

Plasma Welding Torch ABIPLAS® WELD CT and MT



ABIPLAS® WELD – the new torch generation ...

... for the automated Plasma welding.

The new Plasma welding torch series stands for highest economic efficiency. Due to the rugged design and reproducible adjustments it suits ideally for robots and semiautomatic machines.

The extremely stable welding process allows a spatter free welding and high quality welding seams. Expensive reworks are not necessary anymore. The Plasma welding torches cover a rating up to 300 A in the Plasma key hole welding.

The Features:

- Small design for best accessibility
- High lifetime of wear parts through optimal torch cooling
- Only few wear parts – easy handling

Technical data (EN 60974-7):

ABIPLAS® WELD 150 CT 20

| | |
|---------------------|---------------------|
| Type of cooling: | liquid cooled |
| Welding current: | 80–150 A |
| Duty cycle: | 100 % |
| Welding speed: | Vs up to 4.0 m/min. |
| Electrode diameter: | 1.2–3.6 mm |

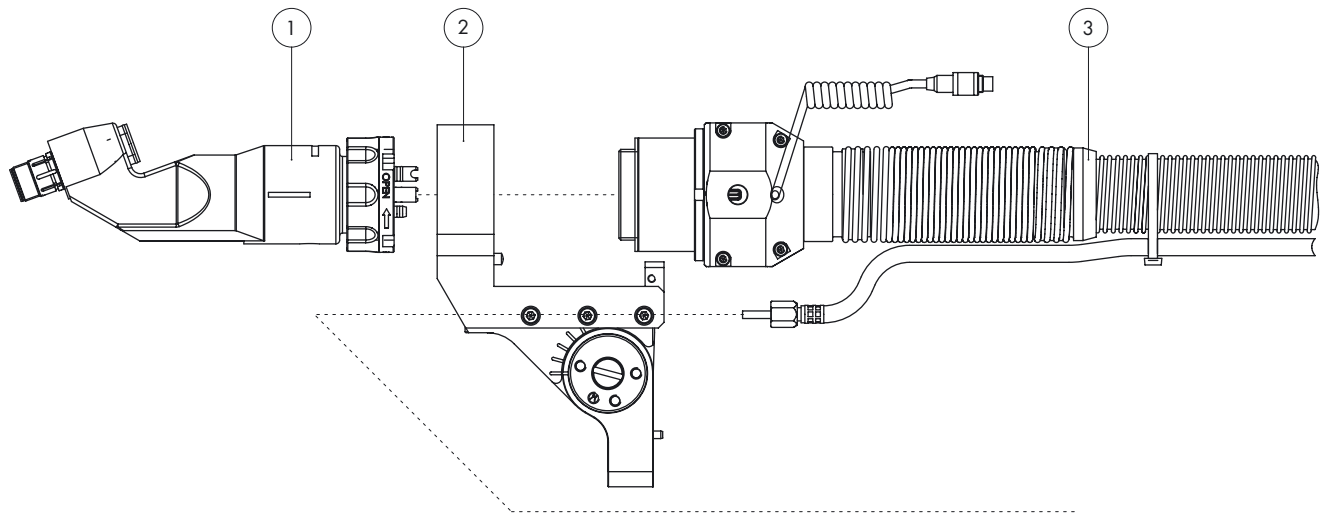
ABIPLAS® WELD 250 MT

ABIPLAS® WELD 250 CT 20

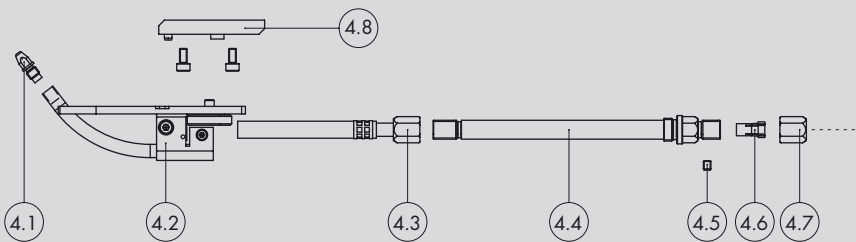
| | |
|---------------------|---------------------|
| Type of cooling: | liquid cooled |
| Welding current: | max. 300 A |
| Duty cycle: | 100 % |
| Welding speed: | Vs up to 4.0 m/min. |
| Electrode diameter: | 3.0–4.5 mm |



