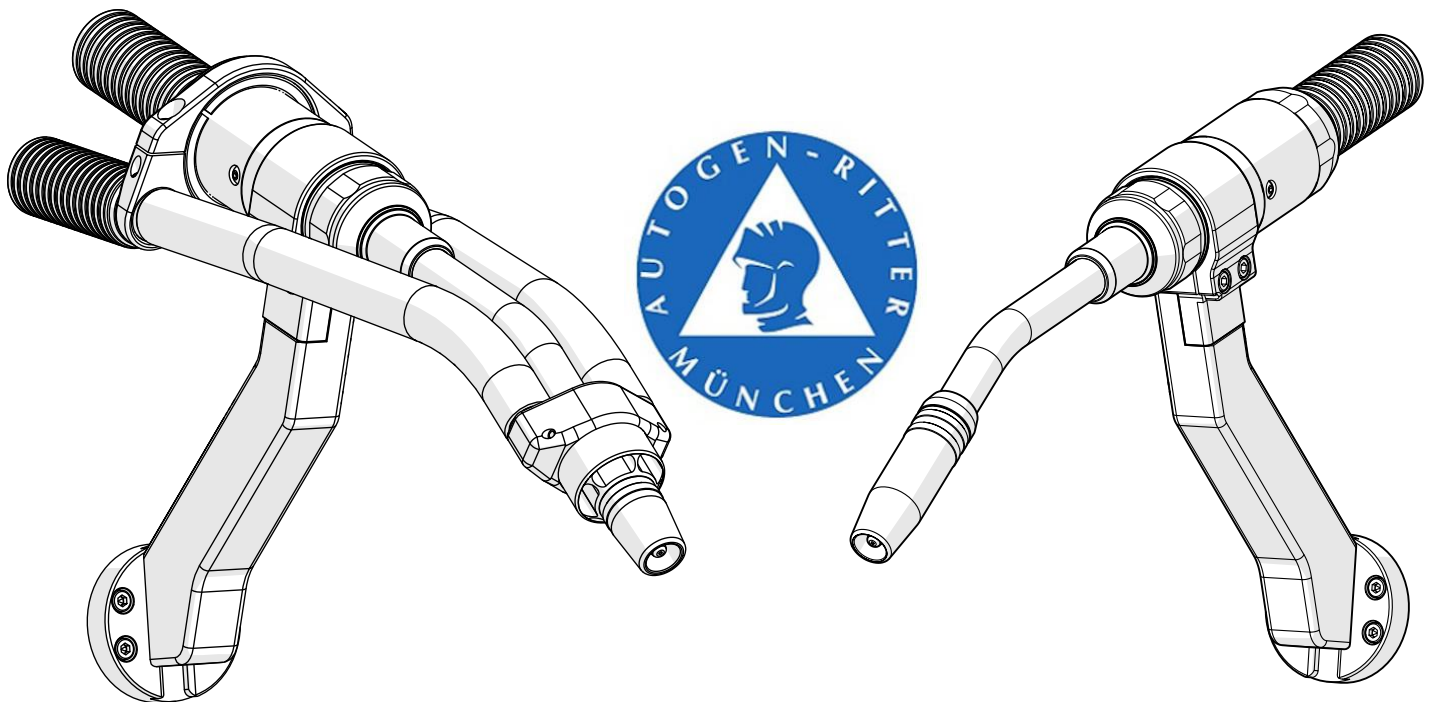




## Robotic-MIG/MAG Welding Torches M-AR

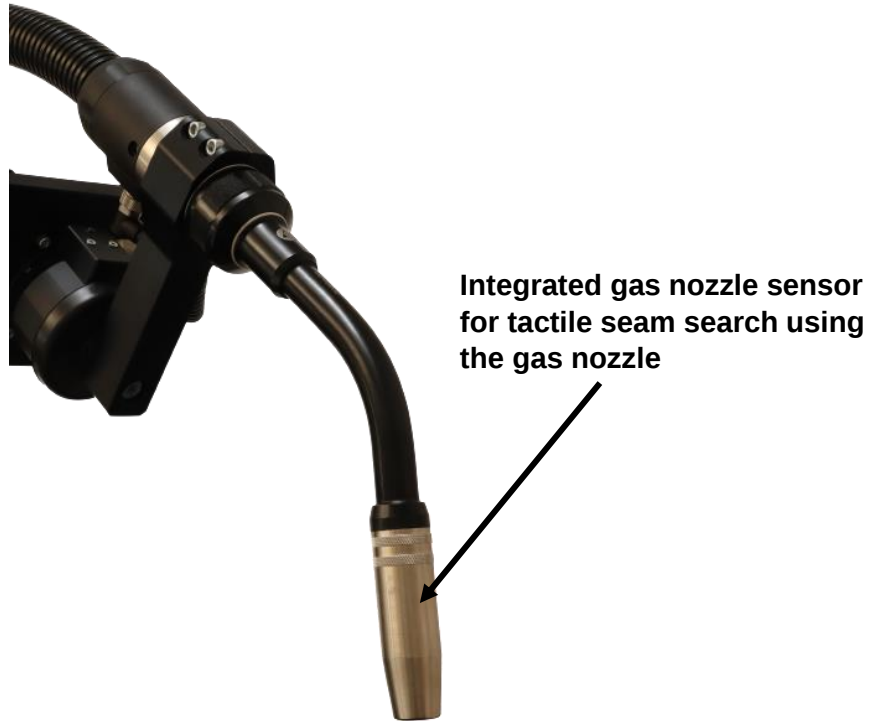




## One System, many opportunities

The new Robotic torch M-AR 5.2W.

Different Addons for multifunctional usability:



AiR WeldGuard®  
fume extraction-kit



Fume extraction-kit for reducing weld fume.

Add-on for push-button



Integrated trigger for free programming use. For example, loosen the break on Cobot-System.

Robot mount (Safety-off  
Mechanism) ARB-2



Integrated adaption for robot mount.



## Contents

### Technical data Robotic torches

|                                             |   |
|---------------------------------------------|---|
| Technical information Robotic torches ..... | 4 |
|---------------------------------------------|---|

### Spare and wear parts Robotic torches

|                              |   |
|------------------------------|---|
| Torch necks M-AR 5.2W .....  | 5 |
| Spare parts M-AR 5.2 W ..... | 6 |

### Holder for Robotic torches

|                                         |   |
|-----------------------------------------|---|
| Torch holders without Robot mount ..... | 7 |
| Torch holders for Robot mount .....     | 7 |

### Order information cable hose package Robotic torches

|                                                           |    |
