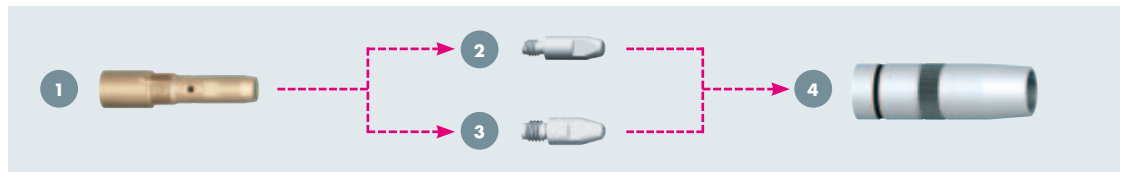


Torch necks

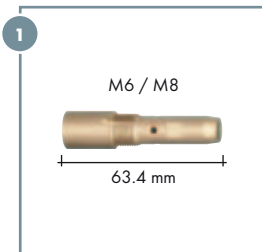
Features	Part-No.			
	0°	22°	35°	45°
Standard	980.1023	980.1024	980.1025	980.1026

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® A 360



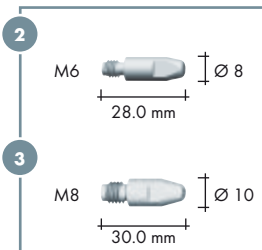
1 Contact tip holder (5 pcs.)



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

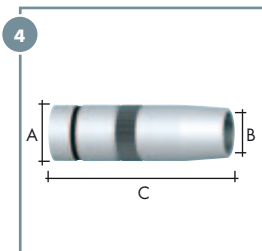
¹ Recommended for high amperages.

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® A 500

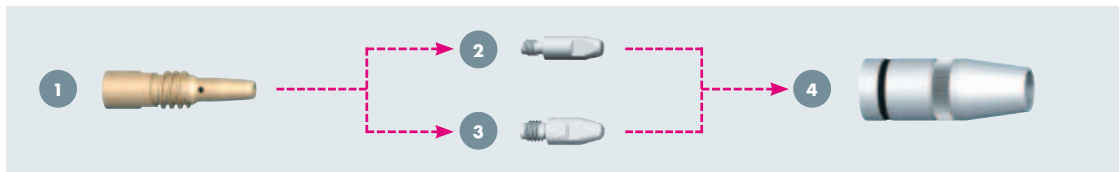


Torch necks

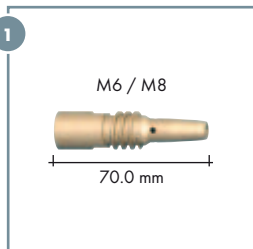
Features	Part-No.			
	0°	22°	35°	45°
Standard	980.1012	980.1013	980.1014	980.1015

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® A 500



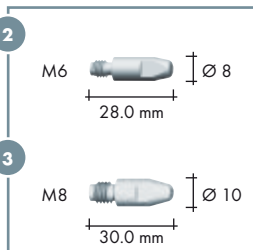
1 Contact tip holder (5 pcs.)



Type	Part-No.
M6 Brass	142.0159.5
M8 Brass	142.0158.5
M8 Copper ¹	142.0169.5

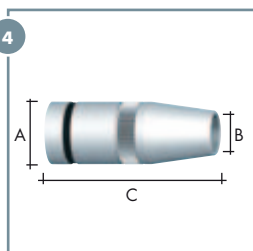
¹ Recommended for high amperages.

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
	Ø 1.6	-	147.0590

4 Gas nozzle (5 pcs.)



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 bottle form	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

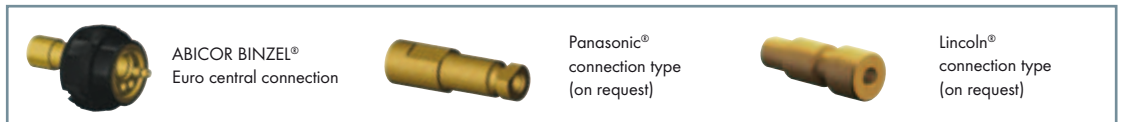
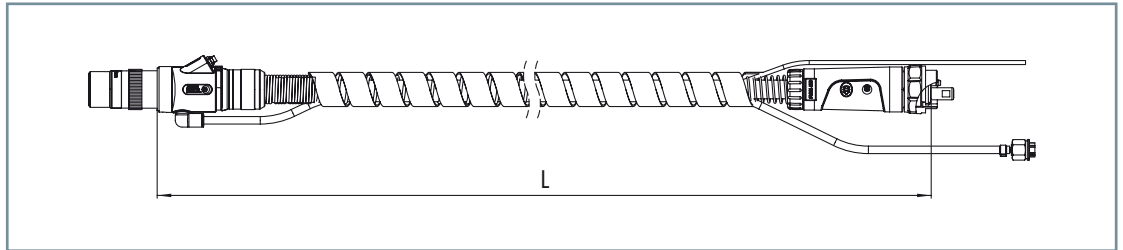
² Flush: Contact tip flush

³ Recess: Contact tip recessed

⁴ Stick-out: Contact tip protruding

"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 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	Wire-Ø	to L=1.6 m ³	to L=3.15 m ³	10.0 m ⁴	Collet
Liner steel red ²	Ø 0.8 - 1.2	124.0145	124.0146	124.0159	131.0012
Liner steel white 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 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 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 2x collets

Accessories

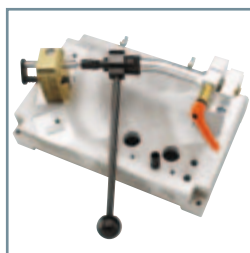


Description

Alignment tool
(to align inner tube with outer tube)

Part-No.

191.0090.1



Alignment jig

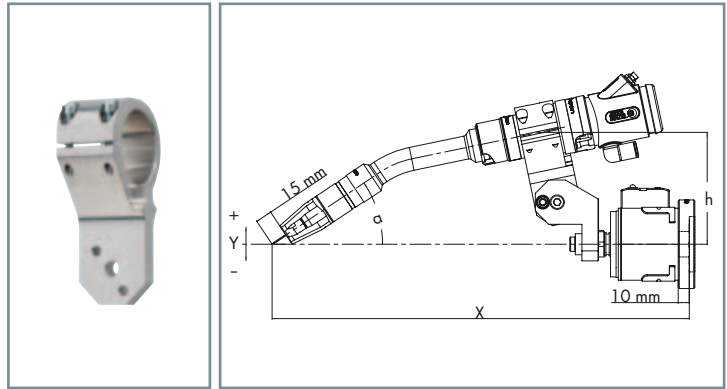
for torch type	Torch geometry	Part-No.
ABIROB® A 300	45°	837.0600
ABIROB® A 360 / A 500	0° / 22° / 45°	837.0500
ABIROB® A 360 / A 500	35°	837.0514

"ABIROB® A ECO" air-cooled Holder and TCP geometries

Clamp holder for ABIROB® A ECO

in connection with CAT2 cpl.

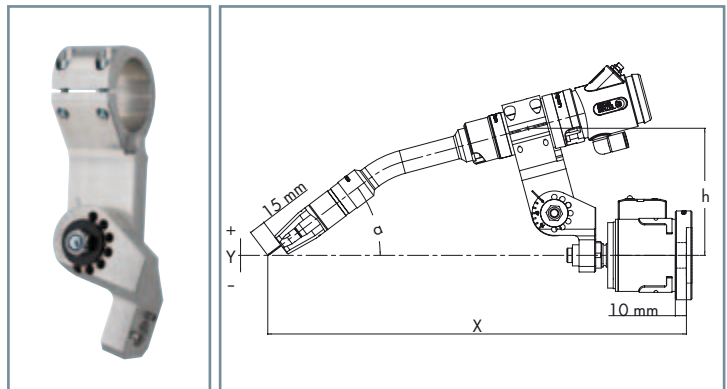
Torch type	Torch geometry	X	Y	h	α	Part-No.
ABIROB®	0°	393	0	97	21°	780.0259
A 360	22°	376	0	101	34°	780.0259
	35°	361	0	102	40°	780.0259
	45°	348	0	103	44°	780.0259
ABIROB®	0°	393	0	97	21°	780.0259
A 500	22°	376	0	101	34°	780.0259
	35°	361	0	102	40°	780.0259
	45°	348	0	103	44°	780.0259



Segment holder for ABIROB® A ECO¹

in connection with CAT2

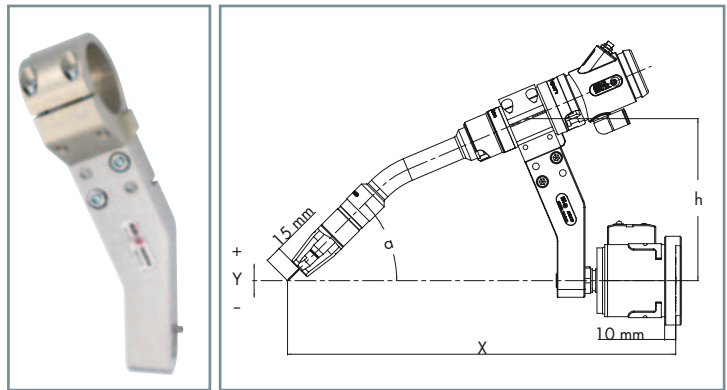
Torch type	Torch geometry	X	Y	h	α	Part-No.
ABIROB®	0°	399	46	114	15°	780.0184
A 360	22°	377	0	114	37°	780.0184
	35°	355	-27	114	50°	780.0184
	45°	332	-47	114	60°	780.0184
ABIROB®	0°	399	46	114	15°	780.0184
A 500	22°	377	0	114	37°	780.0184
	35°	355	-27	114	50°	780.0184
	45°	332	-47	114	60°	780.0184



Fixed bracket for ABIROB® A ECO

in connection with CAT2

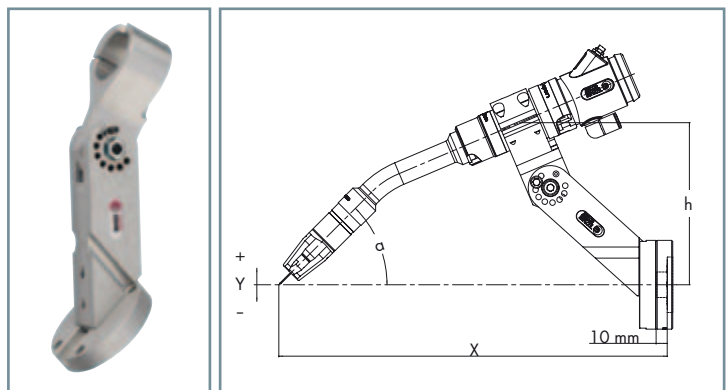
Torch type	Torch geometry	X	Y	h	α	Part-No.
ABIROB®	22°	350	0	146	45°	780.0268
A 360	35°	350	0	123	45°	780.0272
	45°	350	0	107	45°	780.0270
ABIROB®	22°	350	0	146	45°	780.0268
A 500	35°	350	0	123	45°	780.0272
	45°	350	0	107	45°	780.0270



RTM holder for ABIROB® A ECO²

for robots with collision software

Torch type	Torch geometry	X	Y	h	α	Part-No.
ABIROB®	0°	378	42	146	23°	780.0195
A 360	22°	324	0	146	45°	780.0195
	35°	324	-24	146	58°	780.0195
	45°	399	-40	146	68°	780.0195
ABIROB®	0°	378	42	146	23°	780.0195
A 500	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.

Please note: All the trademarks named in this brochure are the property of the respective companies.

¹ Holder adjustable in 15° steps.

² Holder adjustable in 7.5° steps.

MIG/MAG welding torch system

"ABIROB® 350 GC" air-cooled



"Sturdy, durable & economic ..."

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

The changeable torch stands for high capacity and 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

Typical areas of application:

- 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® 350 GC” air-cooled System overview and technical data

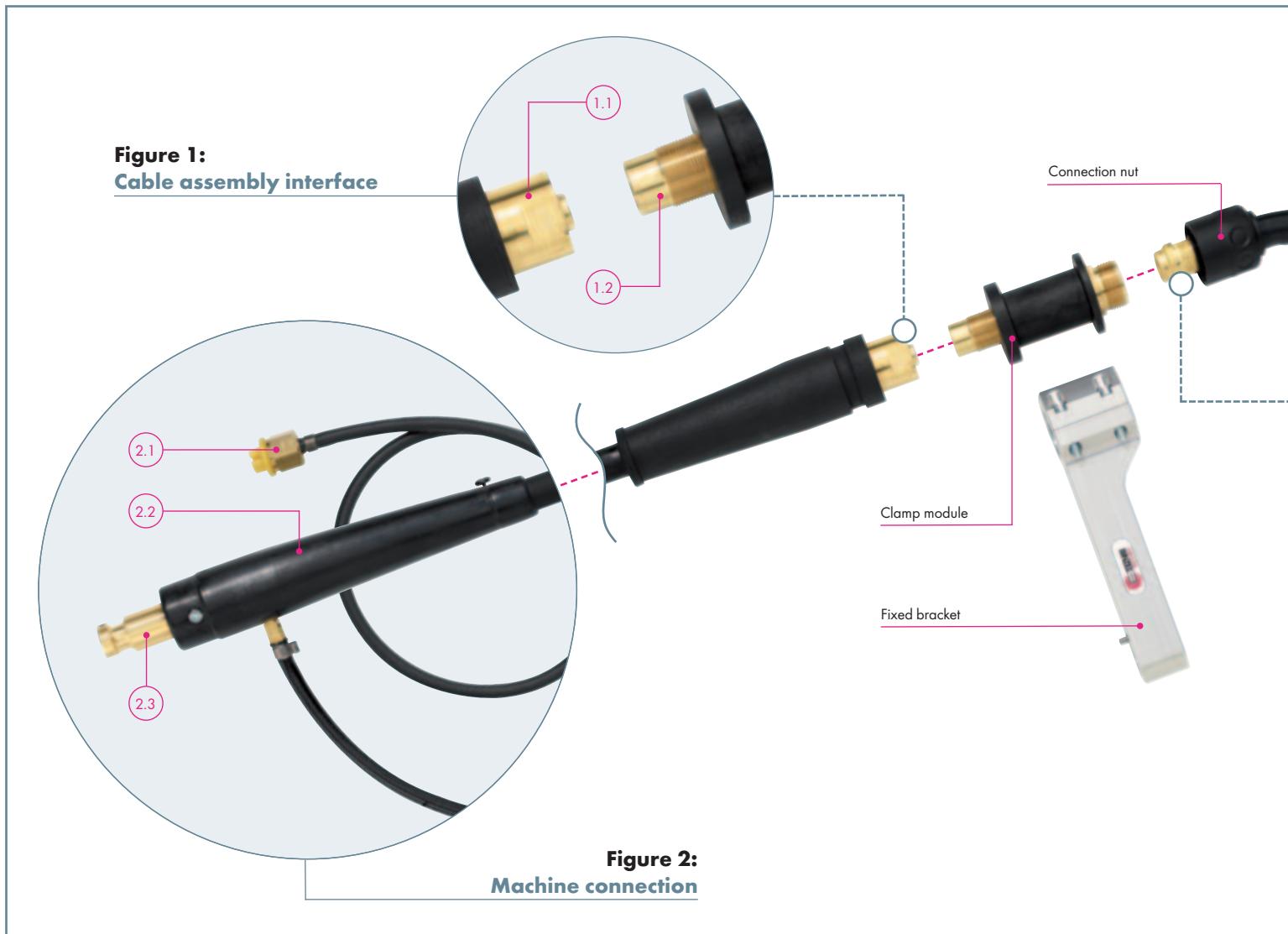


Figure 1:
Cable assembly interface

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

Figure 2:
Machine connection

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

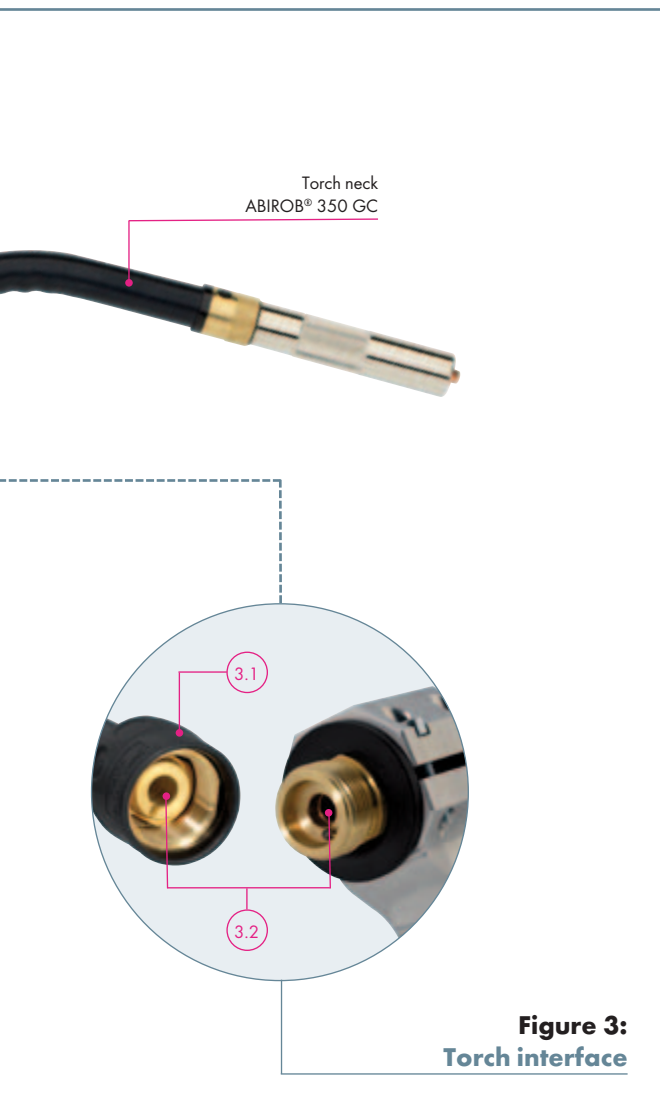


Figure 3:
Torch interface

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® 350 GC

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® 350 GC" air-cooled Torch necks & wear parts

ABIROB® 350 GC



Torch neck

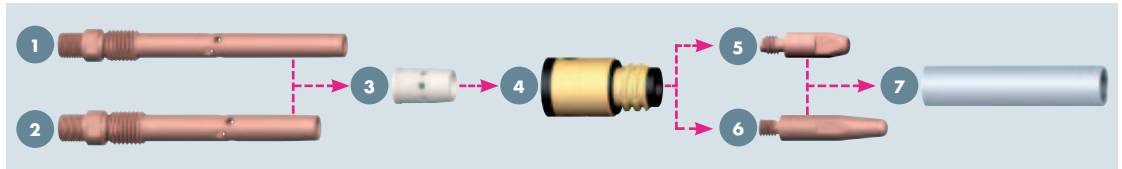
Features	30°	Part-No.	35°
Standard	-		980.0004
Short	980.0027		-
Long	980.0028		-

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

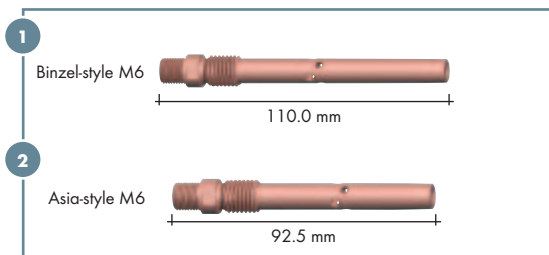
Neck liner

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® 350 GC

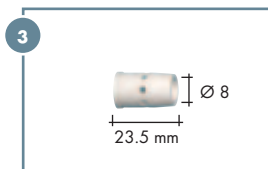


- 1 Binzel-style contact tip holder
- 2 Asia-style contact tip holder (5 pcs.)



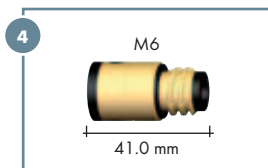
Type	Part-No.
Binzel-style M6 copper	142.0152
Asia-style M6 copper	142.0143.5

- 3 Gas diffuser (10 pcs.)



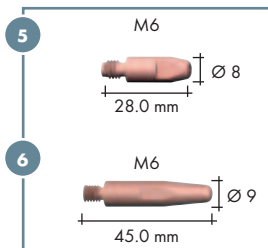
Type	Part-No.
Standard	980.0019

- 4 Gas nozzle holder (10 pcs.)



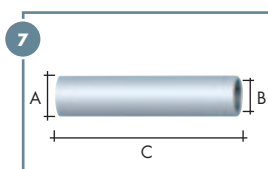
Type	Part-No.
Standard	980.0142.10

- 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	140.0383	140.1357

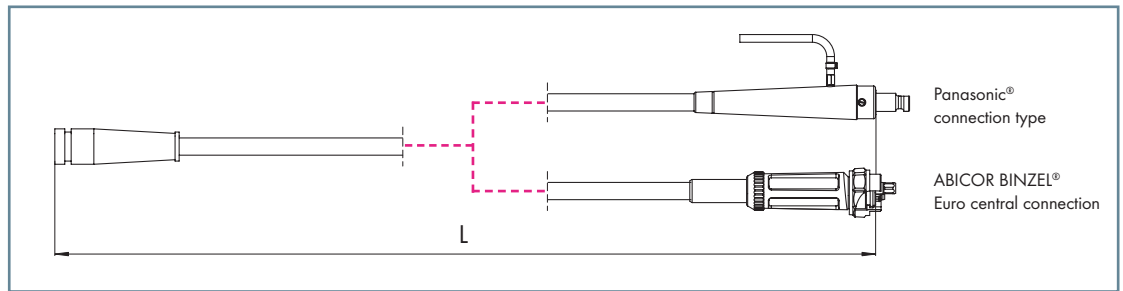
- 7 Gas nozzle (10 pcs.)



Type	Ø A	Ø B	Length C	Part-No.
Conical	Ø 20.0	Ø 12.0	89.5 mm	145.0558
Conical	Ø 20.0	Ø 13.0	89.5 mm	145.0573
Bottle form	Ø 20.0	Ø 14.0	89.5 mm	145.0559
Cylindrical	Ø 20.0	Ø 15.0	89.5 mm	145.0557

"ABIROB® 350 GC" 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 red steel liner 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 350 GC	980.0006
Connection nut	980.0081

Liners

Type	for connection type	Wire-Ø	to L=1.3 m
Liner steel red ¹	ABICOR BINZEL® Euro central connection	Ø 0.8 - 1.2	124.0145
Liner steel red ¹	PANASONIC®	Ø 1.4 - 1.6	124.0147

¹ Red 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.

Accessories



Alignment jig

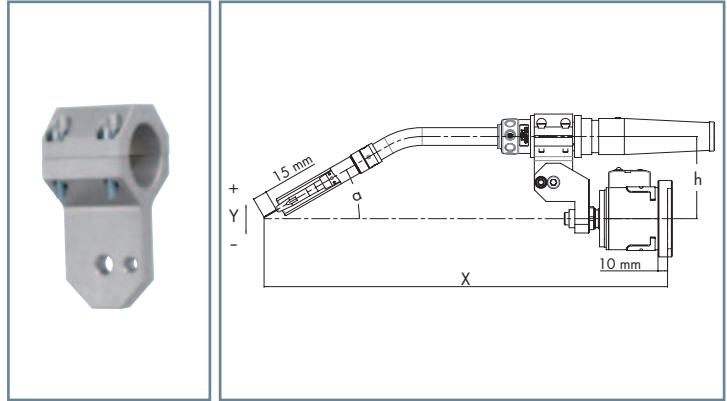
for torch type	Torch geometry	Part-No.
ABIROB® 350 GC Standard	35°	837.0551

“ABIROB® 350 GC” air-cooled Holder and TCP geometries

Torch holder for ABIROB® 350 GC

in connection with CAT2 cpl.

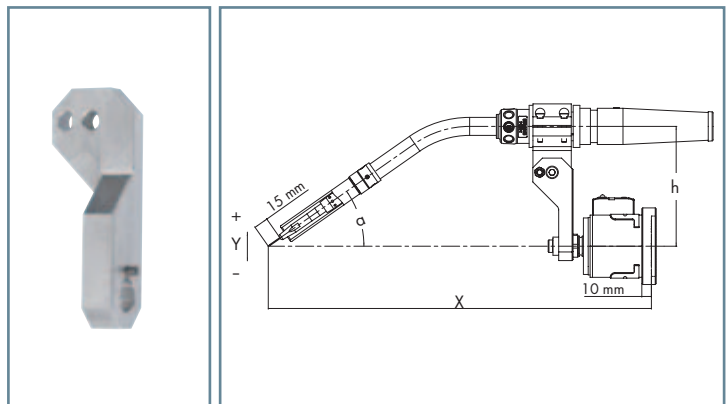
Torch type	Torch geometry	X	Y	h	a	Part-No.
ABIROB®	30°	453	86	86	0°	780.0145
350GC	35°	415	-39	86	35°	780.0145



CAT2 holder for ABIROB® 350 GC

in connection with CAT2 and holder 786.0145

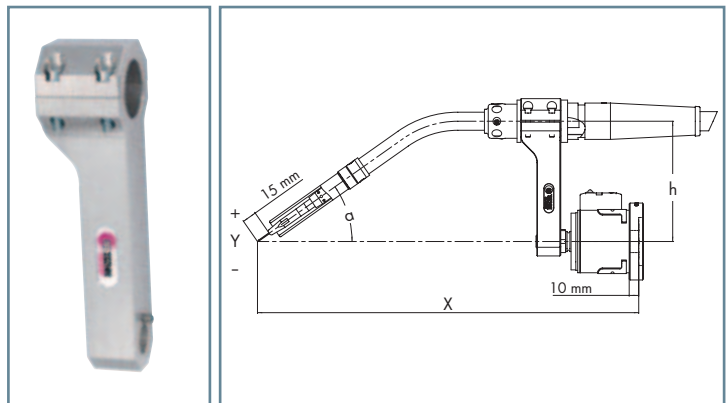
Torch type	Torch geometry	X	Y	h	a	Part-No.
ABIROB®	30°	437	125	125	0°	780.0310
350GC	35°	400	0	125	35°	780.0310



Fixed bracket for ABIROB® 350 GC

in connection with CAT2

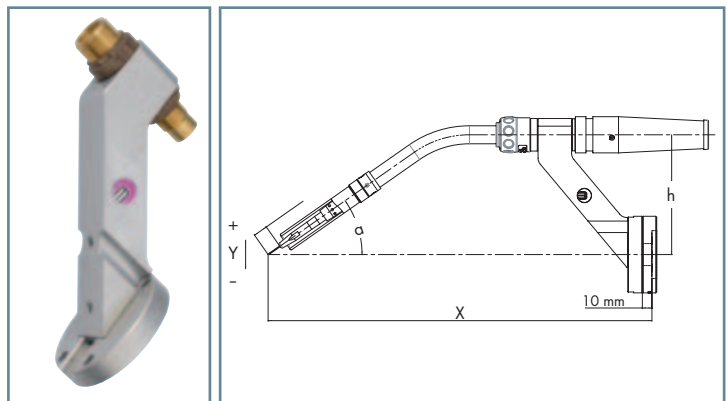
Torch type	Torch geometry	X	Y	h	a	Part-No.
ABIROB®	35°	400	0	125	35°	780.0309
350GC						



I-bracket for ABIROB® 350 GC

for robots with collision software

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

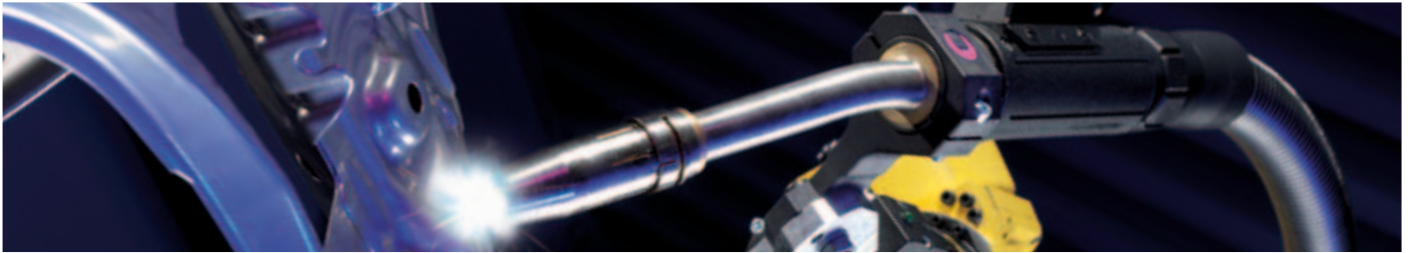


Further holders are available on request.