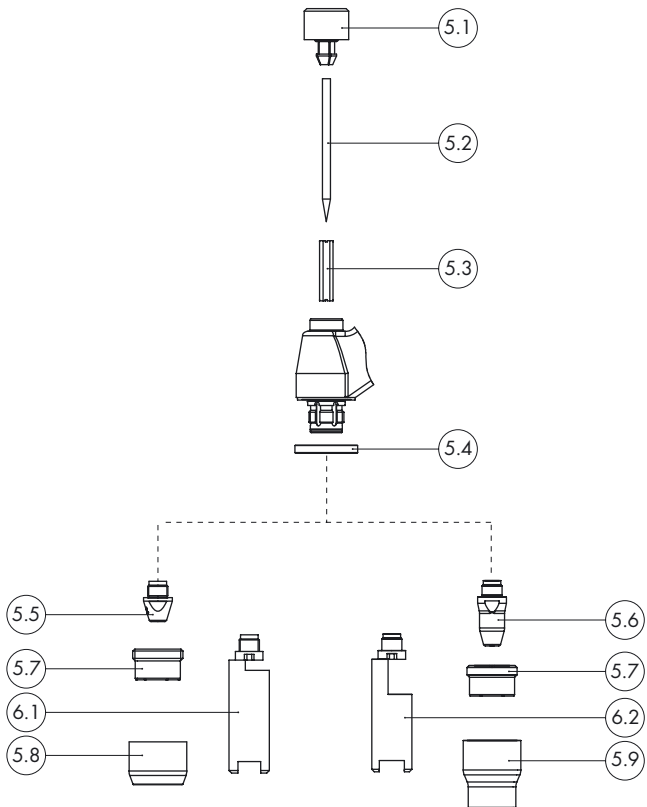
System overview ABIPLAS® WELD CT



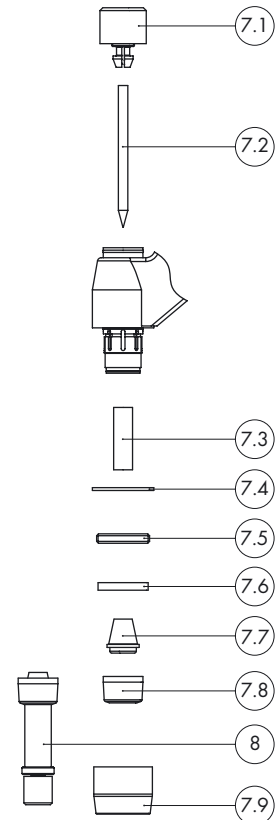
4 Cold wire feeding set



**Wear parts
ABIPLAS® WELD 150 CT**



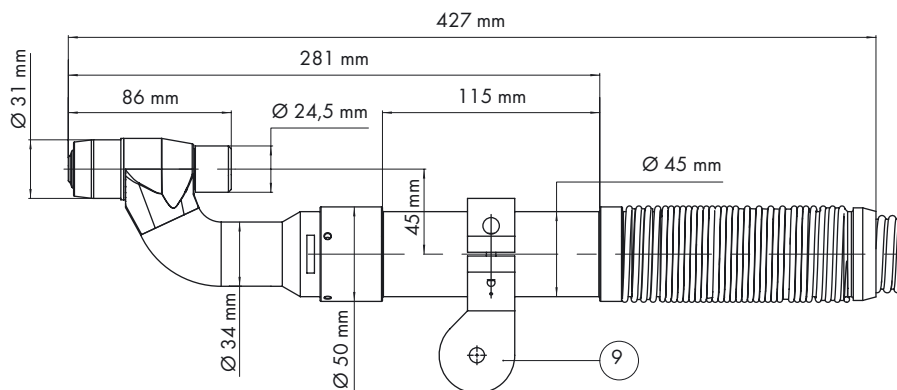
**Wear parts
ABIPLAS® WELD 250 CT/MT**



| Component | Pos. | Description | Spec. | Order-No. | |
|---|--|--|--------------------|-----------|----------|
| Torch body for CT torches | 1 | Torch body ABIPLAS® WELD 150CT 20 | | 698.3020 | |
| | | Torch body ABIPLAS® WELD 250CT 20 | | 698.5001 | |
| Torch mount for CT torches | Page 6 | CAT2-HL (XL) | | 780.2040 | |
| | 2 | Segment holder Plasma CT ECO Line | | 780.0317 | |
| | Page 6 | Flange for CAT2-HL | Plastic | | |
| Cable assemblies ABIPLAS® WELD ECO | 3 | ABIPLAS® WELD ECO cpl., liquid cooled, Connector SBI® | L=1.35 m | 698.3088 | |
| | | ABIPLAS® WELD ECO cpl., liquid cooled, Connector SBI® | L=6.00 m | 698.3019 | |
| | | ABIPLAS® WELD ECO cpl., liquid cooled, Connector EWM® | L=4.00 m | 698.3098 | |
| | | ABIPLAS® WELD ECO cpl., liquid cooled, Connector Castolin® | L=4.00 m | 698.3101 | |
| Cold wire feeding set | 4 | Cold wire feeding set for ABIPLAS® WELD 150 CT20 | | 698.3100 | |
| | | Cold wire feeding set for ABIPLAS® WELD 250 CT20 | | 698.5041 | |
| Cold wire feeding Component parts | 4.1 | Wire feeding tip | Ø 0.6 mm | 967.0335 | |
| | | Wire feeding tip | Ø 0.8/0.9 mm | 967.0329 | |
| | | Wire feeding tip | Ø 1.0 mm | 967.0330 | |
| | | Wire feeding tip | Ø 1.2 mm | 967.0331 | |
| | | Wire feeding tip | Ø 1.6 mm | 967.0332 | |
| | 4.2 | Cold wire feeding | | 698.3086 | |
| | 4.3 | Guiding wire feeding hose for ABIPLAS® WELD 150 CT20 | L=67 mm | 156.0282 | |
| | | Guiding wire feeding hose for ABIPLAS® WELD 250 CT20 | L=92 mm | 156.0291 | |