Please note: All the trademarks named in this brochure are the property of the respective companies.

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 the sturdy torches particularly crash-resilient, thus reducing downtimes and maintenance costs to a minimum.

In addition, the excellent cooling performance of the torches means they guarantee 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 matured 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
-----	--------	------

Typical areas of application:

- Commercial vehicles
- Earth-moving equipment
- Rail vehicles
- Shipbuilding
- Container construction
- Machine and steel construction
- 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 on the outside):
 - 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 and technical data

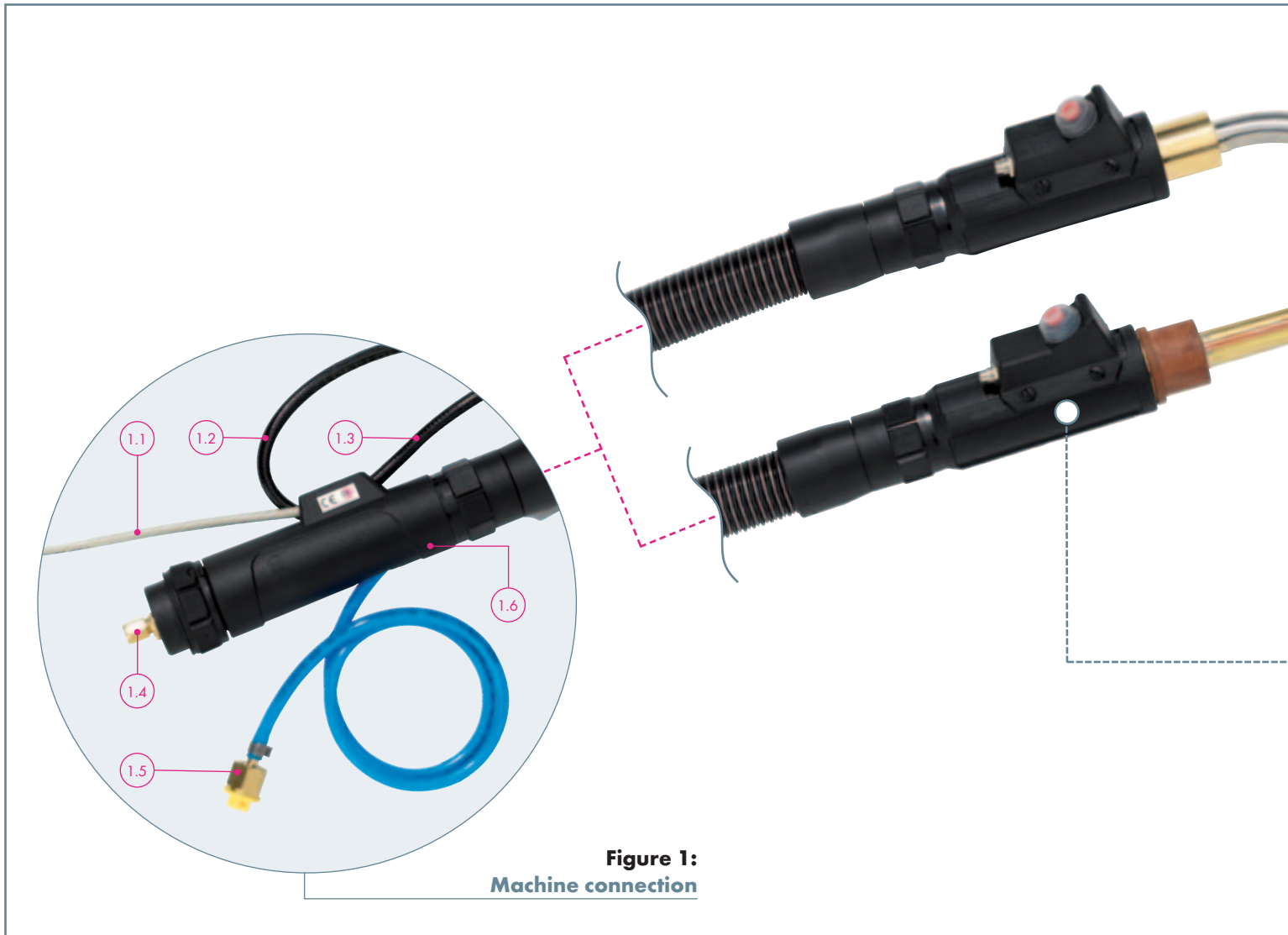


Figure 1:
Machine connection

- 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 bend-protection spring

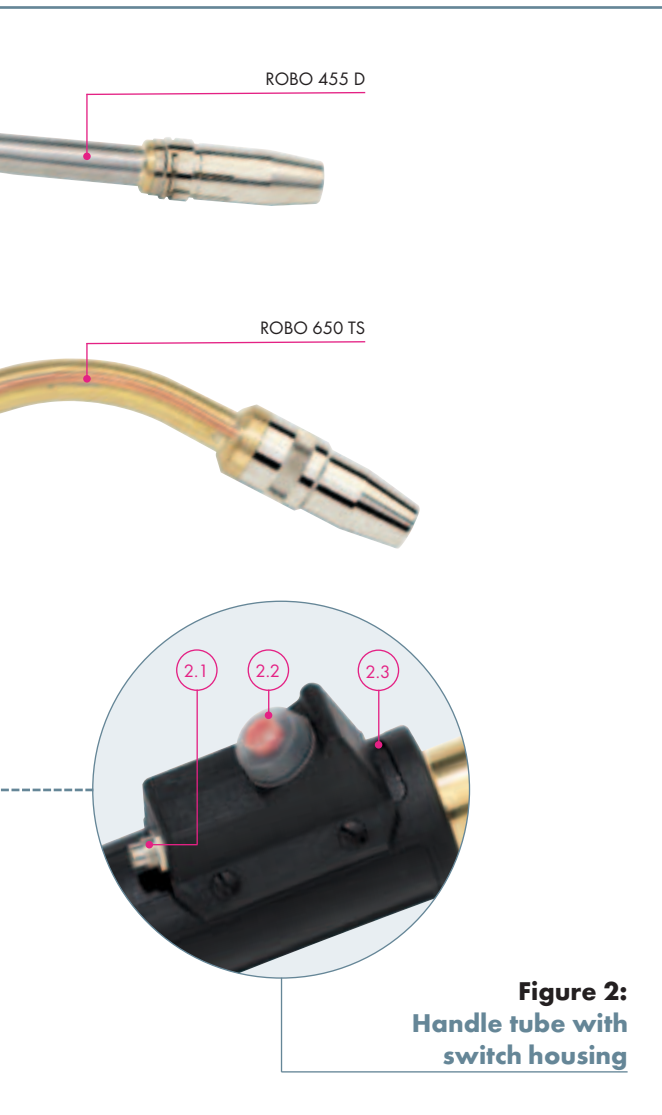


Figure 2:
Handle tube with
switch housing

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

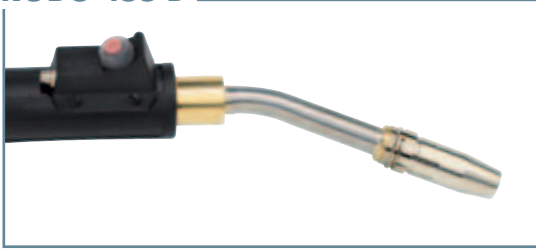
Type of cooling:	liquid-cooled
Rating:	600 A CO ₂ 500 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	1.0–3.2 mm
Torch geometries:	0°/22°/45°

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

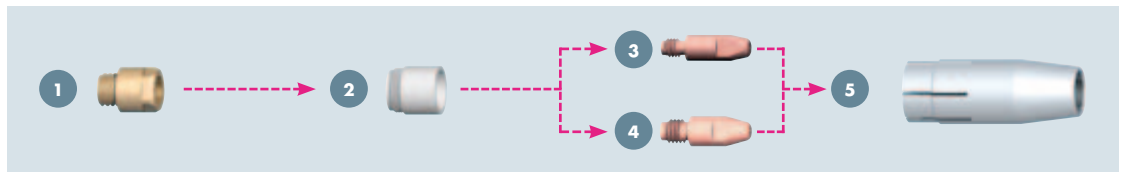


Torch neck

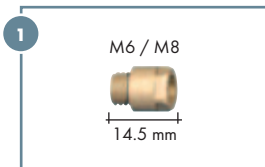
Features	Part-No.		
	0°	22°	45°
Torch complete with cable assembly (L=3.00 m)	943.0247	943.0248	943.0249
Individual torch neck (spare torch)	943.0161	943.0162	943.0163

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

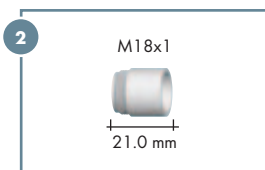


1 Contact tip holder (10 pcs.)



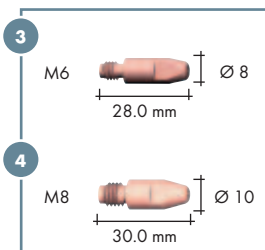
Type	Part-No.
M6 Brass	142.0123
M8 Brass	142.0122

2 Nozzle insulator (10 pcs.)



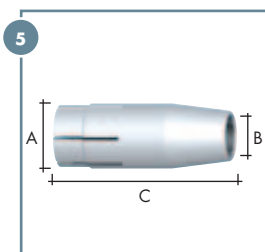
Type	Part-No.
Standard	146.0054
High temperature resistant	146.0059

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
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

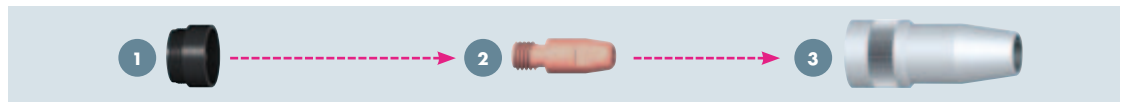


Torch neck

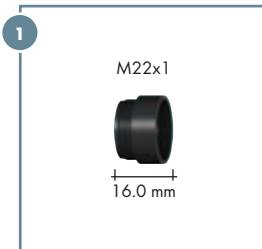
Features	Part-No.		
	0°	22°	45°
Torch complete with cable assembly (L=3.00 m)	944.0109	944.0110	944.0111
Individual torch neck (spare torch)	944.0104	944.0105	944.0108

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

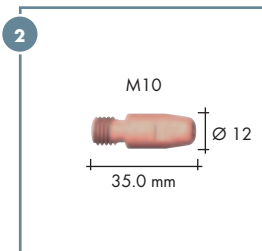


1 Nozzle insulator (10 pcs.)



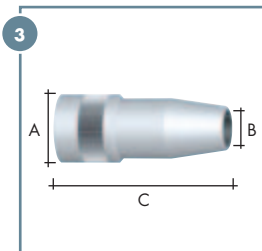
Type	Part-No.
Standard	146.0056
High temperature resistant (ceramic)	146.0069

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.)

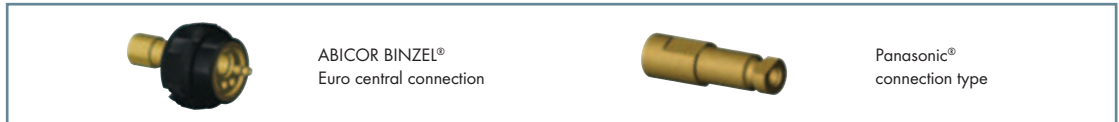
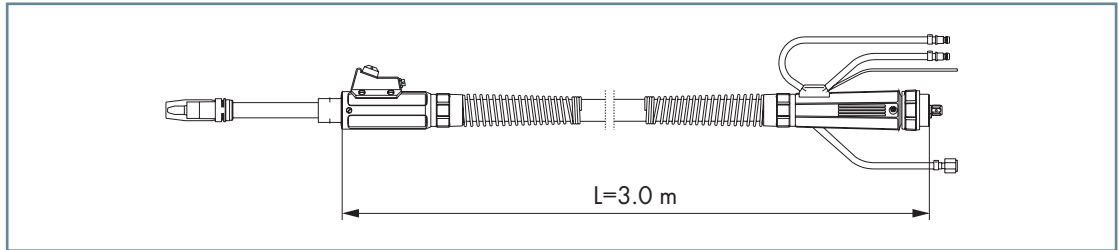


Type bottle form	Ø A	Ø B	Length C	Part-No.
Recess (-2.5 mm) ¹	Ø 30.0	Ø 18.0	78.0 mm	145.0578.10

¹ Recess: Contact tip recessed

“ROBO Standard” liquid-cooled Cable assemblies & accessories

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.

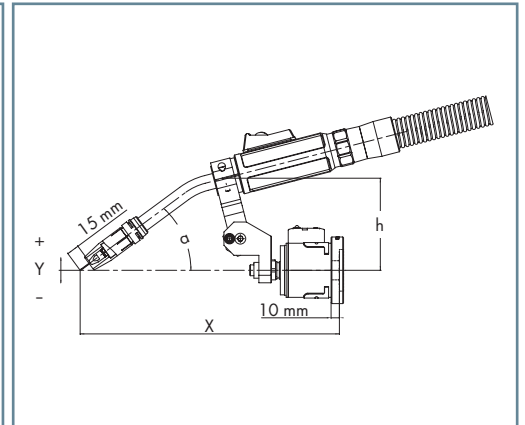
² Can only be used in conjunction with an intermediate liner (122.0099). Please order separately.

“ROBO Standard” liquid-cooled Holder and TCP geometries

Torch holder for ROBO Standard

in connection with CAT2 cpl.

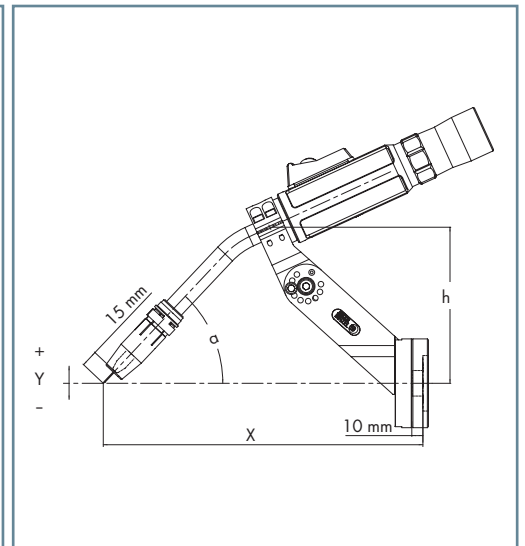
Torch type	Torch geometry	X	Y	h	α	Part-No.
ROBO	0°	337	0	103	30°	780.0203
455 D ¹	22°	312	0	111	36°	780.0203
	45°	366	0	113	46°	780.0203
ROBO	0°	337	0	103	30°	780.0203
650 TS	22°	375	0	111	35°	780.0203
	45°	344	0	113	44°	780.0203



RTM holder for ROBO Standard²

for robots with collision software

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



Further holders are available on request.

Please note: All the trademarks named in this brochure are the property of the respective companies.

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

² Holder adjustable in 7.5° steps.

Notes



MIG/MAG welding torch system "TANDEM WH" liquid-cooled



"Top-level power ..."

Tandem welding makes high demands on the whole equipment. The WH W800 is a reliable and technically matured torch for welding in the high-power range.

Based on the tried-and-trusted WH system, almost all welding applications in this range can be carried out using the WH W800 – thanks to the different torch geometries. Three individual cooling circuits guarantee optimum temperature behaviour.

Advantages that speak for themselves:

- Simple and quick maintenance
- Use of standard WH cable assemblies
- Quick-action connection for gas nozzle, different contact tip lengths available
- Optimally matched to the power source technology of various manufacturers
- Compact and powerful with two separate potentials
- Three individual cooling circuits (gas nozzle and both cable assemblies)

Degree of automation:

Low

Medium

High

Typical areas of application:

- Suppliers (Tier 1, Tier 2)
- Commercial vehicle construction
- Earth-moving equipment
- Rail vehicles
- Container construction
- Machine and steel construction
- Aerospace industry

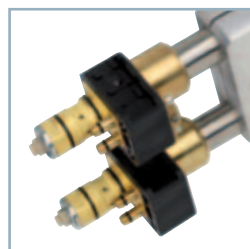
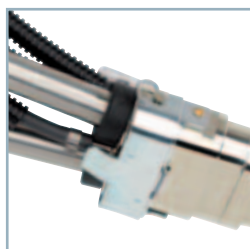
Material:

- 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 on the outside):
 - Robot mount CAT2 HL
 - Fixed bracket RTM

up to
800 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)

"TANDEM WH" liquid-cooled

System overview and technical data

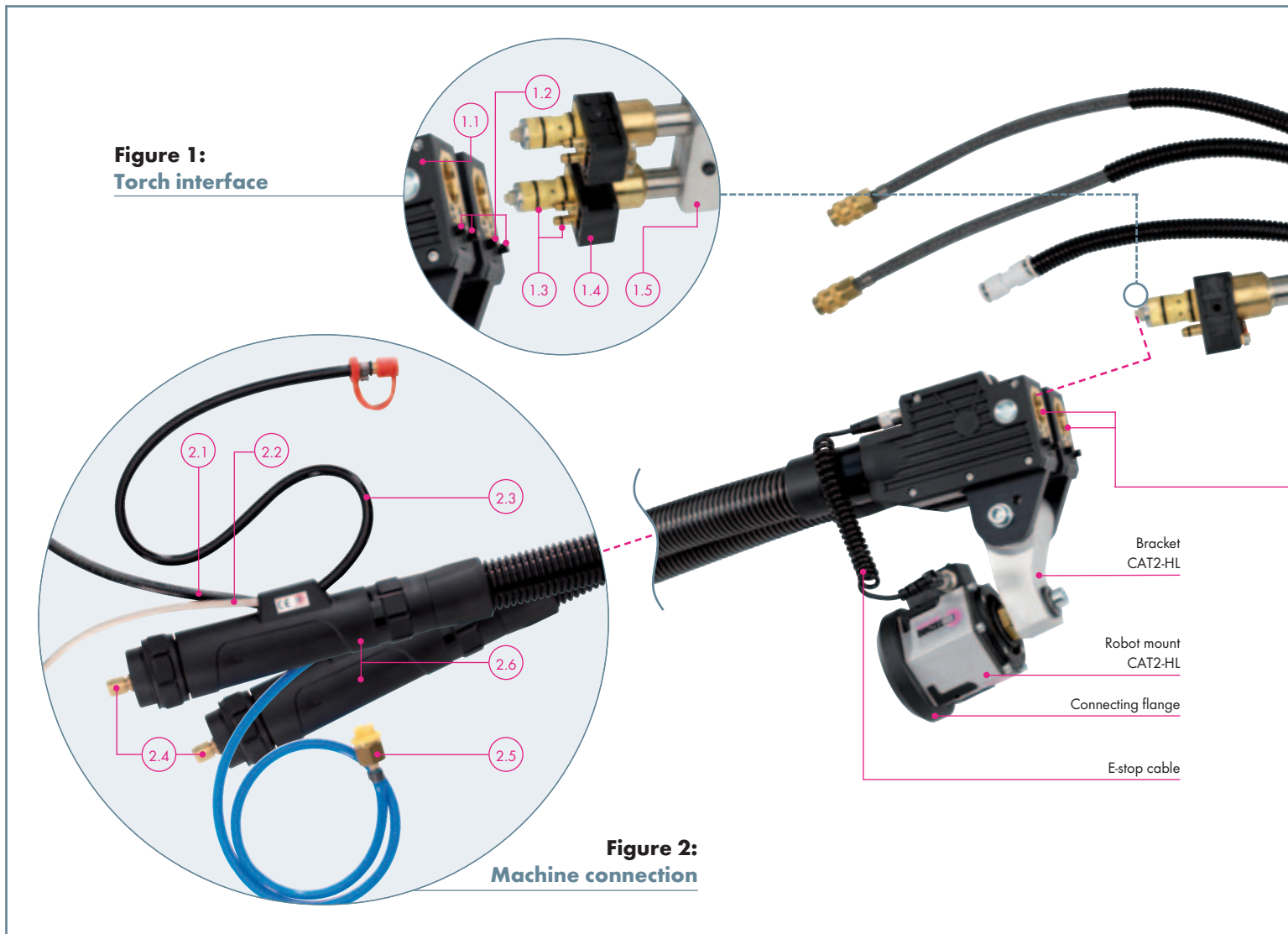


Figure 1:
Torch interface

- 1.1 Integrated wire-cutting function
- 1.2 Contacts for optional gas nozzle sensor
- 1.3 O-rings ensure a gas-tight and leak-free connection
- 1.4 Compact and space-saving interface identical with the popular WH system
- 1.5 Sturdy clamp for maximum torch stability

Figure 2:
Machine connection

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

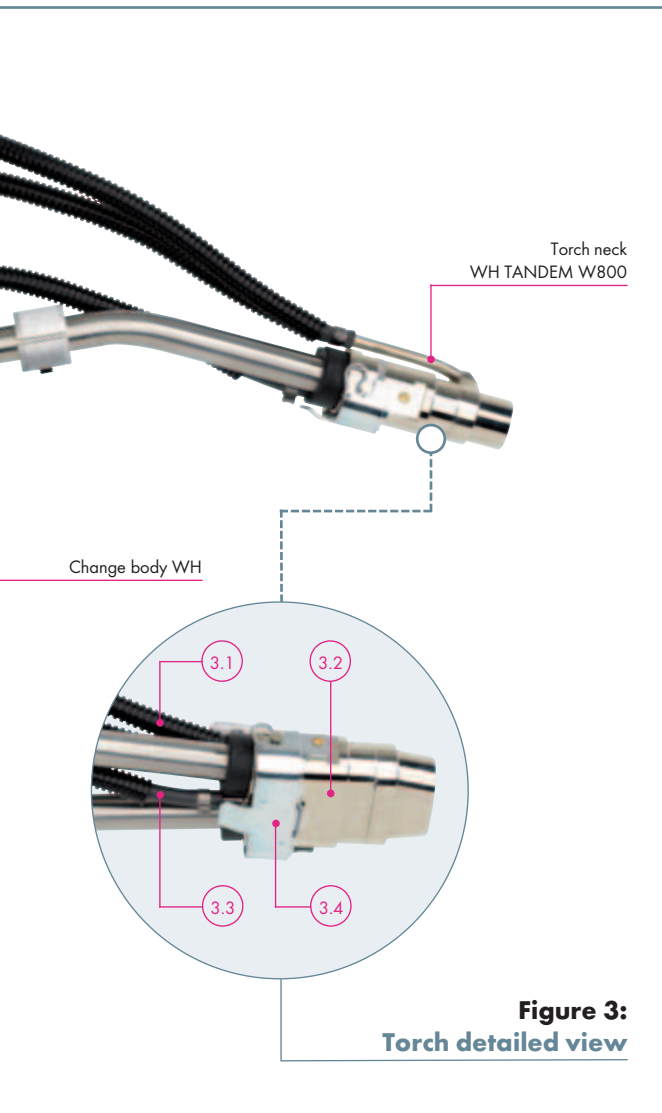
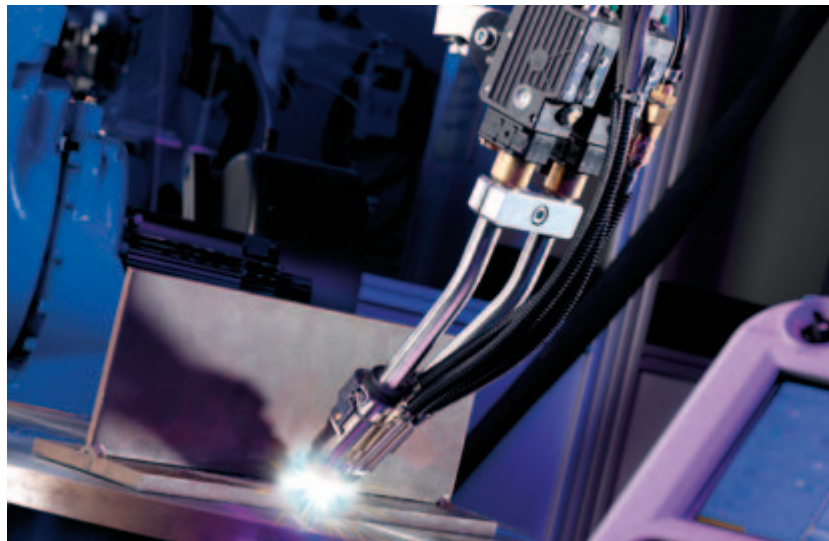


Figure 3:
Torch detailed view

Figure 3:
Torch detailed view

- 3.1 Coolant connection, feed and outflow of the gas nozzle
- 3.2 Gas nozzle with direct cooling
- 3.3 Connection for compressed air or inert gas
- 3.4 Quick-action connection for gas nozzle



Technical data (EN 60 974-7):

WH TANDEM W800

Type of cooling:	liquid-cooled
Rating:	2x400 A CO ₂ 2x350 A Mixed gases M21 (EN ISO 14175)
Duty cycle:	100 %
Wire-Ø:	max. 1.6 mm
Torch geometries:	25°/45°
Wire projection/stick-out:	D 8/S020 D10/S020 D15/S028 D20/S025

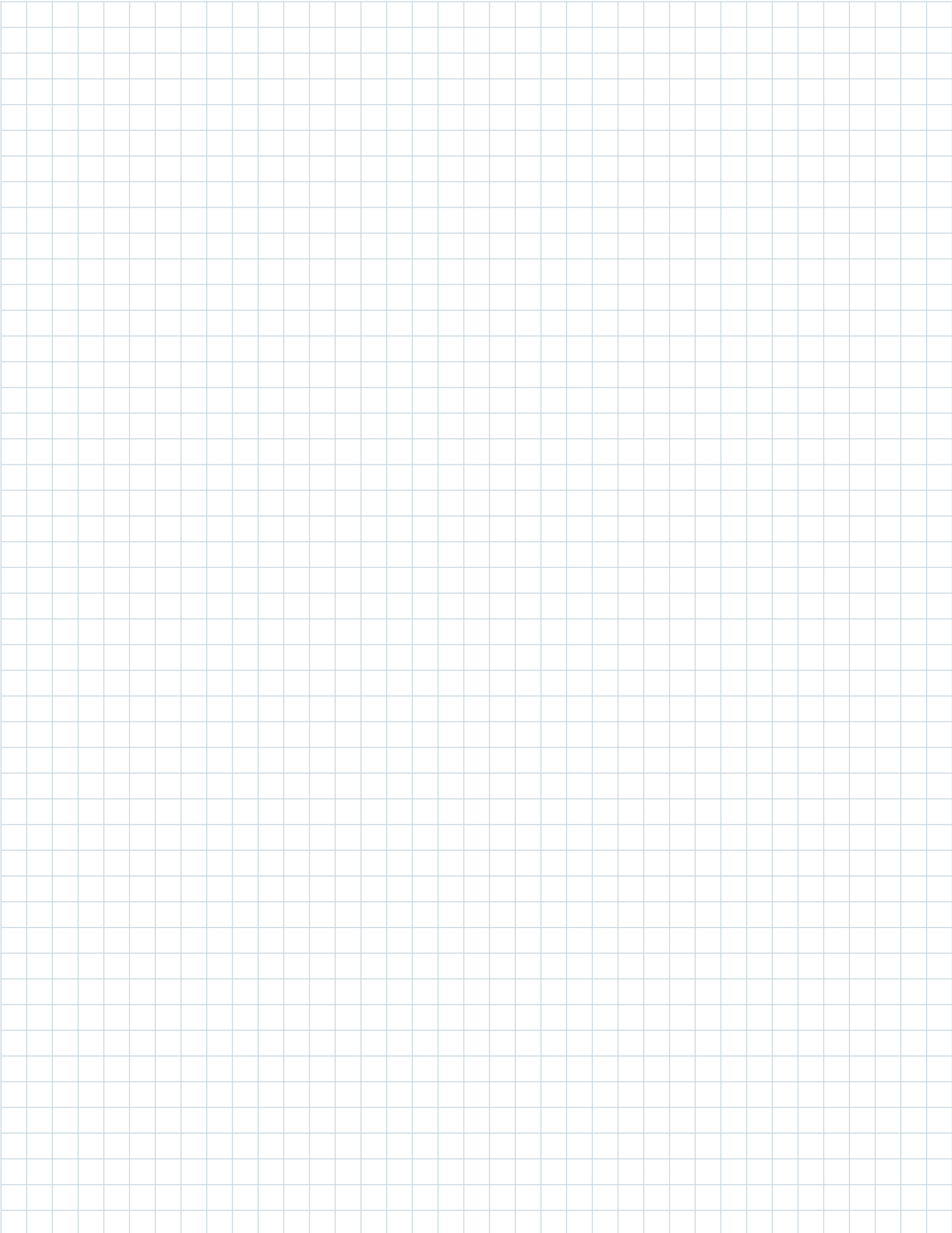
Please note:

For further details and a precise description of the wear parts, holders and geometries, see our current TANDEM WH brochure.

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.

Notes



TIG Welding Torch Systems

liquid-cooled



ABITIG® WH liquid-cooled

Fast, safe and reliable ...

Capacity: to 400 A

Typical areas of application: Earth-moving equipment, wind turbines, shipbuilding, carriage building, steel construction

Degree of automation: Low Medium High

Page
63 – 70



ABITIG® MT liquid-cooled

Efficient allrounder ...

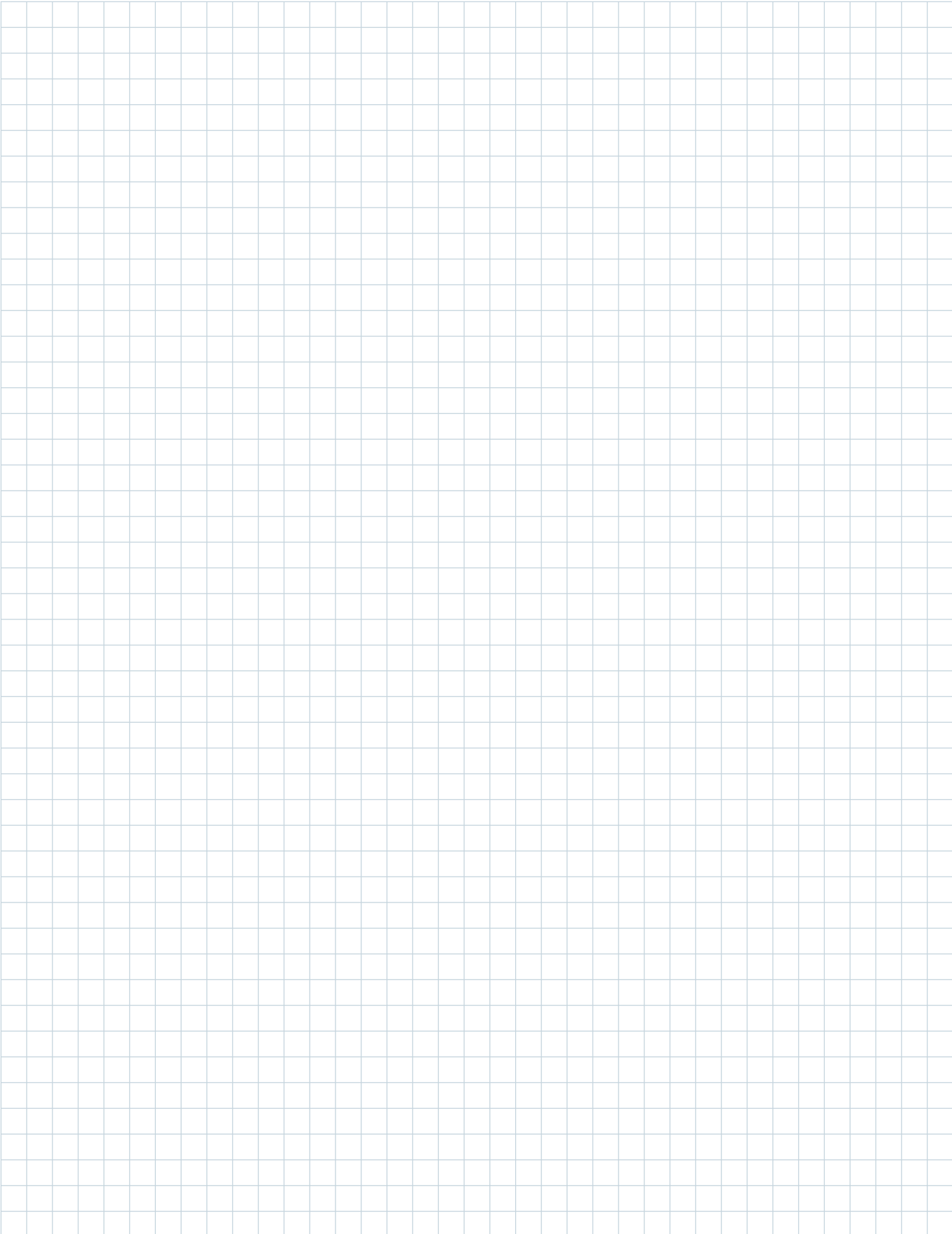
Capacity: to 300 A

Typical areas of application: Earth-moving equipment, wind turbines, shipbuilding, carriage building, steel construction

Degree of automation: Low Medium High

Page
71 – 77

Notes



TIG welding torch system

“ABITIG® WH” liquid-cooled



“Fast, safe & reliable ...”

The ABITIG® WH welding torch system from ABICOR BINZEL® for TIG soldering 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:

- Automobile construction
- Bicycle industry
- Container construction
- Machine and steel construction
- 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 on the outside):
 - Robot mount CAT2
 - Fixed bracket RTM

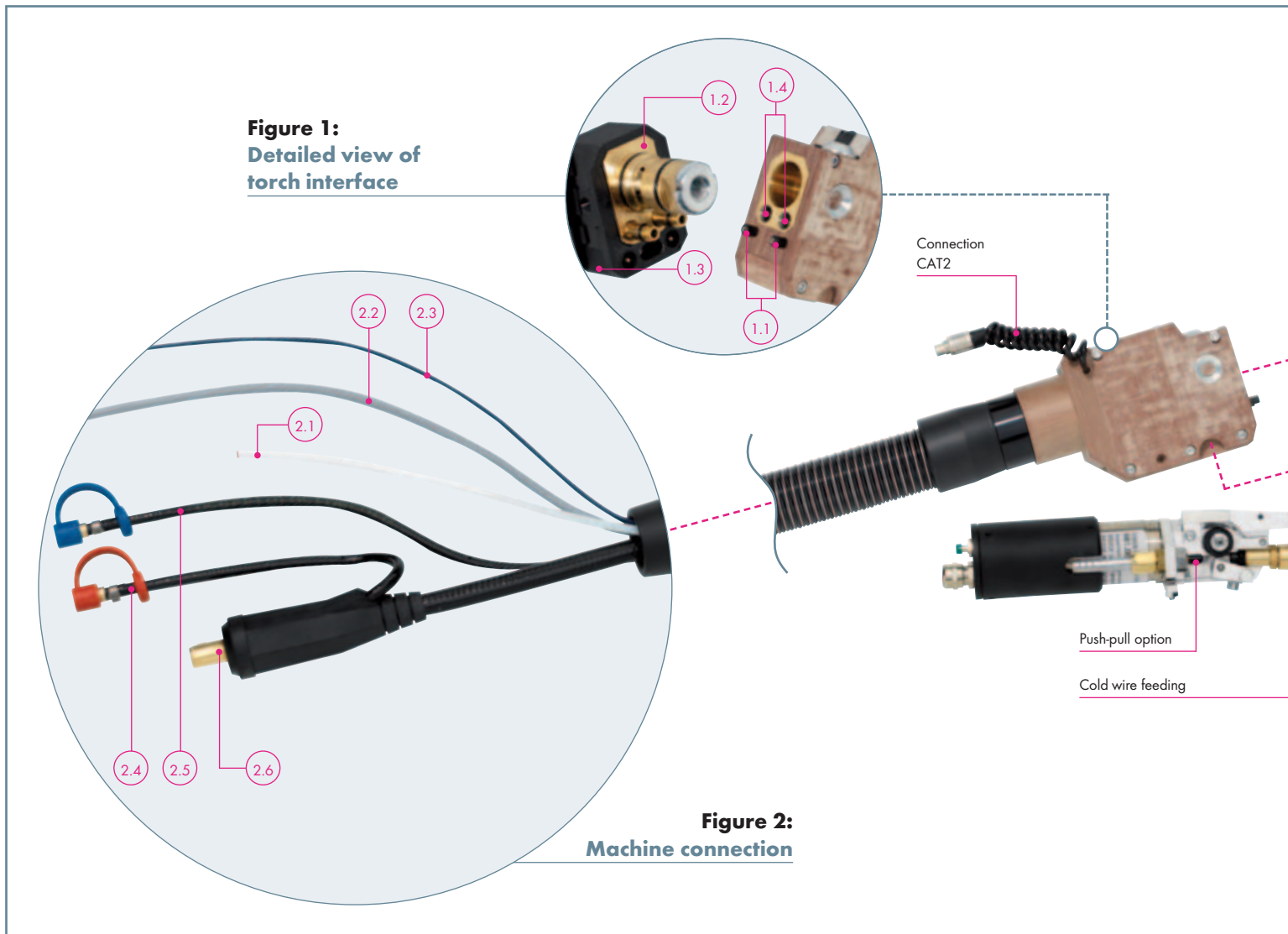
up to
400 A



* 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 and 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)

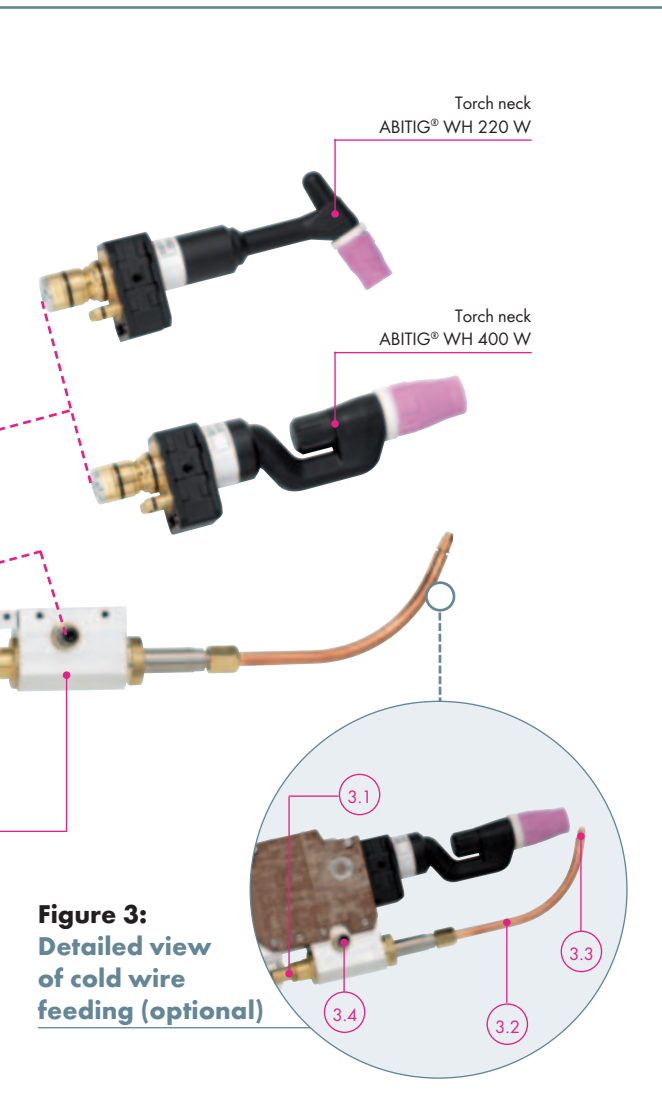
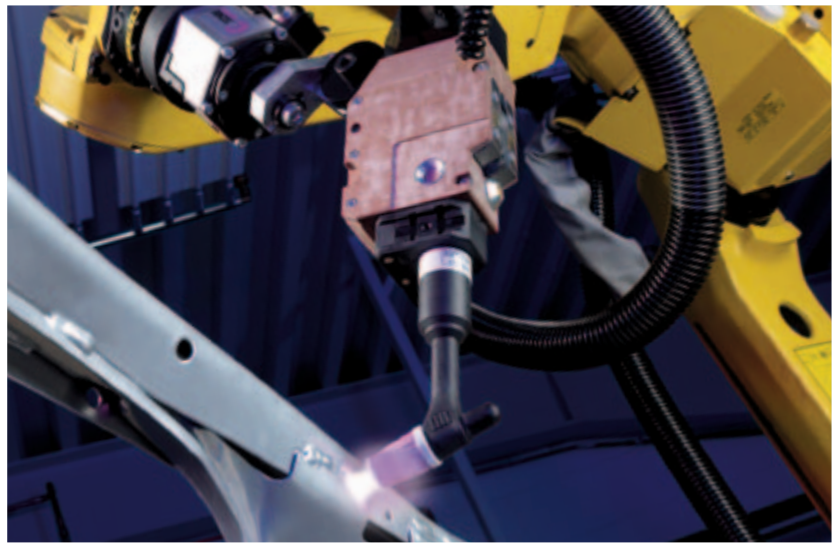


Figure 3:
Detailed view
of cold wire
feeding (optional)

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 220 W

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 400 W

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 220 W

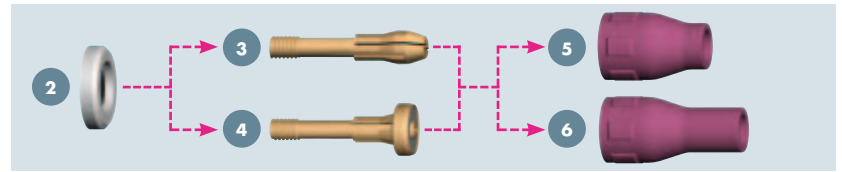
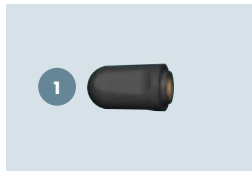


Torch neck

Features	Part-No.
Standard	781.1001

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

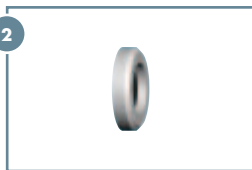


1 Torch cap (1 pc.)



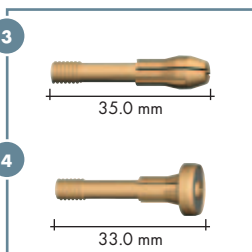
Type	Part-No.
Standard	776.0053

2 Insulator (10 pcs.)



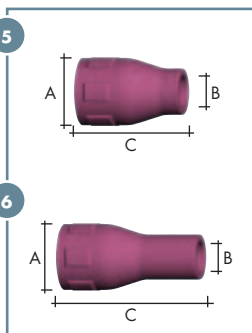
Type	Part-No.
Standard	776.1043

3 Electrode holder 4 Gas diffuser (5 pcs.)



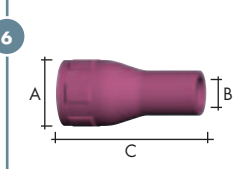
Type	Wire-Ø	Part-No.	
		Electrode holder	Gas diffuser
Standard	Ø 1.0	776.0061	776.0171
	Ø 1.6	776.0062	776.0172
	Ø 2.0	776.0067	776.0177
	Ø 2.4	776.0063	776.0173
	Ø 3.2	776.0064	776.0174

5 Gas nozzle, short



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

6 Gas nozzle, long (10 pcs.)



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 400 W



Torch neck

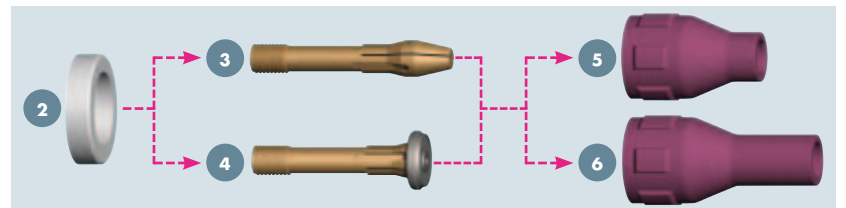
Features	Part-No.			
	0°	45°	70°	90°
Standard	781.0504	781.0507	781.0501	781.0510
WS version	781.2008.1	-	-	-

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.)

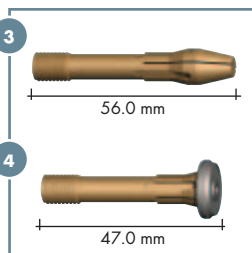


2 Insulator
(1 pc.)



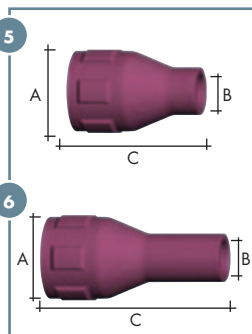
Type	Part-No.
Standard	967.1351
WS clamping element (not illustrated)	781.2006.1

3 Electrode holder
4 Gas diffuser
(5 pcs.)



Type	Part-No.
Standard	775.1043

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



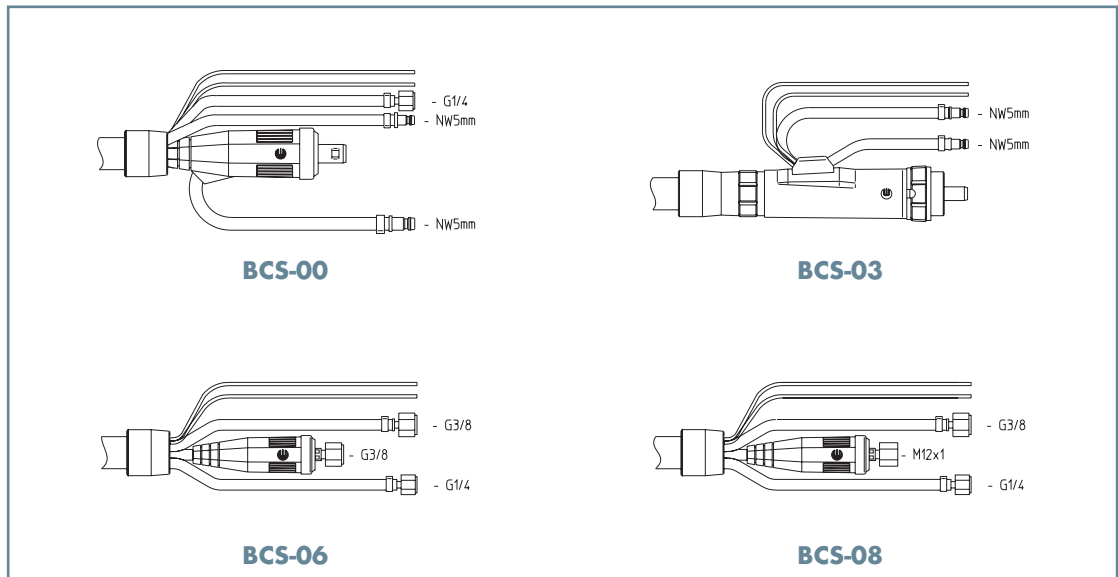
Type	Wire-Ø	Part-No.	
		Electrode holder	Gas diffuser
Standard	Ø 1.6	775.0062	773.0172
	Ø 2.0	775.0067	773.0177
	Ø 2.4	775.0063	773.0173
	Ø 3.2	775.0064	773.0174
	Ø 4.0	775.0065	773.0175
	Ø 4.8	775.0066	773.0176

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	Part-No.		
	L=4.00 m*	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

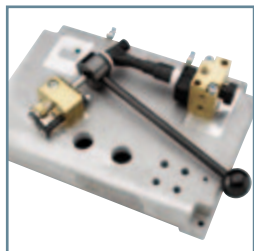
Description	Version / specifications	Part-No.
Cold wire feeding cpl.	incl. feeding tube and tip	967.0320
Feeding tube	ABITIG® WH 220 W 70	967.0327
Feeding tube	ABITIG® WH 400 W 0	967.0326
Feeding tube	ABITIG® WH 400 W 45	967.0328
Feeding tube	ABITIG® WH 400 W 70	967.0325
Feeding tube	ABITIG® WH 400 W 90	967.0325
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 für ΔV = 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 für ΔV = 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 and holders

Accessories



Alignment jig

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

Ignition aid (not ill.)

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

Bracket



Clamp holder for ABITIG® WH

in connection with CAT2 cpl.

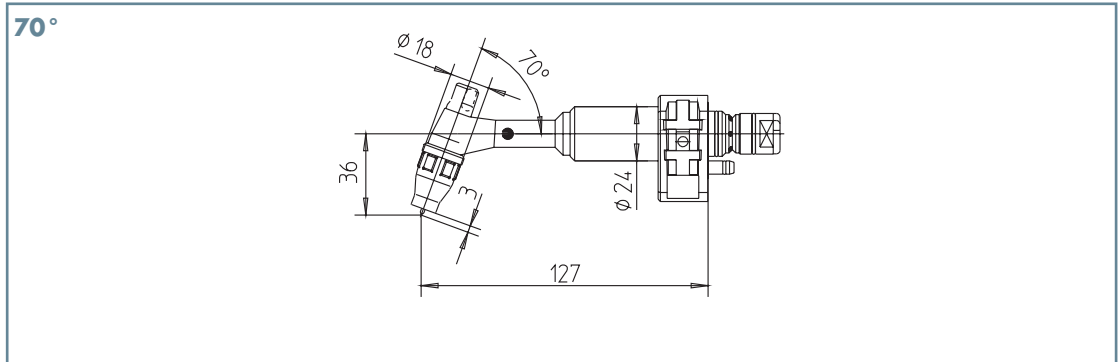
Torch type	Part-No.
ABITIG® WH	963.0007

Further holders are available on request.