| | 4.4 | Guide tube | | 698.3084 | |
| | 4.5 | Set screw | | 009.0266 | |
| | 4.6 | Retaining nipple | | 131.0001 | |
| | 4.7 | Cap nut | | 963.0016 | |
| | 4.8 | Holder cpl. (only for ABIPLAS® WELD 250 CT20) | | 698.5040 | |
| | Wear parts ABIPLAS® WELD 150 CT | 5.1 | Torch cap standard | Ø 1.6 mm | 698.2033 |
| | | | Torch cap standard | Ø 2.4 mm | 698.2030 |
| | | Torch cap standard | Ø 3.2 mm | 698.2012 | |
| | | Torch cap long, L=75 mm | Ø 3.2 mm | 698.2043 | |
| | | Torch cap long, L=100 mm | Ø 3.2 mm | 698.2046 | |
| 5.2 | | Tungsten electrode standard (Cathode), L=57 mm | Ø 1.6 mm | 698.0065 | |
| | | Tungsten electrode standard (Cathode), L=57 mm | Ø 2.4 mm | 698.0066 | |
| | | Tungsten electrode standard (Cathode), L=57 mm | Ø 3.2 mm | 698.0067 | |
| | | Tungsten electrode long (Cathode), L=67 mm | Ø 2.4 mm | 698.2061 | |
| 5.3 | | Centering ceramic | Ø 3.2 mm | 698.2035 | |
| | | Centering ceramic | Ø 1.6 mm | 698.2032 | |
| | | Centering ceramic | Ø 2.4 mm | 698.2020 | |
| 5.4 | | Insulation ring | Ø 3.2 mm | 699.0041 | |
| 5.5 | | Plasma nozzle | Ø 1.2 mm | 698.2036 | |
| | | Plasma nozzle | Ø 1.4 mm | 698.2037 | |
| | | Plasma nozzle | Ø 1.6 mm | 698.2038 | |
| | | Plasma nozzle | Ø 1.8 mm | 698.2014 | |
| | | Plasma nozzle | Ø 2.0 mm | 698.2015 | |
| | | Plasma nozzle | Ø 2.3 mm | 698.2017 | |
| | | Plasma nozzle | Ø 2.6 mm | 689.2018 | |
| 5.6 | | Plasma nozzle long | Ø 3.0 mm | 698.2057 | |
| | | Plasma nozzle long | Ø 1.6 mm | 698.2058 | |
| | | Plasma nozzle long | Ø 2.0 mm | 689.2059 | |
| 5.7 | | Gas diffuser | Ø 2.6 mm | 698.2009 | |
| 5.8 | | Shielding gas nozzle | | 699.0071 | |
| 5.9 | | Shielding gas nozzle long | | 698.2060 | |
| 6.1 | | Alignment gauge | | 698.2019 | |
| 6.2 | | Alignment gauge long | | 698.2062 | |