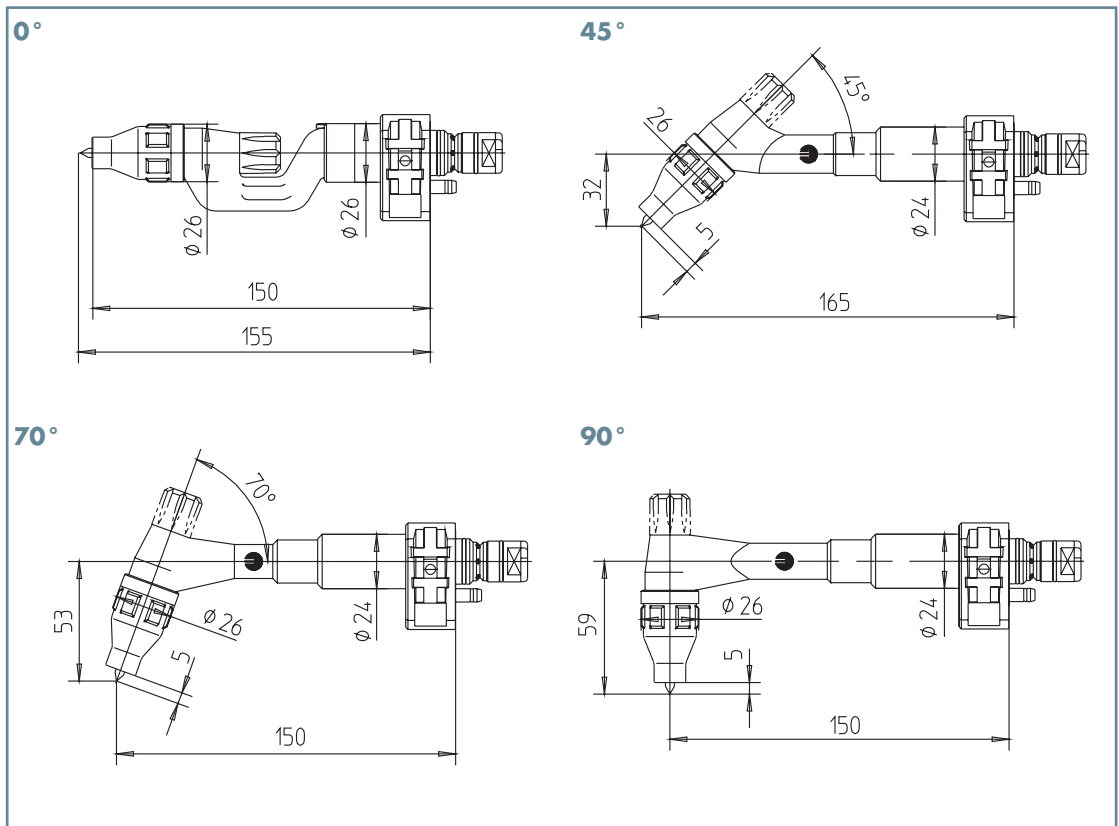
Please note: All the trademarks named in this brochure are the property of the respective companies.

“ABITIG® WH” liquid-cooled Geometries

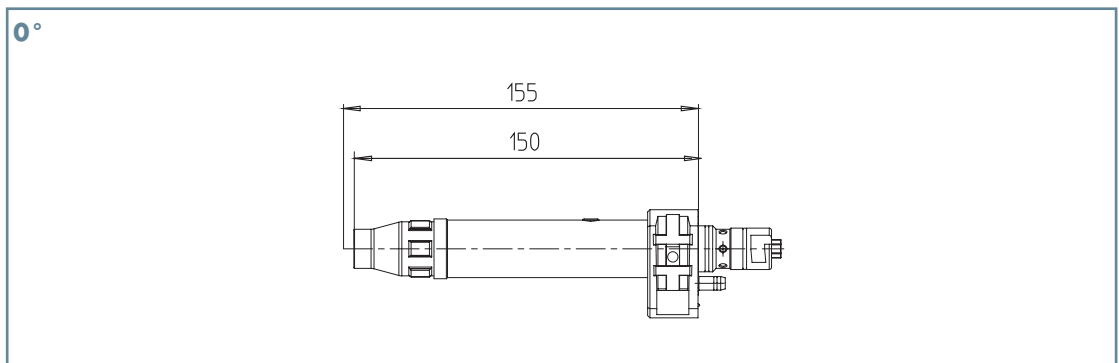
Dimensional sketch
ABITIG® WH 220 W



Dimensional sketch
ABITIG® WH 400 W

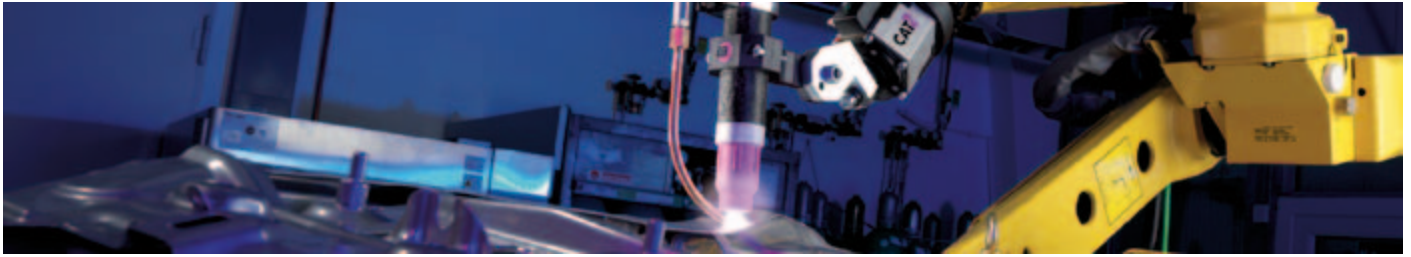


Dimensional sketch
ABITIG® WH 400 WS



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, air-cooled and liquid-cooled, 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 without any danger of bending
- Tungsten electrode can be pre-set from behind
- Tried-and-trusted design principle like the ABITIG® handheld torches

Degree of automation:

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

Typical areas of application:

- Automobile construction
- Bicycle industry
- Container construction
- Machine and steel construction
- Aerospace industry

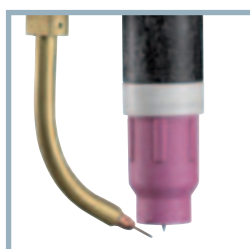
Material:

- Chrome-nickel steels
- Duplex steels
- Nickel basic materials
- Mixed compounds
- Aluminium materials
- Magnesium materials
- Copper materials
- Special materials

Robot interface:

- Conventional robot
(Cable assembly on the outside):
 - 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 and technical data

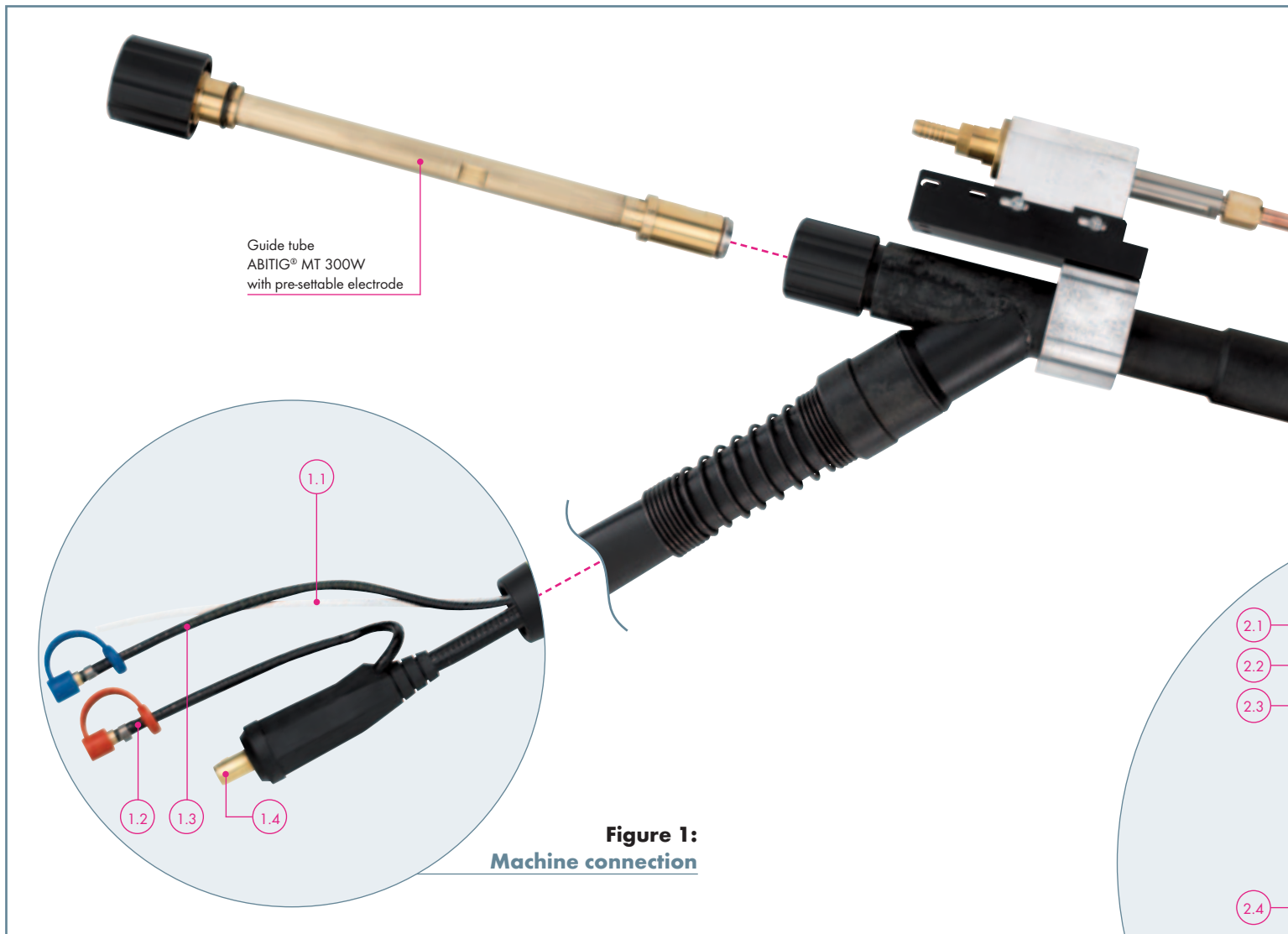


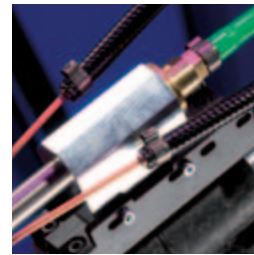
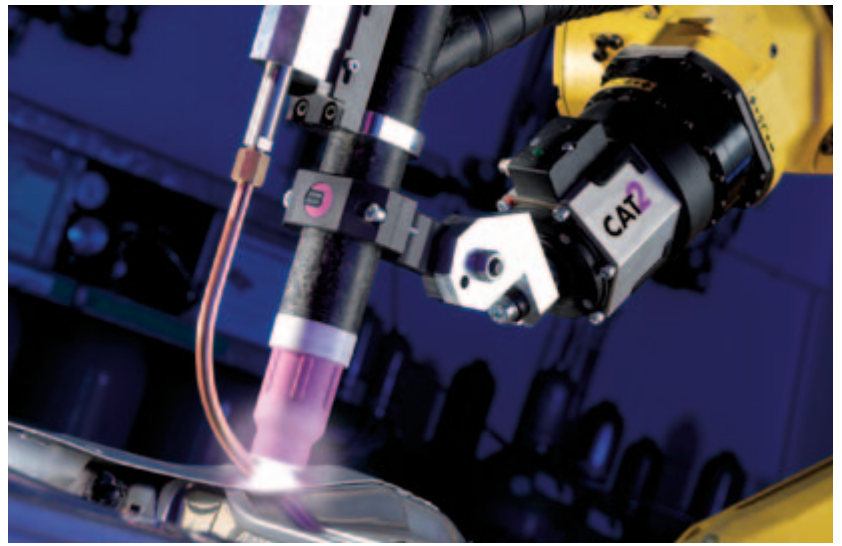
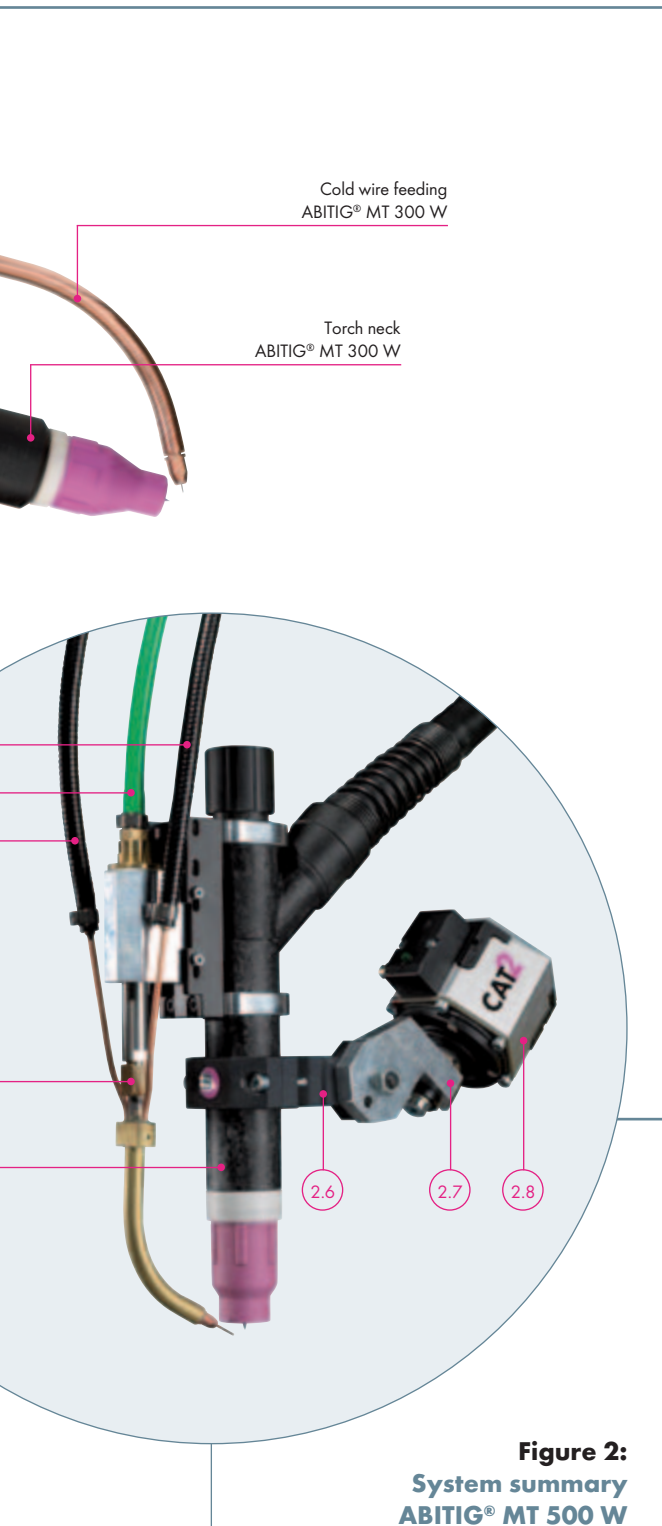
Figure 1:
Machine connection

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 500 W

- 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 500 W
- 2.6 Torch holder MT 35
- 2.7 Bracket CAT2
- 2.8 Robot mount CAT2



Technical data (EN 60 974-7):

ABITIG® MT 300 W

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 500 W

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 300 W

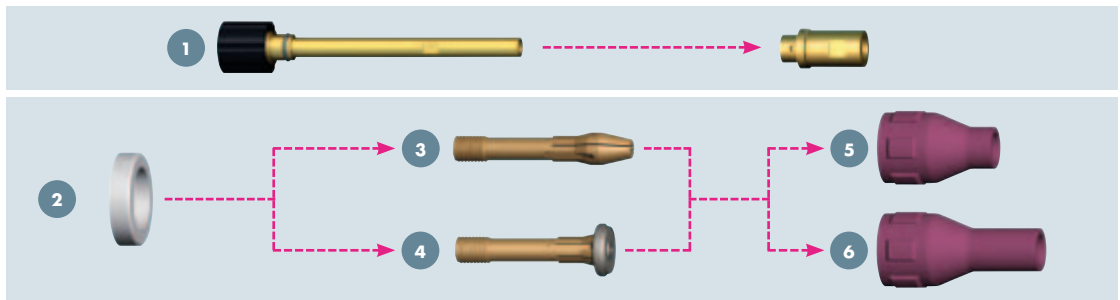


Torch neck

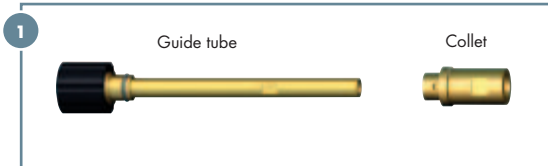
Features	Part-No.
ABITIG® MT 300 W Standard	779.2020

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 300 W



1 Guide tube with collet (1 pc.)



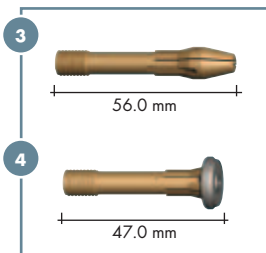
Type	Part-No.
Guide tube cpl.	778.1030
Collet	778.1140
O-ring (20 pcs.)	165.0079

2 Insulator (1 pc.)



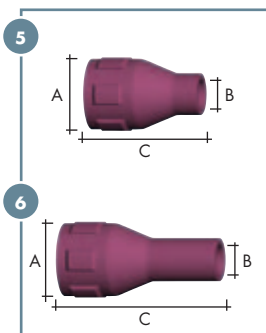
Type	Part-No.
Standard	775.1043

3 Electrode holder 4 Gas diffuser (5 pcs.)



Type	Wire-Ø	Part-No.	
		Electrode holder	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

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



Short type	Ceramic	Ø A	Ø B	Length C	Part-No.
		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	Ceramic	Ø A	Ø B	Length C	Part-No.
		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 500 W



Torch neck

Features

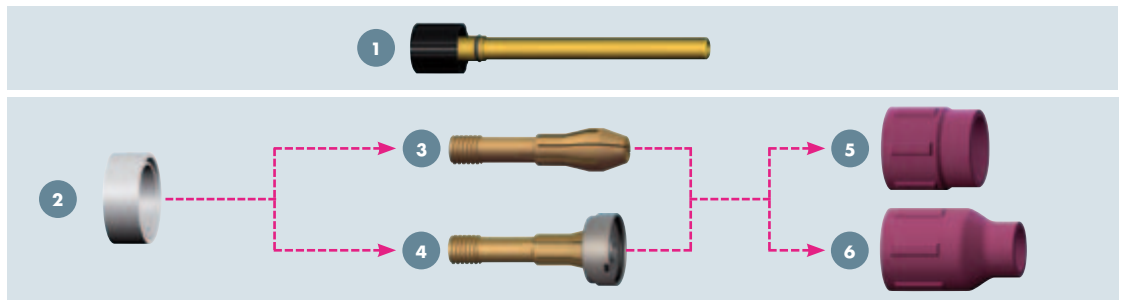
ABITIG® MT 500 W Standard

Part-No.

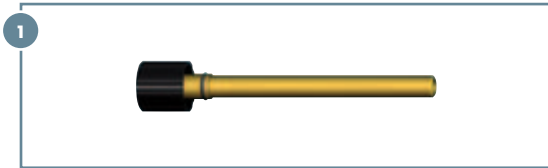
779.6020

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 500 W



1 Guide tube (1 pc.)



Type

Guide tube cpl.
O-ring (20 pcs.)

Part-No.

779.6026
165.0079

2 Insulator (1 pc.)



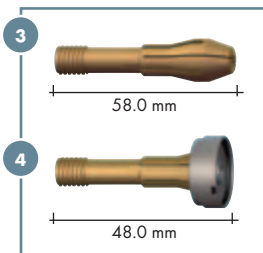
Type

Standard

Part-No.

779.6033

3 Electrode holder 4 Gas diffuser (5 pcs.)



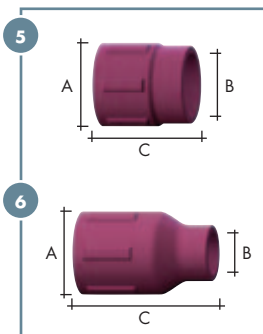
Type

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

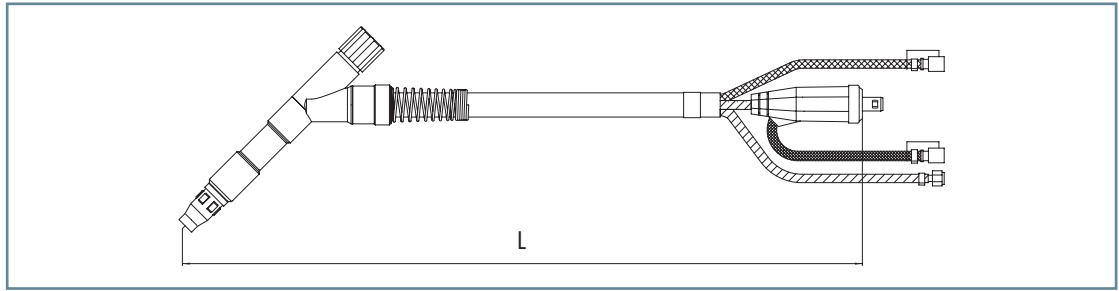
	Ø A	Ø B	Length C	Part-No.
Ceramic	Ø 31.0	Ø 24.0	34.0 mm	778.1189

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

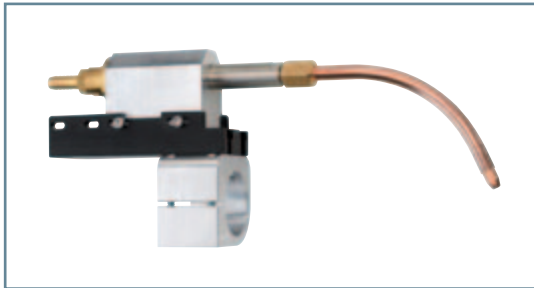
"ABITIG® MT" liquid-cooled Cable assemblies, cold wire feeding & accessories

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 300 W	779.6514.1
Cold wire feeding cpl. ABITIG® MT 500 W	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

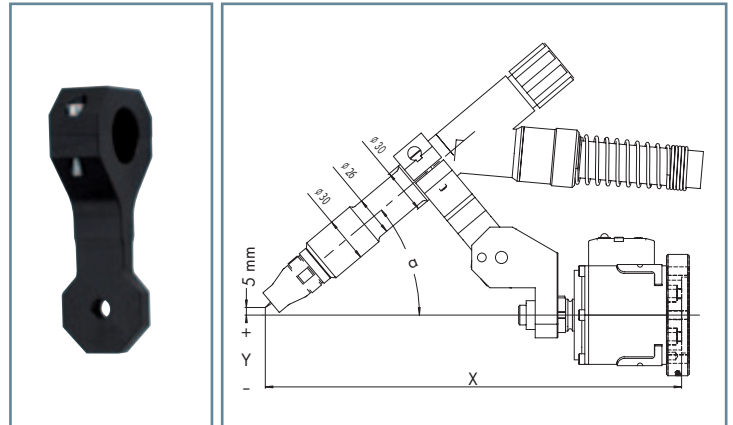
for torch type	Part-No.
ABITIG® MT 300 W	778.1157

“ABITIG® MT” liquid-cooled Holder and TCP geometries

Clamp holder MT 26 for ABITIG® MT

in connection with CAT2 cpl.

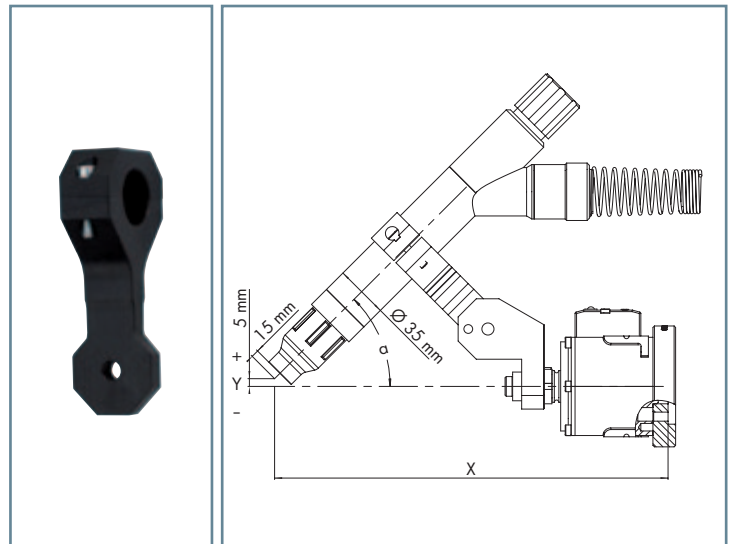
Torch type	X	Y	α	Part-No.
	(mm)			
ABITIG® MT 300 W	245	0	40°	780.0258



Clamp holder MT 35 for ABITIG® MT

in connection with CAT2 cpl.

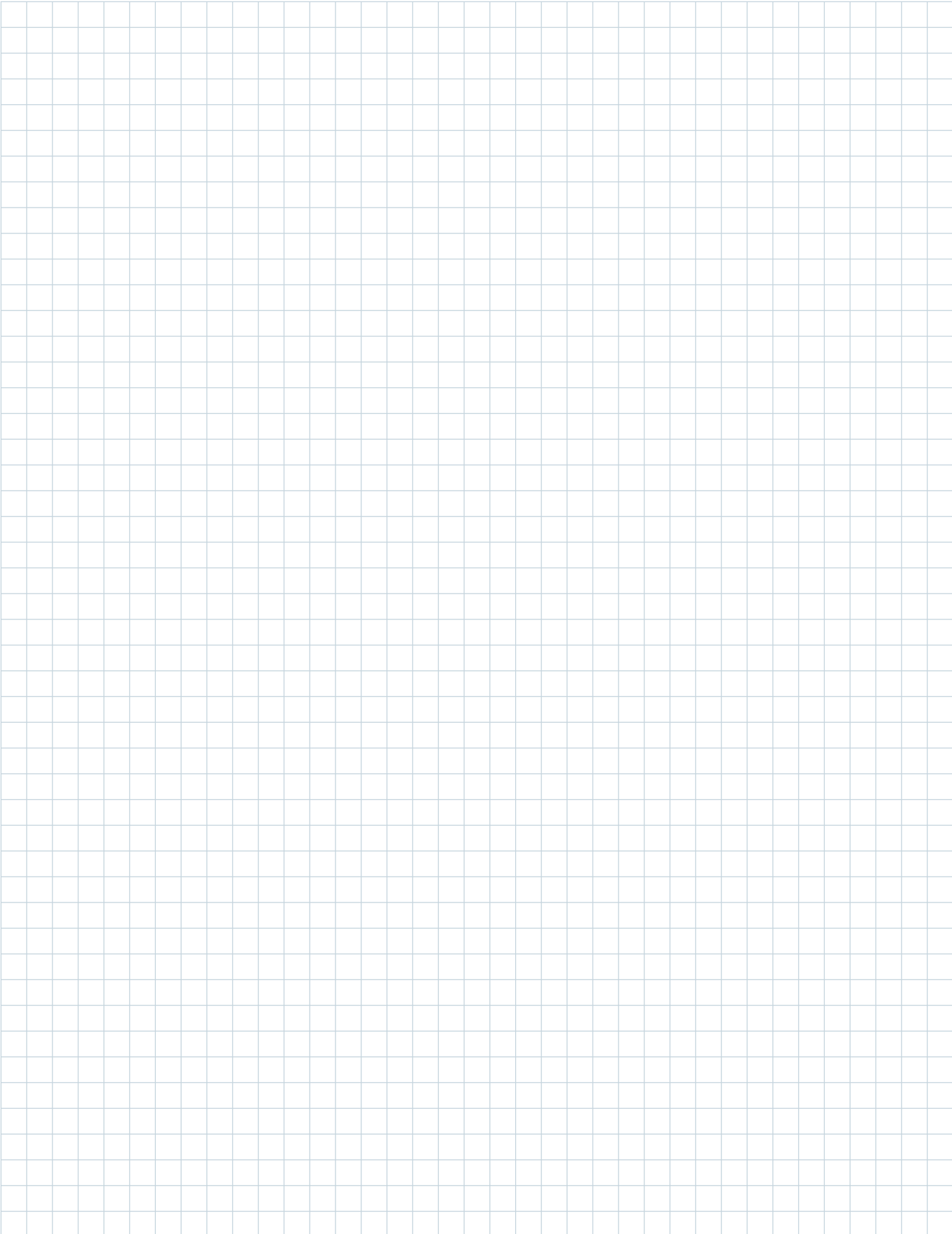
Torch type	X	Y	α	Part-No.
	(mm)			
ABITIG® MT 500 W	275	0	40°	780.0292



Further holders are available on request.

Please note: All the trademarks named in this brochure are the property of the respective companies.

Notes



PLASMA Welding Torch Systems

liquid-cooled



ABIPLAS® WELD liquid-cooled

The new torch generation ...

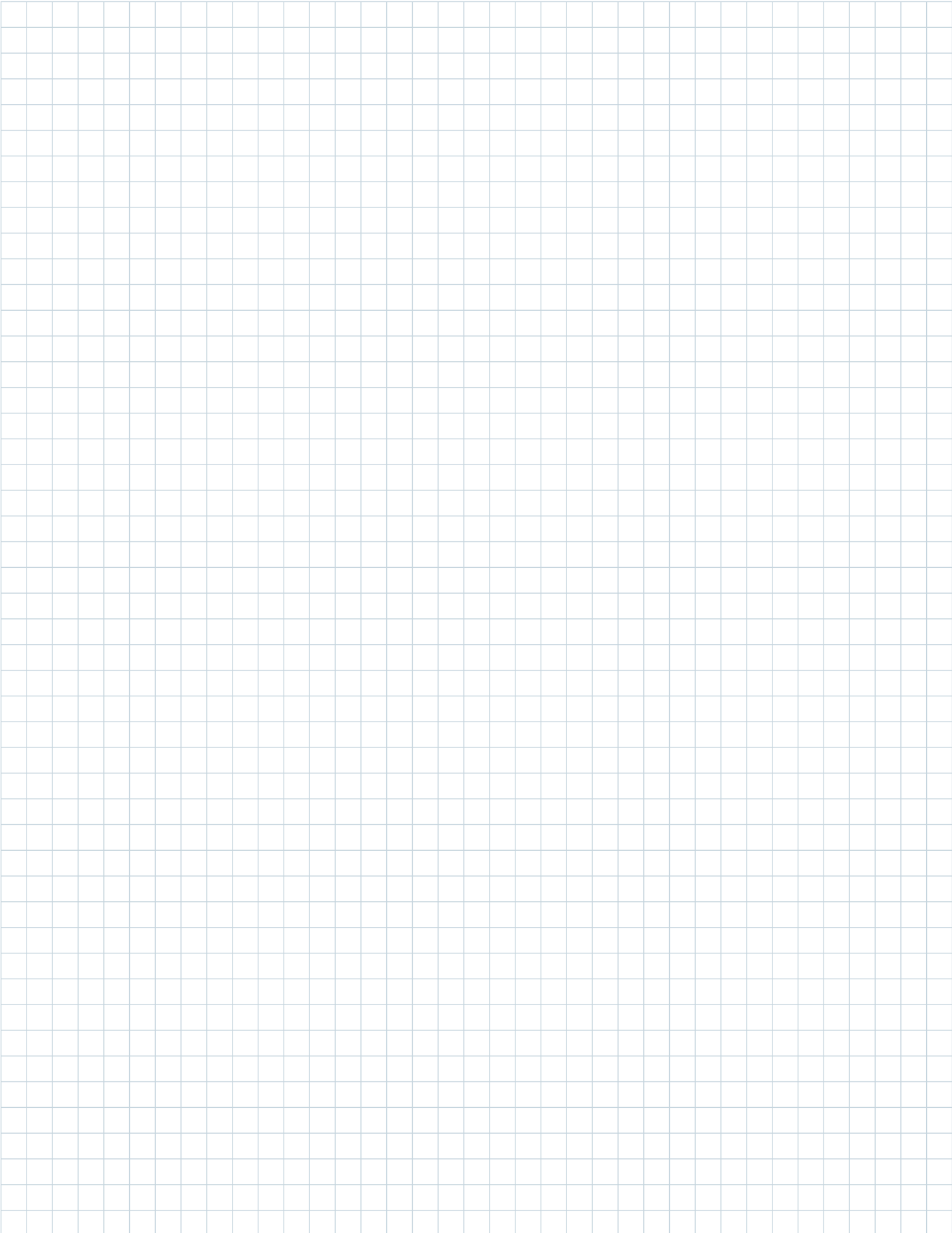
Capacity: to 300 A

Typical areas of application: Earth-moving equipment, wind turbines, shipbuilding, carriage building, steel construction

Degree of automation: Low Medium High

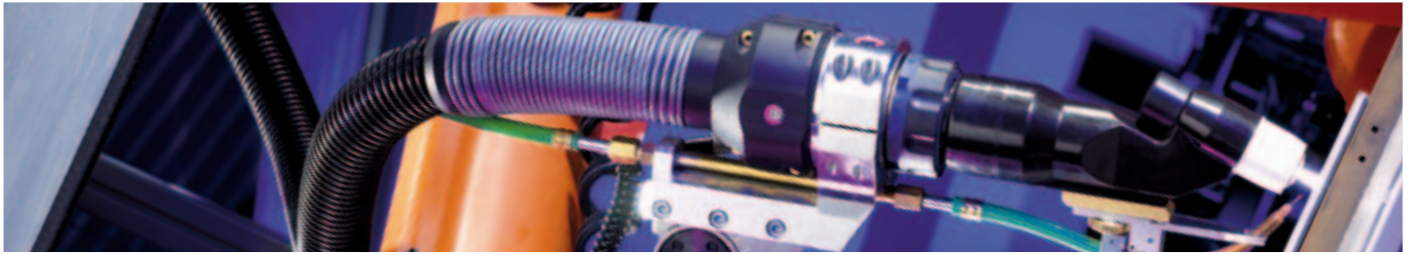
Page
81 – 87

Notes



PLASMA welding torch system

“ABIPLAS® WELD” liquid-cooled



“High precision & economy ...”

The new liquid-cooled welding torch ranges ABIPLAS® WELD CT and MT – in capacities up to 250 A – are ideal for use on robots thanks to their precisely reproducible settings. The sturdy yet compact design guarantees optimum accessibility.

The stable, spatter-free welding process ensures high-quality weld seams – complex reworking is not required.

Convincing features include long service lives for the wear parts thanks to optimum torch cooling and the small number of wear parts, all of which are easy to handle.

Advantages that speak for themselves:

- Extremely small design for optimum accessibility
- Long service lifetime for wear parts thanks to optimum torch cooling
- Small number of wear parts – easy handling

Degree of automation CT:

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

Degree of automation MT:

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

Typical areas of application:

- Automobile construction
- Suppliers (Tier 1, Tier 2)
- Rail vehicle construction
- Bicycle industry
- Container construction
- Machine and steel construction
- 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 on the outside):
 - Robot mount CAT2
 - Fixed bracket RTM

up to
250 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)

“ABIPLAS® WELD” liquid-cooled System overview and technical data

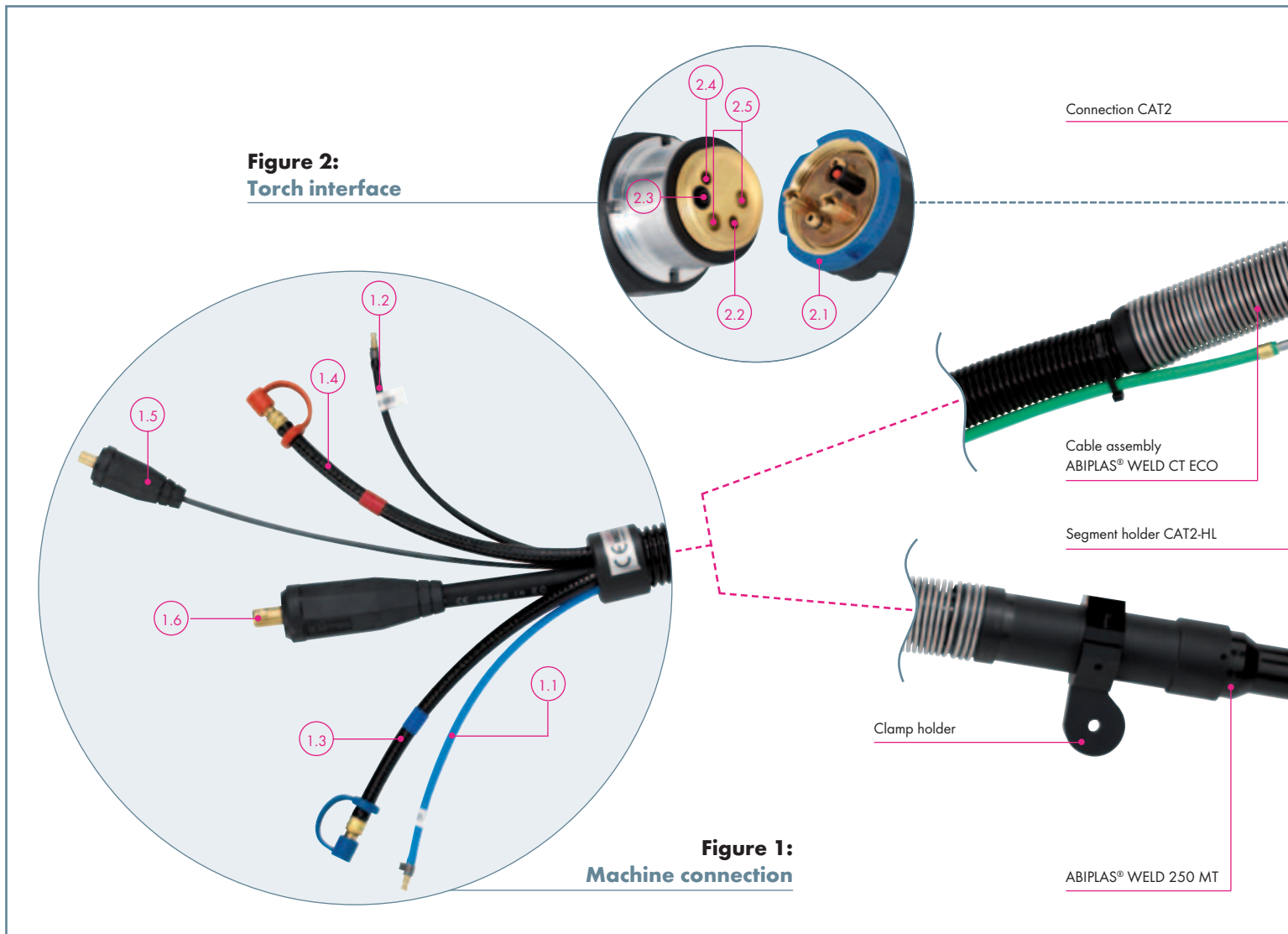


Figure 2:
Torch interface

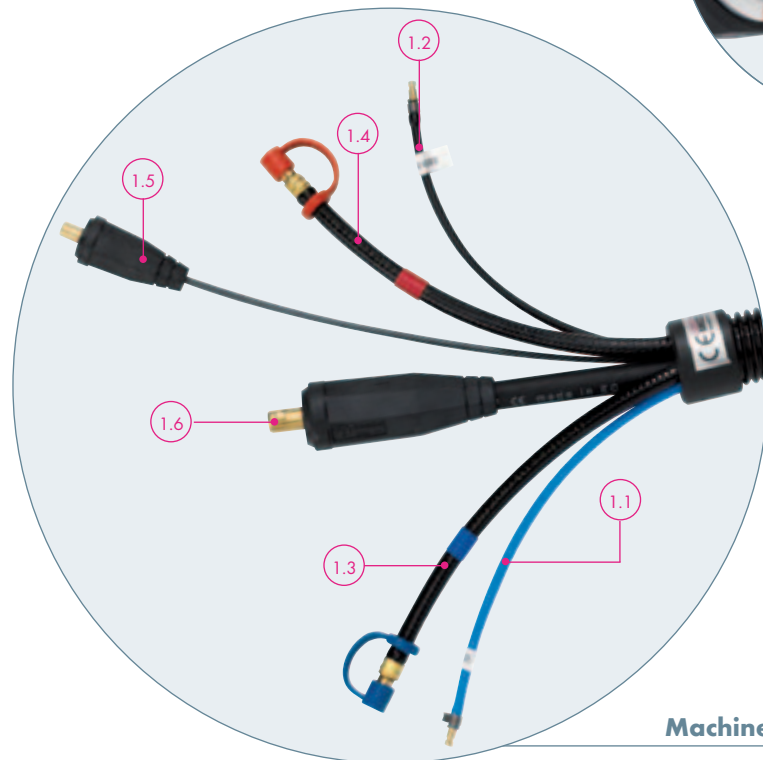


Figure 1:
Machine connection

Figure 1:
Machine connection

- 1.1 Shielding gas
- 1.2 Plasma gas
- 1.3 Coolant feed hose with closure
- 1.4 Coolant return hose with closure
- 1.5 Pilot cable with high-grip rubber bend protection
- 1.6 Sturdy brass connector with high-grip rubber bend protection (machine connection available for all standard power sources)

Figure 2:
Torch interface

- 2.1 High-grip union nut
- 2.2 Plasma gas connection
- 2.3 Pin for pilot current
- 2.4 Inert gas connection
- 2.5 Coolant feed/return with non-return valve

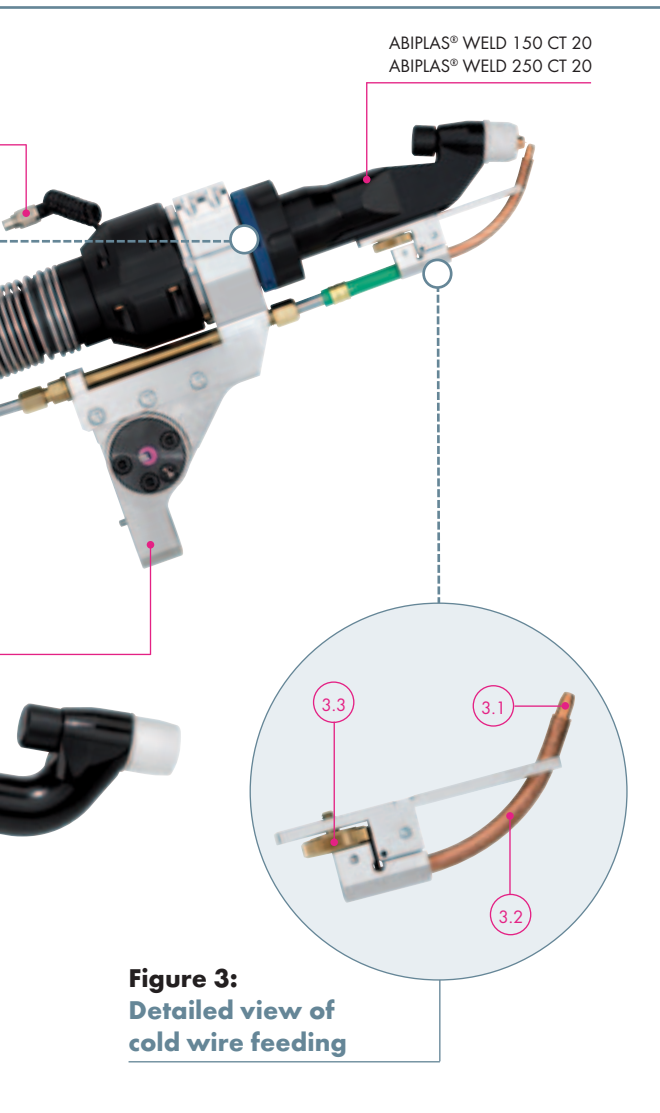
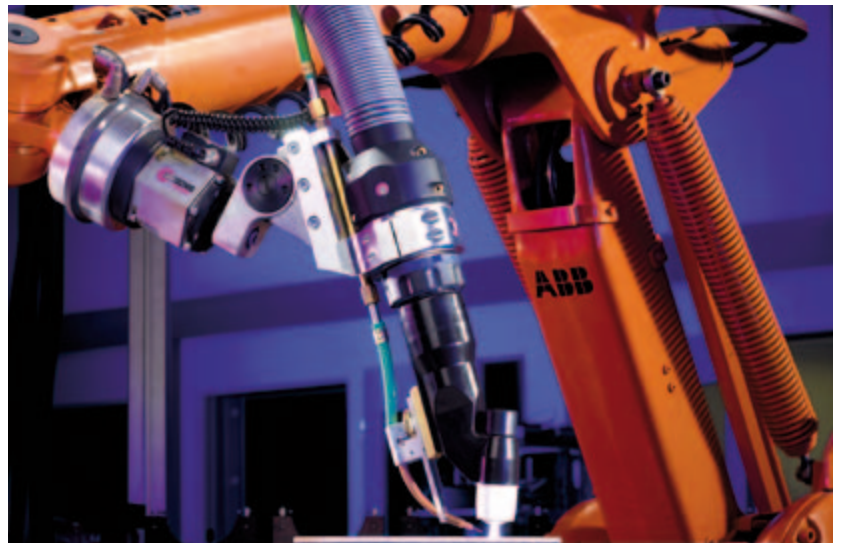


Figure 3:
Detailed view of cold wire feeding

Figure 3:
Detailed view of cold wire feeding

- 3.1 Feeding tip
- 3.2 Feeding tube
- 3.3 Knurled screw for attachment to the torch body



Technical data (EN 60 974-7):

ABIPLAS® WELD 150 CT 20

Type of cooling:	liquid-cooled
Welding current:	max. 150 A
Duty cycle:	100 %
Welding speed:	Vs up to 4.0 m/min.
Nozzle-Ø:	1.2–3.6 mm

ABIPLAS® WELD 250 CT 20

Type of cooling:	liquid-cooled
Welding current:	max. 250 A
Duty cycle:	100 %
Welding speed:	Vs up to 4.0 m/min.
Nozzle-Ø:	2.5–4.5 mm

ABIPLAS® WELD 250 MT

Type of cooling:	liquid-cooled
Welding current:	max. 250 A
Duty cycle:	100 %
Welding speed:	Vs up to 4.0 m/min.
Nozzle-Ø:	2.5–4.5 mm

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.

"ABIPLAS® WELD" liquid-cooled Torch necks & wear parts

ABIPLAS® WELD 150 CT 20

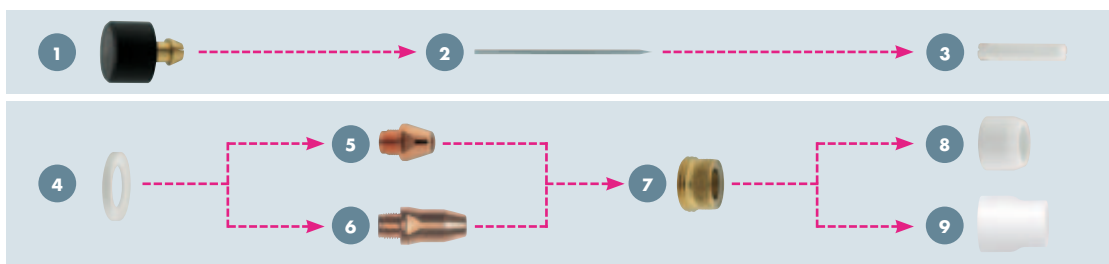


Torch neck

Features	Part-No.
Standard	698.3020

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

Wear parts for ABIPLAS® WELD 150 CT 20

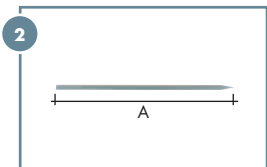


1 Torch cap (1 pc.)



Type	Ø A	Part-No.
Standard	Ø 1.6 mm	698.2033
Standard	Ø 2.4 mm	698.2030
Standard	Ø 3.2 mm	698.2012
Long	Ø 3.2 mm	698.2043
Long	Ø 3.2 mm	698.2046

2 Tungsten electrode (10 pcs.)



Type	Length A	Ø	Part-No.
Standard (cathode)	57.0 mm	Ø 1.6 mm	698.0065
Standard (cathode)	57.0 mm	Ø 2.4 mm	698.0066
Standard (cathode)	57.0 mm	Ø 3.2 mm	698.0067
Long (cathode)	67.0 mm	Ø 2.4 mm	698.2061

3 Centering ceramic (1 pc.)



Type	Ø	Part-No.
Centering ceramic, standard	Ø 1.6 mm	698.2035
Centering ceramic, standard	Ø 2.4 mm	698.2032
Centering ceramic, standard	Ø 3.2 mm	698.2020
Insulating ring, standard	Ø 1.2 mm	699.0041

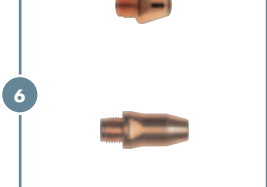
4 Insulating ring (1 pc.)



5 Plasma nozzle, short

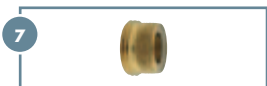


6 Plasma nozzle, long (1 pc.)



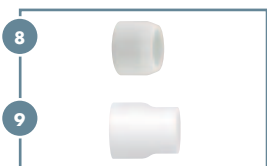
Type	Ø	Part-No.	
		Short	Long
Standard	Ø 1.2 mm	698.2036	-
	Ø 1.4 mm	698.2037	-
	Ø 1.6 mm	698.2038	698.2057
	Ø 1.8 mm	698.2014	-
	Ø 2.0 mm	698.2015	698.2058
	Ø 2.6 mm	698.2017	698.2059
	Ø 3.0 mm	698.2018	-

7 Gas diffuser (1 pc.)



Type	Part-No.
Standard	698.2009

8 Inert gas nozzle 9 Inert gas nozzle, long (10 pcs.)



Type	Part-No.
Inert gas nozzle	699.0071
Inert gas nozzle, long	698.2060

"ABIPLAS® WELD" liquid-cooled Torch necks & wear parts

ABIPLAS® WELD 250 CT/MT

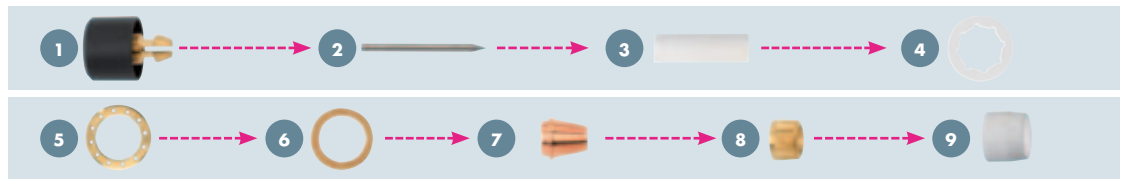


Torch neck

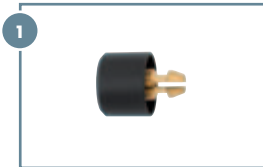
Features	Part-No.-Nr.
ABIPLAS® WELD 250 CT 20	698.5001
ABIPLAS® WELD 250 MT	698.5100.1

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

Wear parts for ABIPLAS® WELD 250 CT/MT

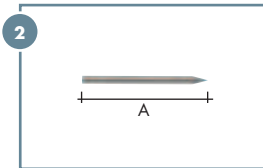


1 Torch cap (1 pc.)



Type	Ø A	Part-No.
Complete	Ø 3.2 mm	698.5053.1
Complete	Ø 4.0 mm	698.5055.1
Complete	Ø 4.8 mm	698.5057.1
Standard	Ø 5.0 mm	698.5024.1

2 Tungsten electrode (5 pcs.)



Type	Length A	Ø	Part-No.
WR 2	75.0 mm	Ø 3.2 mm	698.5047.5
WR 2	75.0 mm	Ø 4.0 mm	698.5048.5
WR 2	75.0 mm	Ø 4.8 mm	698.5049.5
WR 2	75.0 mm	Ø 5.0 mm	698.4076.5

3 Centering ceramic (5 pcs.)



Type	Ø	Part-No.
Centering ceramic	Ø 3.2 mm	698.5050.5
Centering ceramic	Ø 4.0 mm	698.5051.5
Centering ceramic	Ø 4.8 mm	698.5052.5
Centering ceramic	Ø 5.0 mm	698.5027.5

4 Insulating ring (1 pc.)



Insulating ring 698.5028.1

5 Distribution ring (1 pc.)



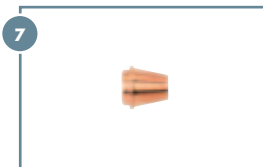
Distribution ring 698.5029.1

6 Gas diffuser (5 pcs.)



Gas diffuser 698.5030.5

7 Plasma nozzle (5 pcs.)



Type	Ø	Part-No.
Standard	Ø 2.5 mm	698.5059.5
	Ø 3.0 mm	698.5044.5
	Ø 3.5 mm	698.5033.5
	Ø 4.0 mm	698.5045.5
	Ø 4.5 mm	698.5046.5

8 Attachment nut (5 pcs.)



Type	Part-No.
Standard	698.5032.5

9 Inert gas nozzle (10 pcs.)

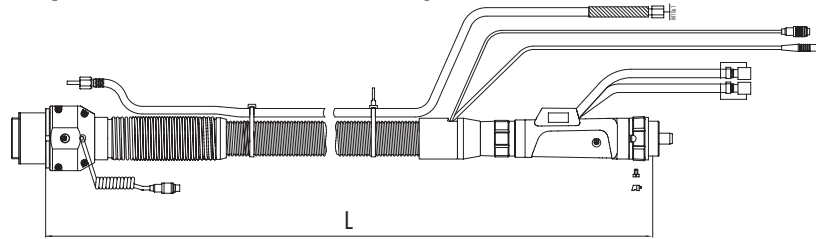


Type	Part-No.
Standard	698.5031.10

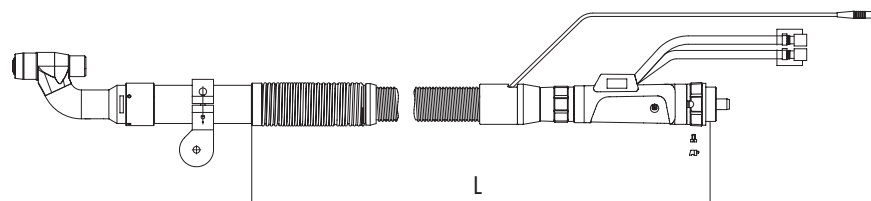
“ABIPLAS® WELD” liquid-cooled Cable assemblies & cold wire feeding

Cable assemblies and connection types

Cable assembly for ABIPLAS® WELD CT ECO cpl.