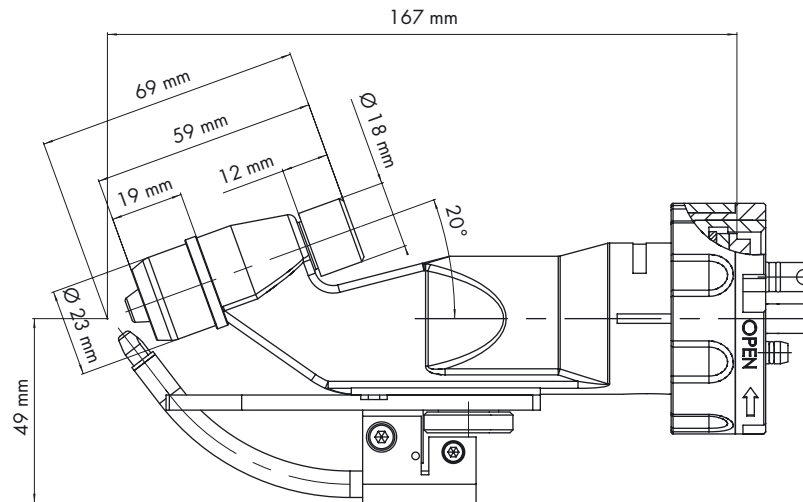
| Component | Pos. | Description | Spec. | Order-No. |
|---|-----------------|--------------------------------------|----------|------------|
| Wear parts ABIPLAS® WELD 250 CT/MT | 7.1 | Torch cap cpl. | Ø 3.2 mm | 698.5053.1 |
| | | Torch cap cpl. | Ø 4.0 mm | 698.5055.1 |
| | | Torch cap cpl. | Ø 4.8 mm | 698.5057.1 |
| | | Torch cap standard | Ø 5.0 mm | 698.5024 |
| | 7.2 | Tungsten electrode (WR 2), L=75mm | Ø 3.2 mm | 698.5047.5 |
| | | Tungsten electrode (WR 2), L=75mm | Ø 4.0 mm | 698.5048.5 |
| | | Tungsten electrode (WR 2), L=75mm | Ø 4.8 mm | 698.5049.5 |
| | | Tungsten electrode (Cathode), L=75mm | Ø 5.0 mm | 698.4076 |
| | 7.3 | 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 |
| | 7.4 | Insulation ring | | 698.5028 |
| | 7.5 | Disposing ring | | 698.5029 |
| | 7.6 | Gas diffuser | | 698.5030 |
| | 7.7 | Plasma nozzle | Ø 3.0 mm | 698.5044 |
| | | Plasma nozzle | Ø 3.5 mm | 698.5033 |
| | | Plasma nozzle | Ø 4.0 mm | 698.5045 |
| | | Plasma nozzle | Ø 4.5 mm | 698.5046 |
| | 7.8 | Fastening nut | | 698.5032 |
| | 7.9 | Shielding gas nozzle | | 698.5031 |
| 8 | Alignment gauge | | 698.5035 | |
| Accessories | w/o fig. | Cable assembly holder | | 191.0039 |
| | | Sharpener for plastic liner | | 191.0064 |
| | | Hose cutter for plastic liner | | 191.0062 |
| | | Spare blade for hose cutter | | 191.0063 |