Cable assembly ABIPLAS® WELD 250 MT



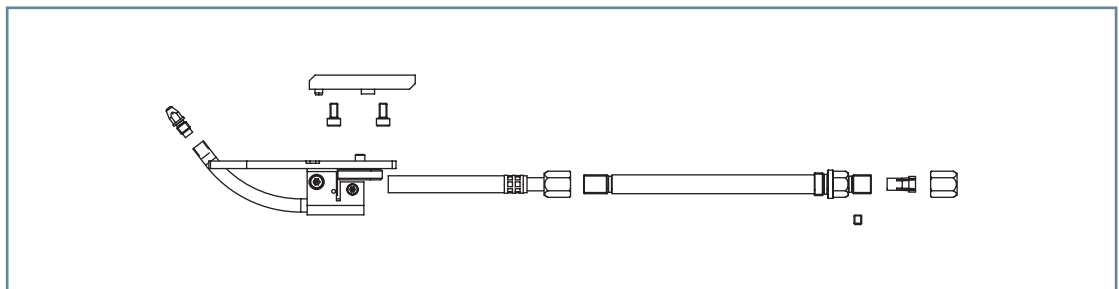
Cable assemblies for ABIPLAS® WELD ECO cpl.

Type	Design	Length	Part-No.
ABIPLAS® WELD CT ECO cpl.	SBI®	1.35 m	698.3088
ABIPLAS® WELD CT ECO cpl.	SBI®	6.00 m	698.3019
ABIPLAS® WELD CT ECO cpl.	EWM®	4.00 m	698.3098
ABIPLAS® WELD CT ECO cpl.	Castolin®	4.00 m	698.3101
ABIPLAS® WELD 250 MT	SBI®	1.50 m	698.5114.1
ABIPLAS® WELD 250 MT	SBI®	6.00 m	698.5113.1

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.

Cold wire feeding ABIPLAS® WELD CT



Cold wire feeding for ABIPLAS® WELD CT

Type	Part-No.
Cold wire feeding cpl. ABIPLAS® WELD 150 CT20	698.3100
Cold wire feeding cpl. ABIPLAS® WELD 250 CT20	698.5041

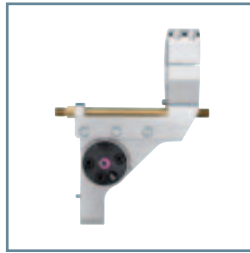
Feed tip

Type	Diameter	Part-No.
Standard	0.6 mm	967.0335
	0.8 / 0.9 mm	967.0329
	1.0 mm	967.0330
	1.2 mm	967.0331
	1.6 mm	967.0332

Please note: All the trademarks named in this brochure are property of the respective companies.

“ABIPLAS® WELD” liquid-cooled Holders & accessories

Bracket



Segment holder for ABIPLAS® WELD CT

in connection with CAT2 HL

Torch type

ABIPLAS® WELD CT

Part-No.

780.0491.1



Clamp holder for ABIPLAS® WELD MT

in connection with CAT2 HL cpl.

Torch type

ABIPLAS® WELD MT

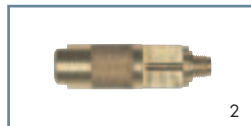
Part-No.

963.0007

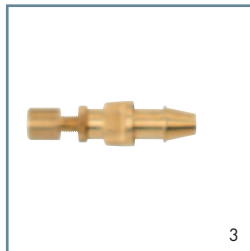
Accessories



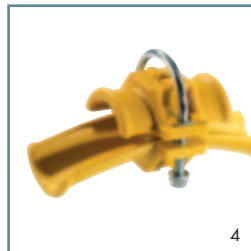
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2



3



4



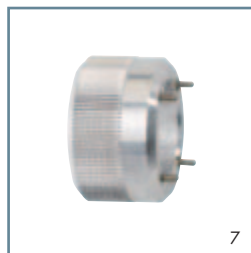
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6



7

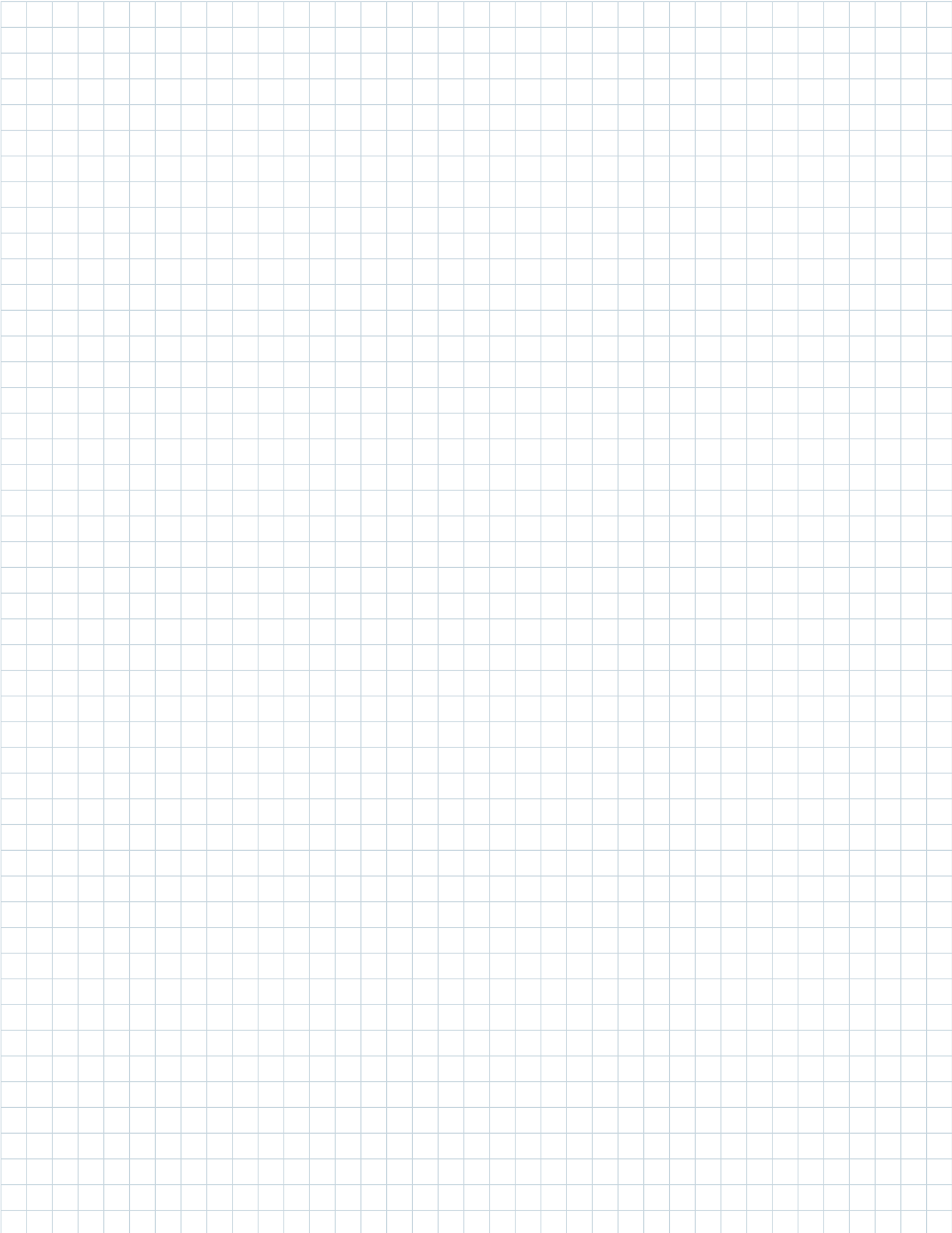


7

Description

		Part-No.
1	Setting gauge ABIPLAS® WELD 150 CT	698.2019
2	Setting gauge, long ABIPLAS® WELD 150 CT	698.2062
3	Setting gauge ABIPLAS® WELD 250 CT/MT	698.5035.1
4	Cable assembly holder	191.0039
5	Sharpener for plastic liner	191.0064
6	Hose cutter for plastic liner	191.0062
not ill.	Spare blade for hose cutter	191.0063
7	Assembly aid for distribution ring	698.5060.1

Notes



Robot peripherals

System solutions



Robot mount "CAT2"

CAT2 / CAT2-HL

Spring type: S-XL

Area of application: Standard welding robot with cable assembly on the outside

Degree of automation: Low Medium High

Page
91–94



Robot mount "iCAT"

iCAT ABIROB® A / iCAT ABIROB® W / iCAT ABIROB® GC / iCAT ROBO WH

Area of application: Hollow wrist robots without integrated collision software

Degree of automation: Low Medium High

Page
95–100



Robot mount "iSTM"

iSTM ABIROB® A / iSTM ABIROB® W / iSTM ABIROB® 350GC

Area of application: Hollow wrist robots with integrated collision software

Degree of automation: Low Medium High

Page
101–106



Cleaning station "BRS"

BRS CC / CCi / LC / LCi / FP / FPi

Area of application: MIG/MAG welding torches of all common torch brands

Degree of automation: Low Medium High

Page
107–112



Torch neck change system "ATS-Rotor"

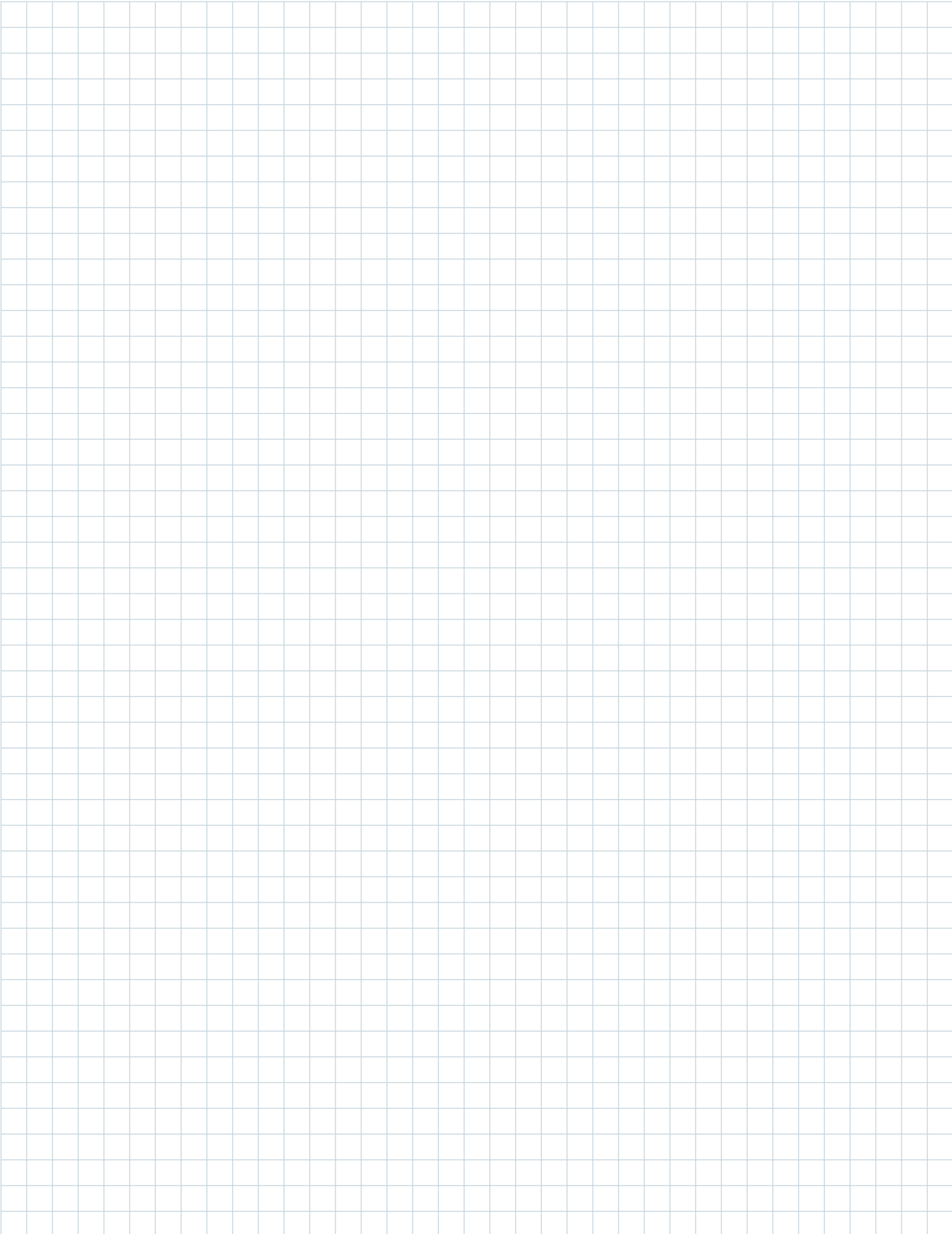
Torch neck change system for MIG/MAG and TIG-WH torches

Area of application: All fully automated welding robot cells

Degree of automation: Low Medium High

Page
113–115

Notes



Robot peripherals

Robot mount "CAT2" and "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

Degree of automation CAT2:

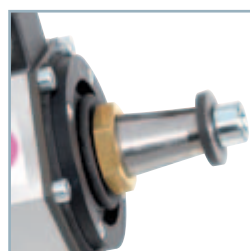
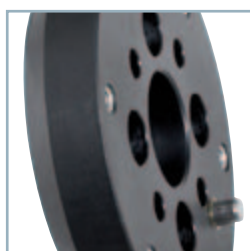
Low	Medium	High
-----	--------	------

Degree of automation CAT2-HL:

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

Area of application:

Standard welding robot with cable assembly on the outside



* 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)

Robot mounts "CAT2" and "CAT2-HL"

System overview and technical data

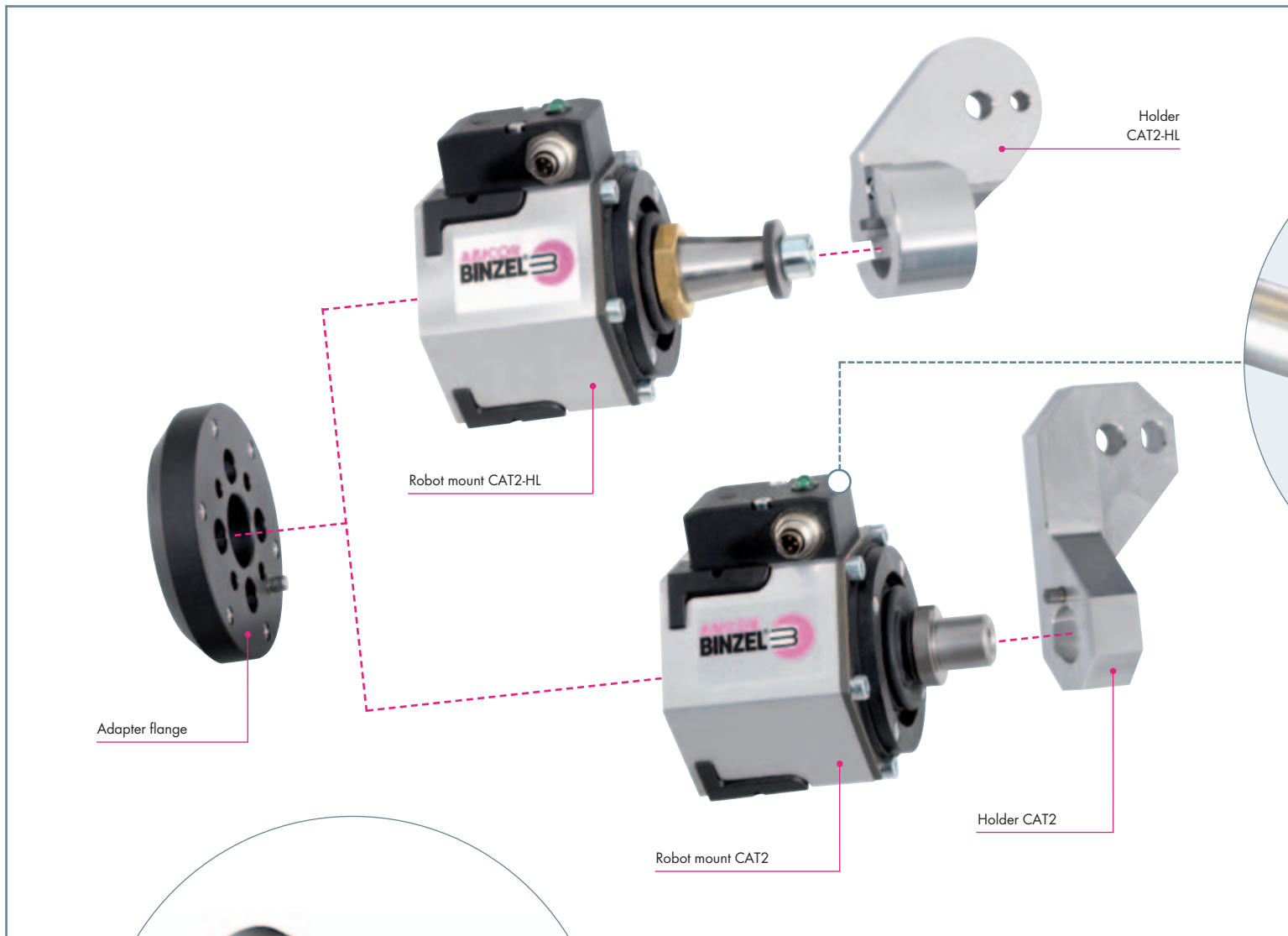


Figure 1:
Deflection

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)
S	46	475
M	80	535
L	85	925
LL	130	1325
XL	150	1540

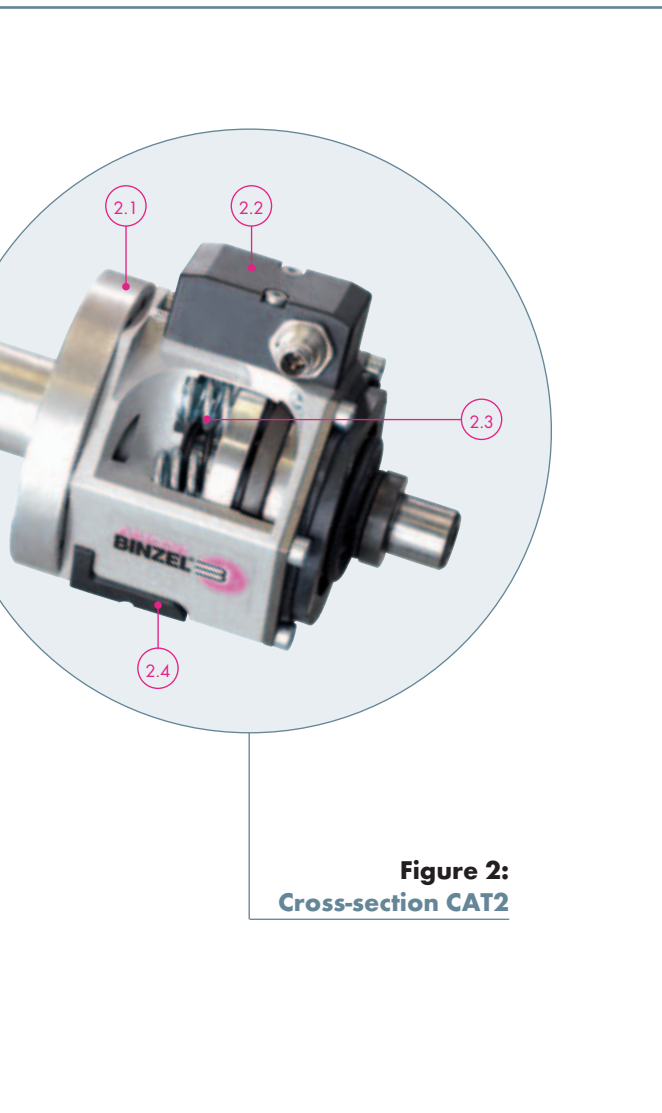
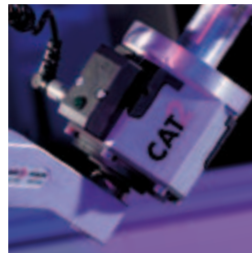


Figure 2:
Cross-section CAT2

Figure 2:
Cross-section CAT2

- 2.1 Adapter 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:

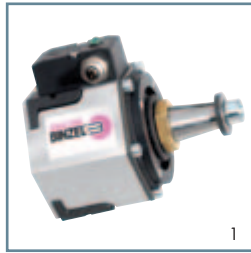
Robot mounts CAT2 and CAT2-HL

Dimensions:	Corner width 75 mm; width across flats 65 mm; height 87 mm (robot flange to release flange)
Weight:	approx. 630 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" and "CAT2-HL"

Robot mount, holder & adapter flange

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
not ill. Protective sleeve CAT2	780.0261
not ill. Torch holder (see respective torch chapter)	

Adapter flanges



Description	Version Plastic	Version Aluminium
	Part-No.	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
ISO 9409-1-A80	780.0607	780.0507
ISO 9409-1-A100	780.0649	780.0549
ISO 9409-1-A125	780.0630	780.0530

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

Caution! For insulation reasons, always use a plastic adapter 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 central media feeding through the center axis 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 in the center axis, 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

Degree of automation iCAT ABIROB® A and GC:

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

Degree of automation iCAT ABIROB® W:

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

Degree of automation iCAT ROBO WH:

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

Area of application:

Hollow wrist robots without integrated collision software



* 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)

Robot mount "iCAT"

System overview and technical data

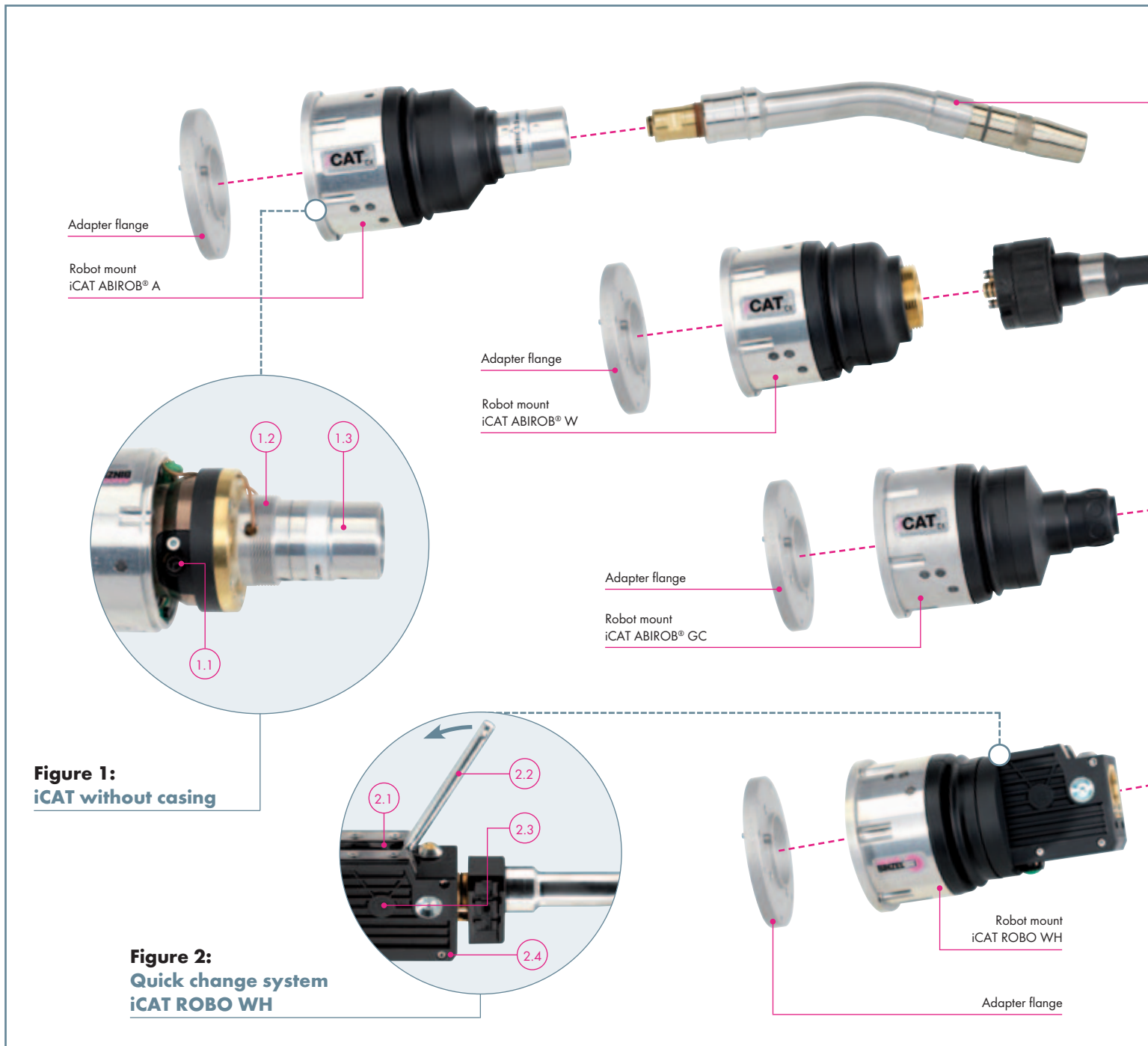


Figure 1:
iCAT ABIROB® A without casing

- 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



Technical data:
Robot mount iCAT

Dimensions:	Length 162 mm Ø 90 mm
Weight:	approx. 1500 g approx. 2100 g (inc. flange and torch)
Release force:	12 N +/- 2 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°
Release torque:	4.3 Nm +/- 2 Nm (at 360 mm distance to the robot flange)
Resetting accuracy:	< +/- 0.1 mm (at 300 mm distance to the robot flange)
Load capacity of safety cut-out:	24 DC, max. 100 mA

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

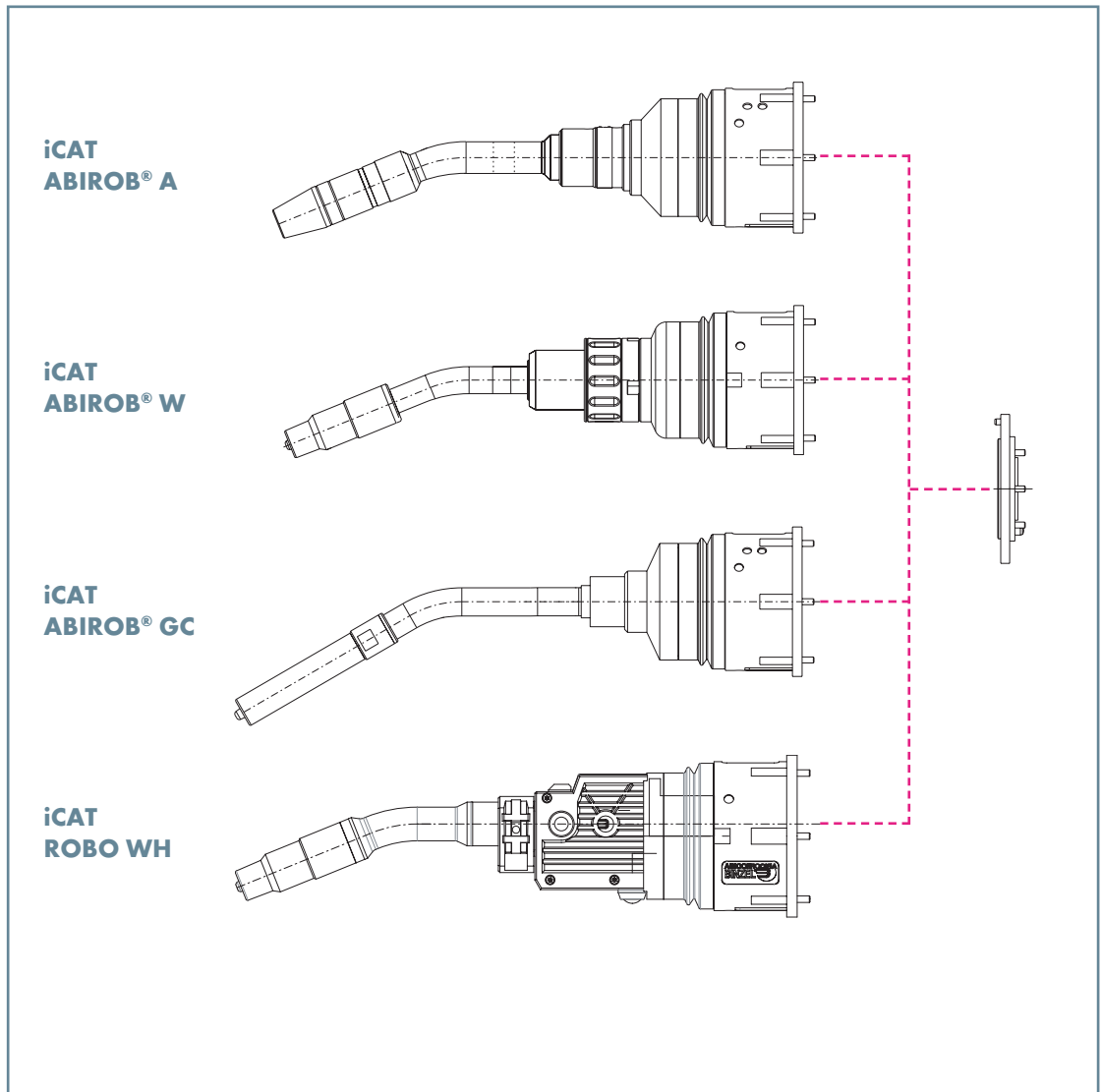
Figure 2:
Quick change system iCAT ROBO WH

- 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

Robot mount "iCAT"

Robot mount & flanges

Robot mount iCAT



Description	Part-No.
Robot mount iCAT ABIROB® A cpl.	780.3101
Robot mount iCAT ABIROB® W cpl.	780.3130
Robot mount iCAT ABIROB® GC cpl.	780.3110
Robot mount iCAT ROBO WH	780.3150

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

Adapter flanges



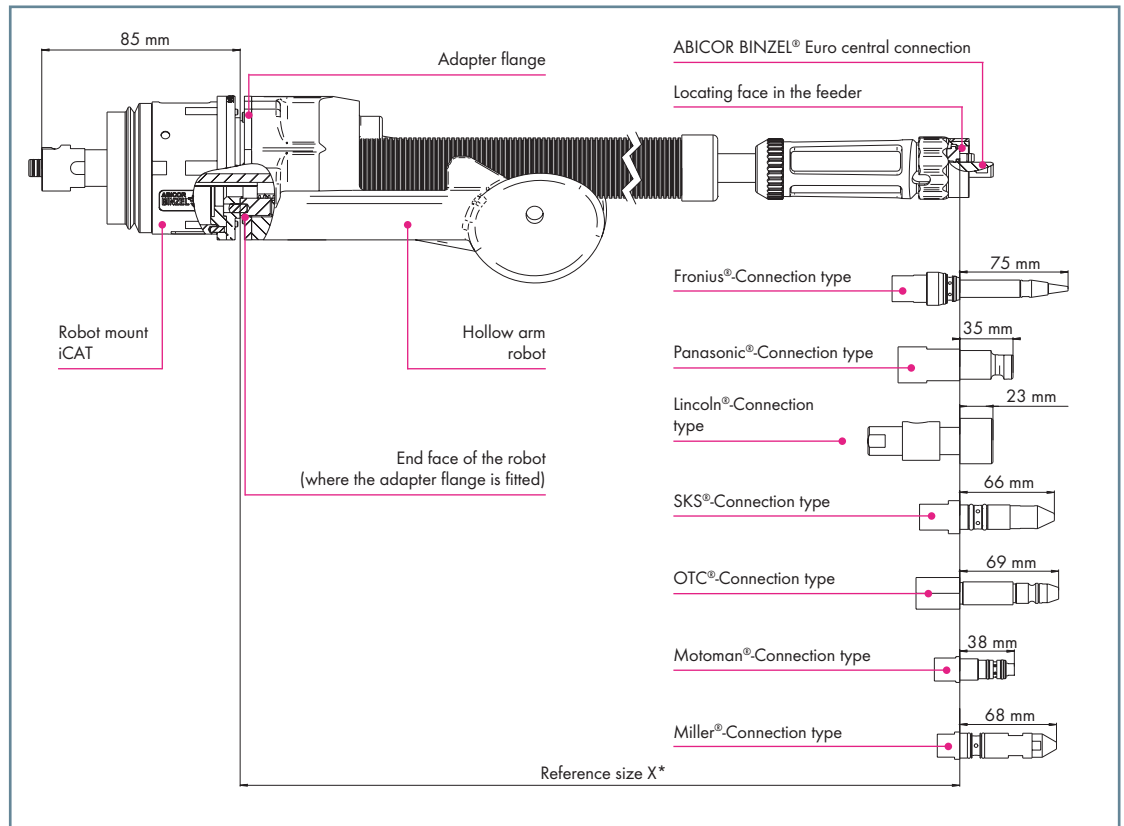
Type	Description	Part-No.
Adapter flange for Motoman®	EA1400N / SSA 2000 or EA1900N	780.0575
Adapter flange for ABB®	IRB 1600 ID	780.0589
Adapter flange for Kuka®	KR5 Arc HW	780.0590
Adapter flange for Fanuc®	Arc Mate iC Series	780.0583
Adapter flange for OTC®	All B4 oder AIIIX B4L	780.0696.1

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

Robot mount "iCAT"

Cable assemblies

Cable assemblies iCAT



* **Reference size X:** The reference size means the distance between the endface of the robot and the feeder. All combinations of connection type and robot are possible. Please state the required distance (=reference size X) or robot type when submitting your order.

Robot	connection type									
	Cebora®	EWM®	Fronius®	Kemppi®	Lincoln®	Miller®	Motoman®	OTC®	Panasonic®	SKS®
ABB® IRB 1600ID			✓							
Fanuc® Arc Mate series					✓					
Kuka® KR5 arc HW	✓	✓	✓	✓						
Motoman® EA 1400N	✓	✓	✓	✓		✓	✓		✓	✓
Motoman® EA 1900N	✓	✓	✓	✓		✓	✓		✓	✓
Motoman® SSA2000	✓	✓	✓	✓						
OTC® AX V4								✓		
OTC® AX V4L								✓		
OTC® All B4								✓		
OTC® All B4L								✓		
Panasonic® TB 1400WG									✓	
Reis® RV20-6HW		✓								
Reis® RV20-10HW		✓								

Cable assemblies iCAT

with connection type	for robots	Length	Part-No.	
			air-cooled	liquid-cooled
ABICOR BINZEL® Euro central connection	Motoman® EA1400N/SSA2000	1.05 m	980.2006	980.2054
ABICOR BINZEL® Euro central connection	Motoman® EA1900N	1.34 m	980.2007	980.2055
Fronius®	Motoman® EA1400N/SSA2000	1.03 m	980.2016	980.2058
Fronius®	Motoman® EA1900N	1.32 m	980.2017	980.2059
OTC®	OTC® All B4	1.02 m	980.2210.1	980.2212.1
OTC®	OTC® All B4L	1.42 m	980.2211.1	980.2213.1
Panasonic®	Motoman® EA1400N/SSA2000	0.94 m	980.2004	980.2052
Panasonic®	Motoman® EA1900N	1.23 m	980.2005	980.2053

Further cable assemblies are available on request.

Robot mount "iCAT"

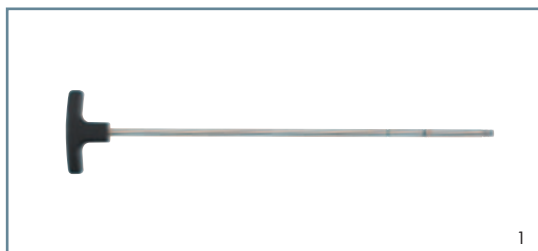
Liners and accessories

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
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.

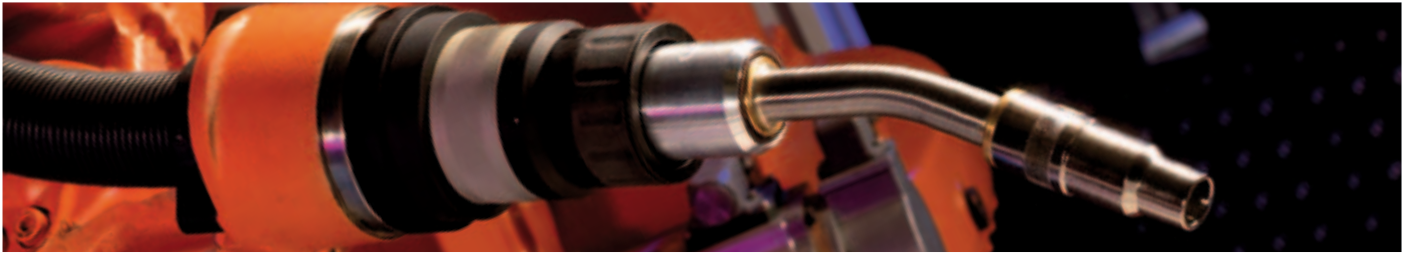
Accessories



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 Motoman® EA 1400 / EA 1900)	400.1153
Corrugated hose clamp cpl. (for OTC® Almega 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 in the center axis, 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

Degree of automation iSTM ABIROB® A and GC:

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

Degree of automation iSTM ABIROB® W:

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

Area of application:

Hollow wrist robots with integrated collision software



* 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)

Robot mount "iSTM"

System overview and technical data

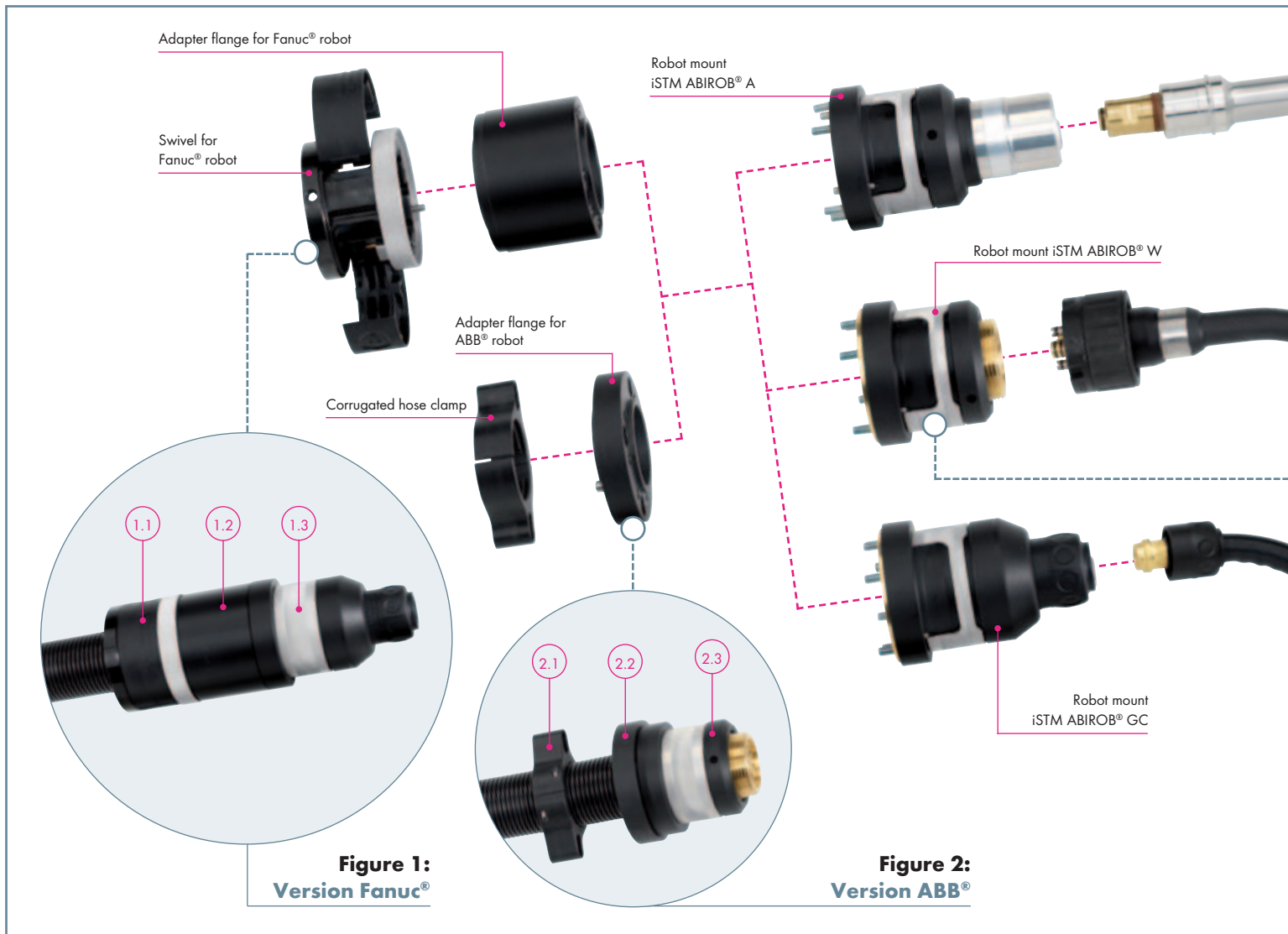


Figure 1:
Version Fanuc® with iSTM ABIROB® GC

- 1.1 Swivel (hose clamp) for Fanuc® robot
- 1.2 Adapter 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 Adapter flange for ABB® robot
- 2.3 Robot mount iSTM ABIROB® W

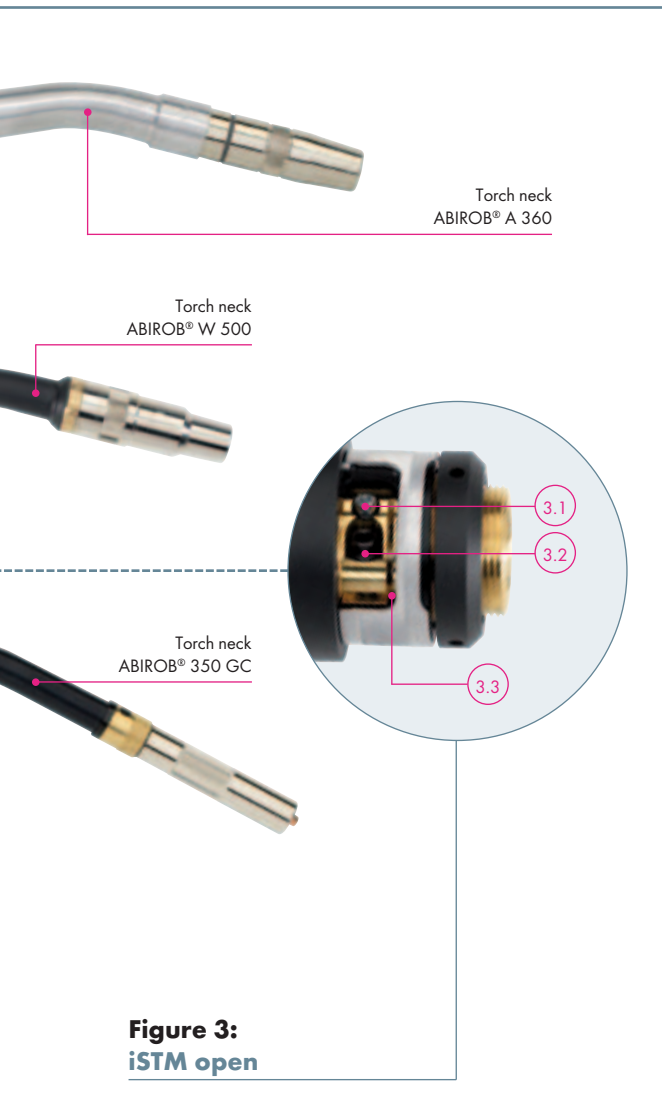
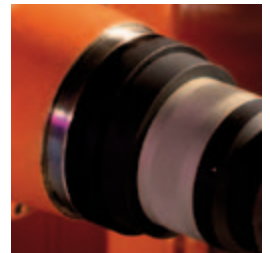


Figure 3:
iSTM open

- 3.1 Counter screw to loosen the clamp connection and for simple removal
- 3.2 Clamping screw to hold the cable assembly in place safely
- 3.3 Control opening for checking the correct position of the cable assembly



Technical data (EN 60 974-7):

Dimensions: Length 109 mm
 Ø 73 mm

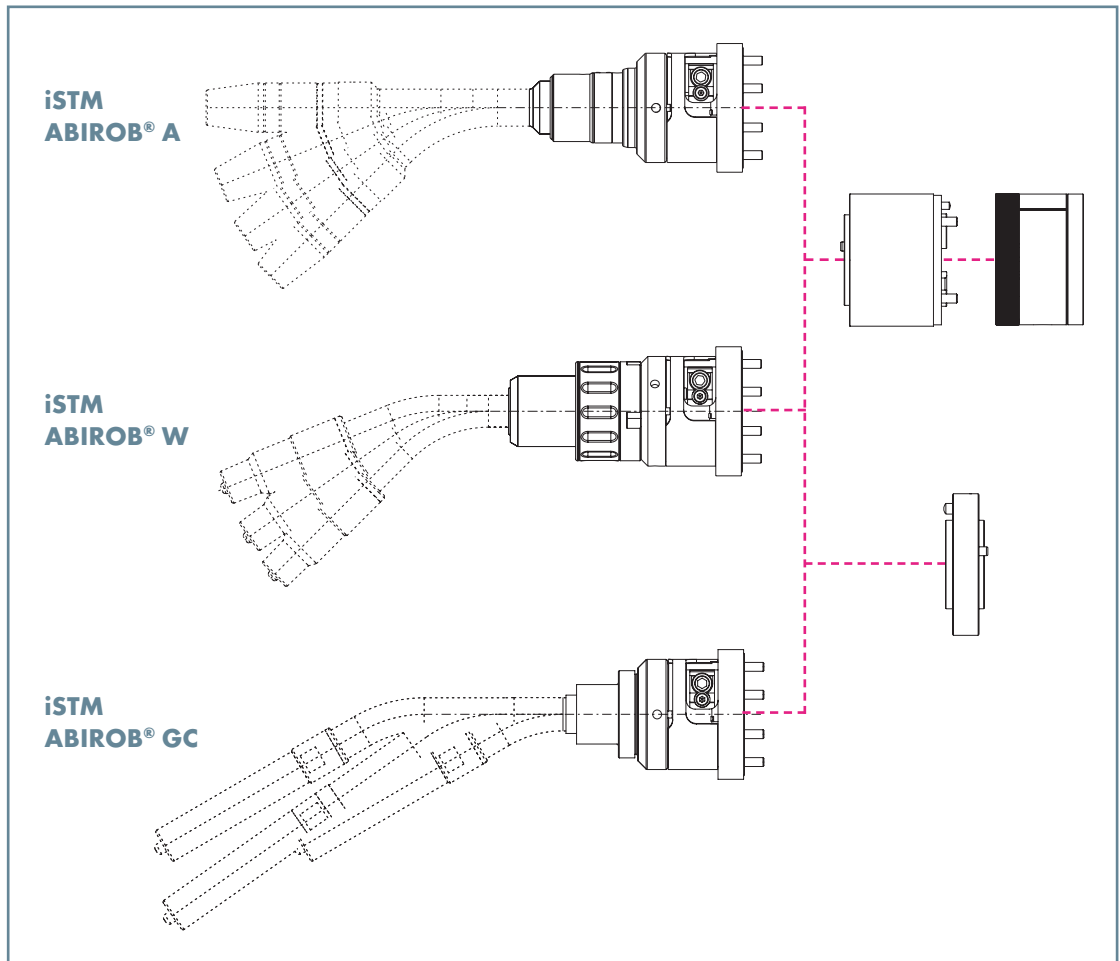
Weight:

- without torch neck approx. 900 g
- with ABIROB® A 300 approx. 1200 g
- with ABIROB® A 360 approx. 1200 g
- with ABIROB® A 500 approx. 1200 g
- with ABIROB® W 500 approx. 1500 g
- with ABIROB® 350 GC approx. 1200 g

Robot mount "iSTM"

Robot mount & flanges

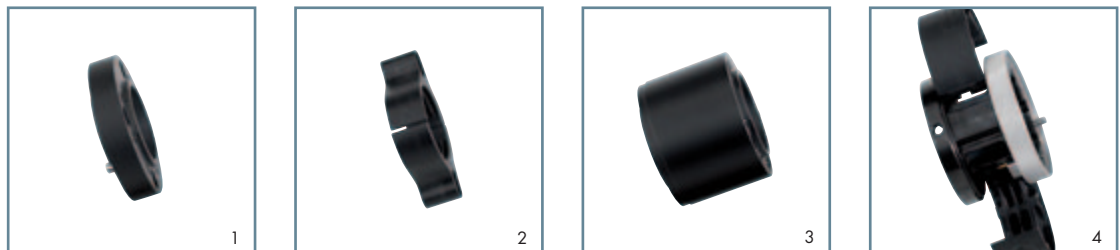
Robot mount iSTM



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.

Adapter flanges

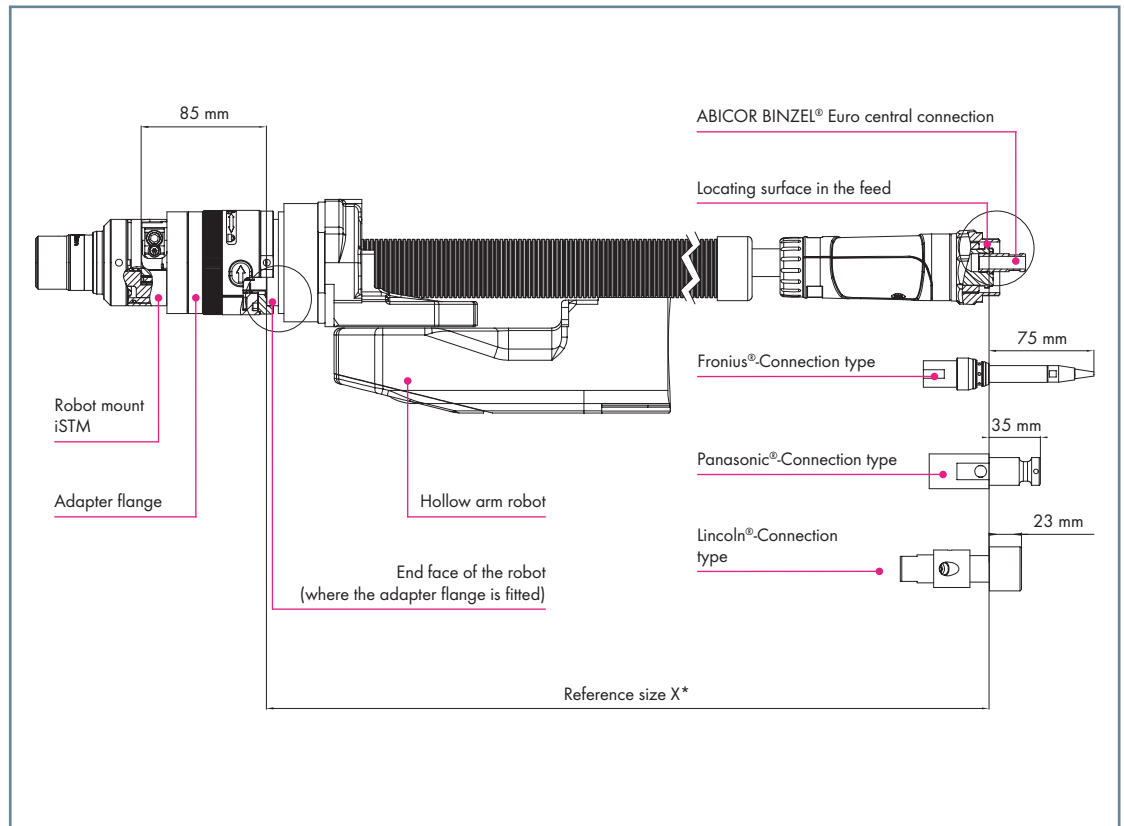


Type	Description	Part-No.
1 Adapter flange for ABB®	ABB® IRB 1600 ID	780.0678
2 Corrugated hose clamp	ABB® IRB 1600 ID	400.1194
3 Adapter flange for Fanuc®	Fanuc® Arc Mate iC Series	780.0680
4 Swivel for Fanuc®	Fanuc® Arc Mate iC Series	780.3220

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

Robot mount "iSTM" Cable assemblies

Cable assemblies iSTM



* **Reference size X:** The reference size means the distance between the endface of the robot and the feeder. All combinations of connection type and robot are possible. Please state the required distance (=reference size X) or robot type when submitting your order.