Dimensional sketch ABIPLAS® WELD 250 MT

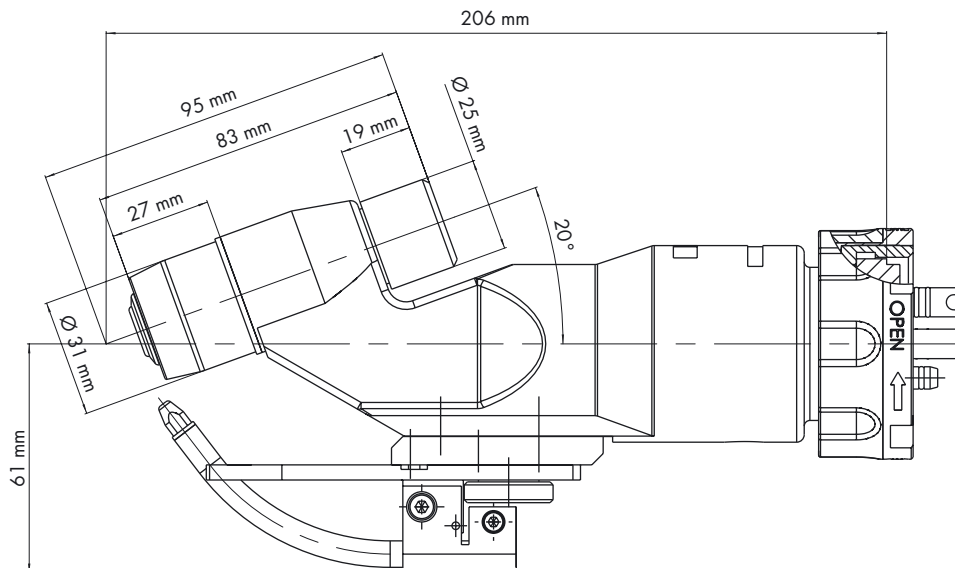


| Component | Pos. | Description | Spec. | Order-No. |
|--|----------|--------------------------------------|---------|-----------|
| Cable assemblies ABIPLAS® WELD MT | w/o fig. | ABIPLAS® WELD 250 MT, Connector SBI® | L=6.0 m | 698.5113 |
| | | ABIPLAS® WELD 250 MT, Connector SBI® | L=1.5 m | 698.5114 |
| Torch mount for MT torches | 9 | Clamp holder | | 963.0007 |
| | Page 6 | CAT2-HL (XL) | | 780.2040 |
| | w/o fig. | Holder CAT2-HL standard | | 780.0323 |
| | Page 6 | Flange for CAT2-HL | Plastic | |
| Wear parts | | see position 7.1 up to 8 | | |

Dimensional sketch ABIPLAS® WELD 150 CT20



Dimensional sketch ABIPLAS® WELD 250 CT20



Order information:

In order to assure an optimal operation, we recommend to order two torch necks per cable assembly for the first order. Downtime due to service works can be reduced to a minimum.

Torch neck geometry should be checked with an alignment gauge before every use.

Necessary information:

- Type of power source
- Cable assembly length

System information:

Robot operation:

In order to assure a smooth operation of the complete system, we recommend the use of an active water cooler. It is very important to use a cooling liquid with a very low electrical conductance value in order to avoid damage at the torch body.

Power sources:

The equipment has successfully been adopted with the following suppliers of power sources so far:

- SBI®
- MIG-O-MAT®
- EWM®
- Castolin®

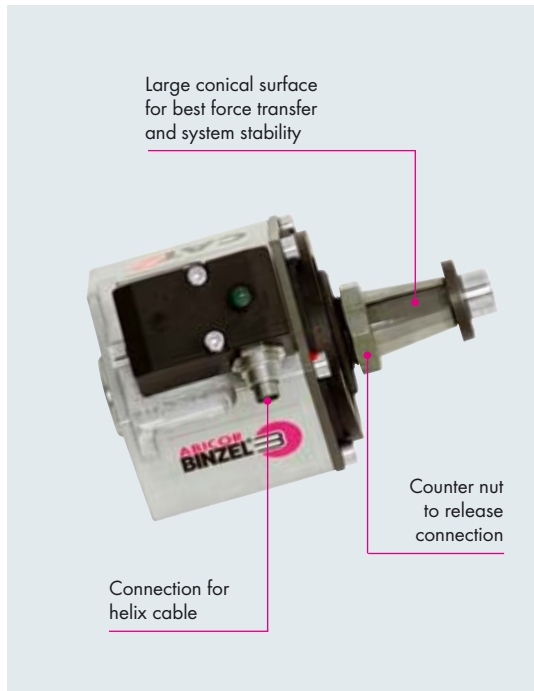
Welding Torch System ABIPLAS® WELD CT/MT

Robot mount CAT2-HL

CAT2-HL is based on the well-proven robot mount CAT2 with improved fixing section for torch mounts. Together with the welding torch system ABIPLAS® WELD CT/MT the robot mount CAT2-HL is used as standard. The mounting arm of the system is equipped with the solid and highly precise conical connection for CAT2-HL.

Features:

- Outer dimensions compatible with CAT2
- Adapter flanges, insulated
- Firm structural construction for best reproducibility
- Easy and fast assembly and disassembly



Robot mount CAT2-HL

| Description | Part-No. |
|--|----------|
| Robot mount CAT2-HL (M) | 780.2042 |
| Robot mount CAT2-HL (L) | 780.2041 |
| Robot mount CAT2-HL (XL) | 780.2040 |
| Helix cable cpl. (Connection CAT2-HL to cable assembly) | 780.0201 |

Adapter flange

(Plastic, insulated)

| Description | Part-No. |
|------------------|------------|
| ISO 9409-1-A31,5 | 780.0632 |
| ISO 9409-1-A40 | 780.0691 |
| ISO 9409-1-A50 | 780.0694.1 |
| ISO 9409-1-A63 | 780.0614 |
| ISO 9409-1-A80 | 780.0607 |
| ISO 9409-1-A100 | 780.0649 |
| ISO 9409-1-A125 | 780.0630 |

Adapter flanges can be delivered for all common welding robots. Please indicate type and model of robot.

TIPS & TRICKS

In combination with the torch system ABIPLAS® WELD CT/MT it is recommended to use torch mount CAT2-HL (XL) with spring tension XL.



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