Robot	connection type							
	ESAB®	EWM®	Fronius®	Kemppi®	Lincoln®	Migatronic®	Miller®	Panasonic®
ABB® IRB 1600ID	✓	✓	✓	✓				
Fanuc® Arc Mate series	✓	✓	✓	✓	✓	✓	✓	✓

Cable assemblies iSTM for ABB® IRB 1600ID

Wire feed	connection type	Length	Part-No.	
			air-cooled	liquid-cooled
ESAB® Aristo™ Robo Feed 3004w	ABICOR BINZEL® Euro central connection	1.05 m	390.0004	390.0005
EWM®	ABICOR BINZEL® Euro central connection	1.05 m	980.2122	980.2125
Kemppi® KempArc™ DT 400	ABICOR BINZEL® Euro central connection	1.05 m	980.2121	980.2124
Fronius® VR 1500 PAP	Fronius®	1.13 m	on request	980.2177

Further cable assemblies are available on request.

Cable assemblies iSTM for Fanuc® Arc Mate 100iC

Wire feed	connection type	Length	Part-No.	
			air-cooled	liquid-cooled
Kemppi® KempArc™ DT 400	ABICOR BINZEL® Euro central connection	0.84 m	980.2107	980.2114
MIGATRONIC®	ABICOR BINZEL® Euro central connection	0.84 m	980.2109	980.2116
Lincoln® AutoDrive 4R90	Lincoln®	0.85 m	980.2112	980.2119
Fronius® VR 1500 PAP	Fronius®	1.01 m	on request	980.2182
Panasonic®	Panasonic®	0.85 m	980.2113	980.2120

Further cable assemblies are available on request.

Robot mount "iSTM"

Liners and 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
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 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

Torch cleaning station "BRS"



"Connect & Clean ..."

ABICOR BINZEL® torch cleaning stations – the complete solutions for reliable automatic servicing of torch heads. Quick and easy to install, or "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 servicing intervals
- Clean environment thanks to encapsulated spraying nozzle 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-start properties as well as exact TCP measurement
- Long service life thanks to sturdy design
- Precise wire length for touch sensing

Degree of automation BRS CC / CCi / LC / LCi:

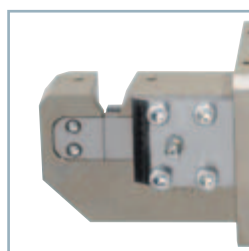
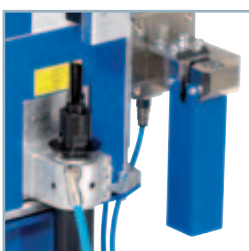
Low	Medium	High
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Degree of automation BRS FP / FPi:

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

Area of application:

MIG/MAG welding torches of all common makes



* 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)

Torch cleaning station "BRS"

System overview and technical data

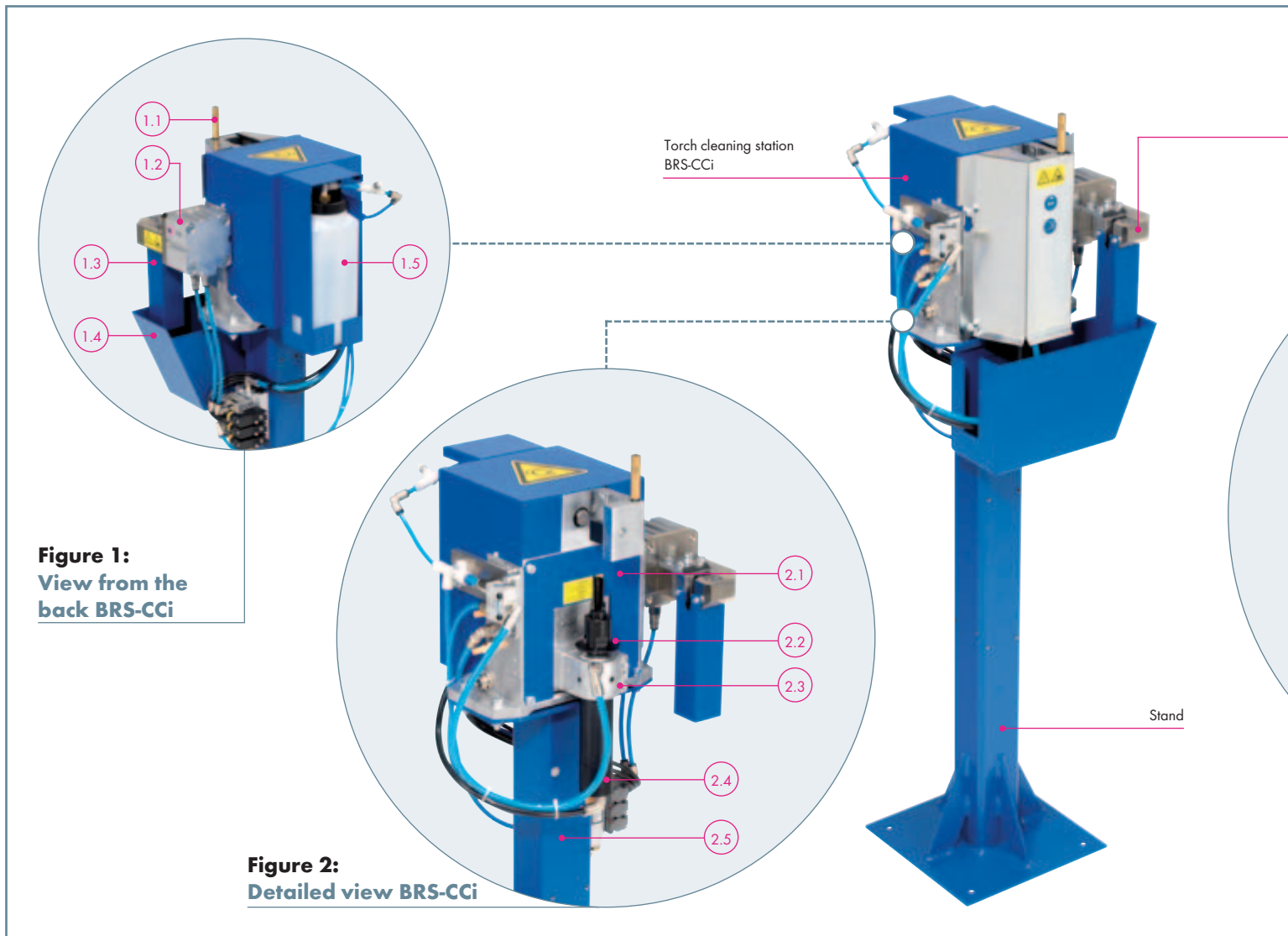


Figure 1:
View from the back BRS-CCi

Figure 2:
Detailed view BRS-CCi

Figure 1:
View from the back BRS-CCi

- 1.1 Test/TCP tip
- 1.2 Wire cutting fixture "DAV" for a constantly free wire end and better arc-start/touch sensing performance properties since the welding bead or oxide layer is cut off at the beginning of the wire
- 1.3 Guide chute for wire cuttings
- 1.4 Drip and wire cutting collection pan
- 1.5 Anti-spatter agent (1 litre)

Figure 2:
Detailed view BRS-CCi

- 2.1 Cutters for different torch makes
- 2.2 Cutter fitting, exchangeable
- 2.3 Guide block, stroke 50 mm
- 2.4 Pneumatic motor
- 2.5 Stand

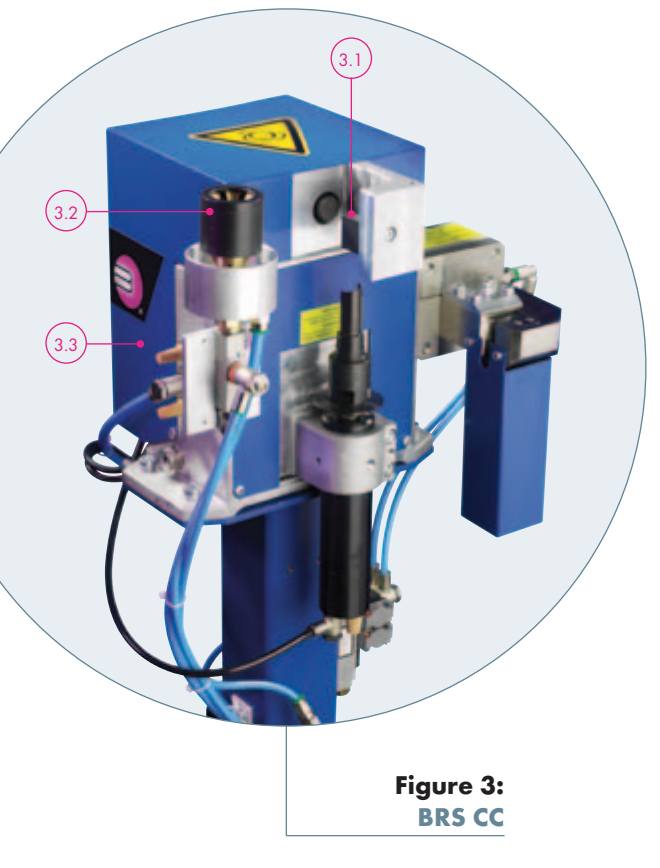
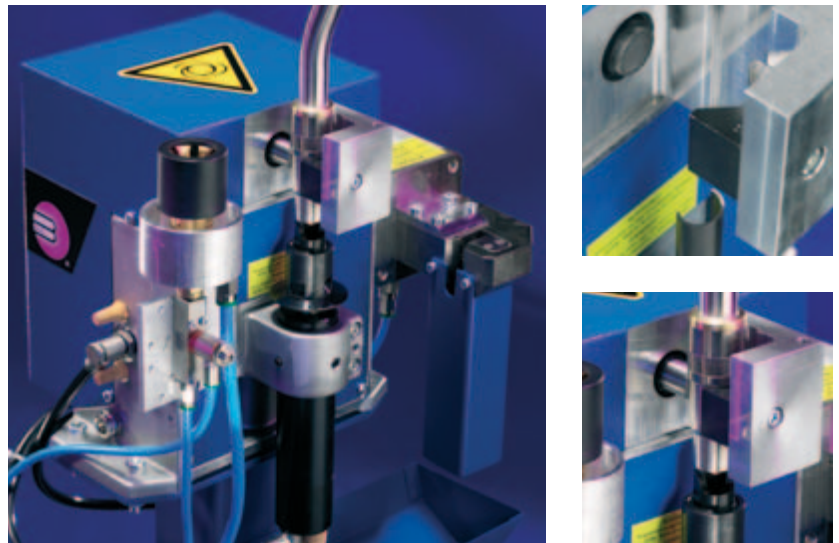


Figure 3:
BRS CC

Figure 3:
BRS-CC

- 3.1 Prism for different torch/gas nozzle types
- 3.2 Injector for the direct and economical spraying of anti-spatter agent reduces spatter adhesion and extends the servicing intervals
- 3.3 Cover



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
Outlets:	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 stations "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-CCi kpl.	with DAV / with stand	831.0670
	BRS-CCi	without DAV / with stand / with airblast function	831.0780.1
3	BRS-LC	Standard (without accessories)	831.0300
not ill.	BRS-LCi	Standard (without accessories)	831.0690
4	BRS-FP	Standard (without accessories)	831.0260
not ill.	BRS-FPi	Standard (without accessories)	831.0680

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"

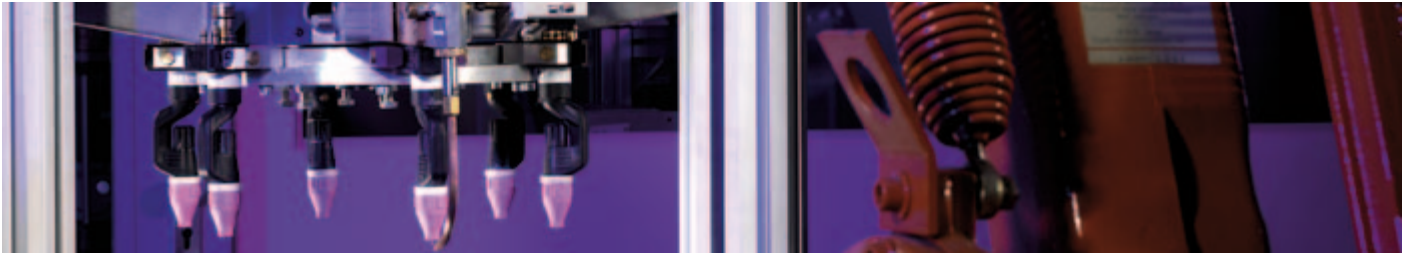
Cutters and clamping prisms

For 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® 350 GC	145.0557	20.0	15.5	89.5	M6	Ø 8	831.0313	831.0491.1
ABIROB® 350 GC	145.0558	20.0	12.0	89.5	M6	Ø 8	831.0313	831.0555.1
ABIROB® 350 GC	145.0573	20.0	13.0	89.5	M6	Ø 8	831.0313	831.0420.1
ABIROB® A 300	145.0671.5	22.0	14.4	36.0	M6	Ø 8	831.0371	831.0709.1
ABIROB® A 360	145.0599	22.0	12.0	68.0	M6	Ø 8	831.0371	831.0604.1
ABIROB® A 360	145.0600	22.0	12.0	70.0	M6	Ø 8	831.0371	831.0604.1
ABIROB® A 360	145.0601	22.0	12.0	65.0	M6	Ø 8	831.0371	831.0604.1
ABIROB® A 360	145.0595	22.0	14.0	68.0	M6	Ø 8	831.0371	831.0592.1
ABIROB® A 360	145.0596	22.0	14.0	70.0	M6	Ø 8	831.0371	831.0618.1
ABIROB® A 360	145.0597	22.0	14.0	65.0	M6	Ø 8	831.0371	831.0593.1
ABIROB® A 360	145.0618	22.0	14.0	68.0	M6	Ø 8	831.0371	831.0592.1
ABIROB® A 360	145.0619	22.0	14.0	65.0	M6	Ø 8	831.0371	831.0593.1
ABIROB® A 360	145.0592	22.0	16.0	68.0	M6	Ø 8	831.0371	831.0487.1
ABIROB® A 360	145.0593	22.0	16.0	70.0	M6	Ø 8	831.0371	831.0487.1
ABIROB® A 360	145.0594	22.0	16.0	65.0	M6	Ø 8	831.0371	831.0589.1
ABIROB® A 500	145.0589	28.0	13.0	75.0	M6	Ø 8	831.0318	831.0180.1
ABIROB® A 500	145.0590	28.0	13.0	77.0	M6	Ø 8	831.0318	831.0180.1
ABIROB® A 500	145.0591	28.0	13.0	72.0	M6	Ø 8	831.0318	831.0169.1
ABIROB® A 500	145.0586	28.0	14.0	75.0	M6	Ø 8	831.0318	831.0592.1
ABIROB® A 500	145.0587	28.0	14.0	77.0	M6	Ø 8	831.0318	831.0618.1
ABIROB® A 500	145.0588	28.0	14.0	72.0	M6	Ø 8	831.0318	831.0593.1
ABIROB® A 500	145.0580	28.0	16.0	75.0	M8	Ø 10	831.0318	831.0488.1
ABIROB® A 500	145.0581	28.0	16.0	77.0	M8	Ø 10	831.0318	831.0488.1
ABIROB® A 500	145.0582	28.0	16.0	72.0	M8	Ø 10	831.0318	831.0591.1
ABIROB® A 500	145.0583	28.0	16.0	75.0	M8	Ø 10	831.0318	831.0488.1
ABIROB® A 500	145.0584	28.0	16.0	77.0	M8	Ø 10	831.0318	831.0488.1
ABIROB® A 500	145.0585	28.0	16.0	72.0	M6	Ø 8	831.0318	831.0591.1
ABIROB® W 300	145.0495	25.0	13.0	44.5	M6	Ø 8	831.0316	831.0169.1
ABIROB® W 300	145.0564	25.0	13.0	48.5	M6	Ø 8	831.0316	831.0180.1
ABIROB® W 300	145.0494	25.0	15.5	44.5	M6	Ø 8	831.0316	831.0576.1
ABIROB® W 500	145.0479	25.0	13.0	75.5	M8	Ø 10	831.0316	831.0368.1
ABIROB® W 500	145.0556	25.0	13.0	77.5	M8	Ø 10	831.0316	831.0368.1
ABIROB® W 500	145.0466	25.0	15.5	72.0	M8	Ø 10	831.0316	831.0216.1
ABIROB® W 500	145.0568	25.0	15.5	72.5	M8	Ø 10	831.0316	831.0216.1
ABIROB® W 500	145.0553	25.0	15.5	75.5	M8	Ø 10	831.0316	831.0023.1
ABIROB® W 500	145.0544	25.0	15.5	75.5	M8	Ø 10	831.0316	831.0023.1
ABIROB® W 500	145.0480	25.0	15.5	77.0	M8	Ø 10	831.0316	831.0023.1
ROBO 455 D	145.0134	25.0	13.0	67.5	M8	Ø 10	831.0316	831.0413.1
ROBO 455 D	145.0106	25.0	15.5	64.5	M8	Ø 10	831.0316	831.0216.1
ROBO 455 D	145.0089	25.0	15.5	67.5	M8	Ø 10	831.0316	831.0023.1
ROBO 455 D	145.0164	25.0	15.5	67.5	M8	Ø 10	831.0316	831.0023.1
ROBO 650 TS	145.0574	30.0	18.0	84.0	M10	Ø 12	831.0319	831.0587.1
ROBO 650 TS	145.0575	30.0	21.5	84.0	M10	Ø 12	831.0319	831.0547.1
ROBO 650 TS	145.0578	30.0	18.0	78.0	M10	Ø 12	831.0319	on request
ROBO WH 242 D	145.0135	21.0	13.0	62.0	M6	Ø 8	831.0314	831.0564.1
ROBO WH 242 D	145.0090	21.0	15.5	62.0	M6	Ø 8	831.0314	831.0563.1
ROBO WH 652 D TS	145.0574	30.0	18.0	84.0	M10	Ø 12	831.0319	831.0162.1
ROBO WH 652 D TS	145.0575	30.0	21.5	84.0	M10	Ø 12	831.0319	831.0547.1
ROBO WH W500	145.0479	25.0	13.0	75.5	M8	Ø 10	831.0316	831.0368.1
ROBO WH W500	145.0556	25.0	13.0	77.5	M8	Ø 10	831.0316	831.0368.1
ROBO WH W500	145.0466	25.0	15.5	72.0	M8	Ø 10	831.0316	831.0216.1
ROBO WH W500	145.0568	25.0	15.5	72.5	M8	Ø 10	831.0316	831.0216.1
ROBO WH W500	145.0553	25.0	15.5	75.5	M8	Ø 10	831.0316	831.0023.1
ROBO WH W500	145.0544	25.0	15.5	75.5	M8	Ø 10	831.0316	831.0023.1
ROBO WH W500	145.0480	25.0	15.5	77.0	M8	Ø 10	831.0316	831.0023.1

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

Robot peripherals

Torch neck change system "ATS-ROTOR"



"Work around the clock ..."

The intelligent system for the automatic exchange of torch necks.

Integrated into the robot cell, the ATS rotor can be equipped with up to five replacement torch necks. The factory-standardised interface allows MIG/MAG and TIG change necks to be used. Depending on the welding application, the robot accesses the neck change system cyclically or event-oriented (for example when a torch sticks) in order to replace a torch neck by a new or newly serviced one.

Manual intervention in the welding cell is not required until all five change necks have been replaced, when the ATS rotor needs equipping with newly serviced necks. Replacement of spare and wear parts on the torch necks is performed outside the robot cell, while the production process continues inside.

For the user, this means up to five times more plant availability (with regard to maintenance service on the torch necks).

Advantages that speak for themselves:

- Integrated SPC (industrial standard) for connection to the robot control
- Extremely easy to install and put into operation
- Increase in plant availability
- Change between different neck geometries for complex welding tasks
- Torch necks are changed in seconds
- Lightweight complex aluminium frame with low-maintenance pneumatic cylinders
- Suitable for MIG/MAG WH/PP welding torches and TIG welding torch ABITIG® WH

Degree of automation:

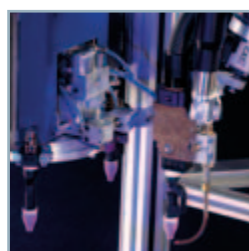
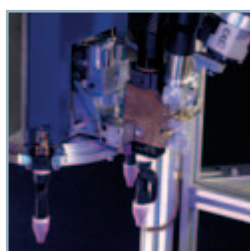
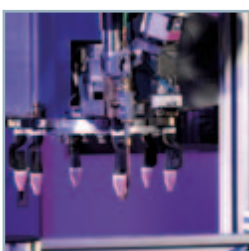
Low

Medium

High

Area of application:

Torch change system for MIG/MAG and TIG-WH torches



* Definition of the degree of automation:

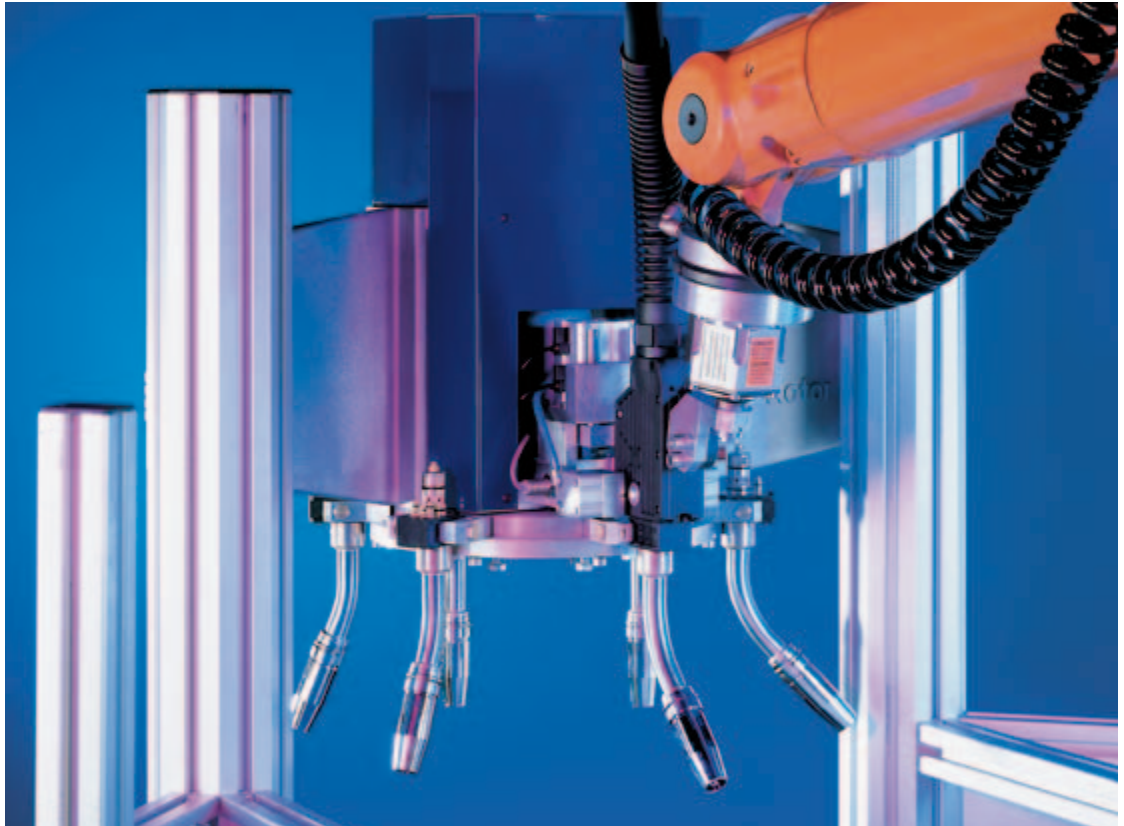
Low = Torch neck change not possible

Medium = Torch neck change possible (manually)

High = Torch neck change possible (manually & automatically)

Torch neck change system "ATS-ROTOR"

Technical data & order summary



Technical data:

Dimensions:	660 mm wide, 416 mm high (plus 100 mm stroke)
Weight:	approx. 31 kg
Ambient temperature:	5° - 50 °C
Protection class:	I (acc. to DIN 57 106)

Pneumatics

Connection:	G1/4"
Clear width:	min. Ø 6 mm
Nominal pressure:	6 bar
Air consumption:	1.5 l

Electrical data

Supply voltage:	24 V DC
Power consumption:	50 W
Tolerated residual ripple:	V _{ss} < 10 %

ATS-ROTOR

Description	Part-No.
ATS-ROTOR with SPC	840.3300
ATS-ROTOR without SPC	840.3400

Torch neck change system "ATS-ROTOR"

How it works

How it works

The ATS-ROTOR is controlled by the robot via digital inputs and outputs (24 V DC).

The actual change cycle is performed automatically under the control of an integrated PLC.



- 1** The robot docks the WH welding torch into the change station.



- 2** The change neck is released. At the same time, the wire is cut inside the torch body.



- 3** The change neck is taken off by the downward movement of the rotor plate. Quick-release valves in the supply channels prevent coolant leaking.



- 4** The ATS-Rotor rotates a replacement change neck into position under the change station.



- 5** The replacement change neck is locked into position on the torch body. All supply connections are automatically made. The robot moves the WH welding torch out of the change station again.

Our product range:

■ MIG/MAG

- Welding Torches
- Automatic and Special Torches
- Push-Pull Welding Torches
- Fume Extraction Torches
- Central Adaptor System

■ TIG

- Welding Torches
- Automatic and Special Torches

■ PLASMA

- Cutting Torches
- Welding Torches
- Automatic and Special Torches

■ Robotic Peripheral Equipment

- Robot Torches
MIG/TIG/Plasma
- Robot Mount CAT2/iCAT
- Torch Change System
ATS-Rotor
- Tool Change System WWS
- Wire Cutting Station DAV
- Torch Cleaning Station
BRS-LC, BRS-CC and BRS-FP
- Wire Feeding Station MFS-V2

■ Welding Accessories

- Cooling Device
- Welding Cable Plug and Socket
- Anti Spatter Spray and Paste
and so on ...



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