|-----------------------------------------------------------|----|
| Order information cable hose package cpl. M-AR 5.2W ..... | 8  |
| Torch mount M-AR 5.2W .....                               | 9  |
| Cable hose package M-AR 5.2W .....                        | 10 |

### Order information for flange and robot mount

|                                               |    |
|-----------------------------------------------|----|
| Intermediate flange .....                     | 12 |
| Robot mount (Safty-off Mechanism) ARB-2 ..... | 13 |

### Accessories

|                                                   |    |
|---------------------------------------------------|----|
| Spare part Kit .....                              | 14 |
| Teaching Tip Kit .....                            | 15 |
| Testing gauge .....                               | 15 |
| Wire conduits and liners .....                    | 16 |
| AiR WeldGuard® fume extraction kit .....          | 17 |
| Extraction hoses and extraction accessories ..... | 18 |



## Technical information Robotic torches

### M-AR 5.2W



Technical Data according to EN 60 974-7

Rating: 450 A\*

Duty cycle: 100 %

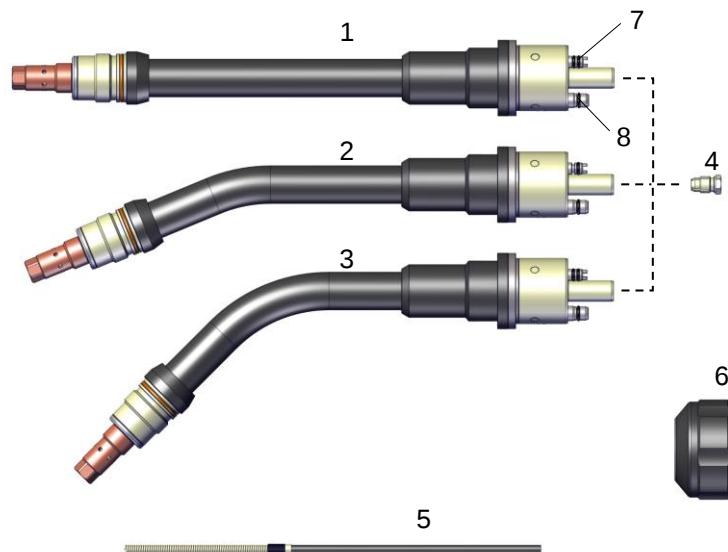
Wire-Ø: 0,8 – 1,6 mm

Torch necks: 0° / 22,5° / 45°

\*For pulse arcs, the rating data are reduced by up to 35%



## Torch necks M-AR 5.2W



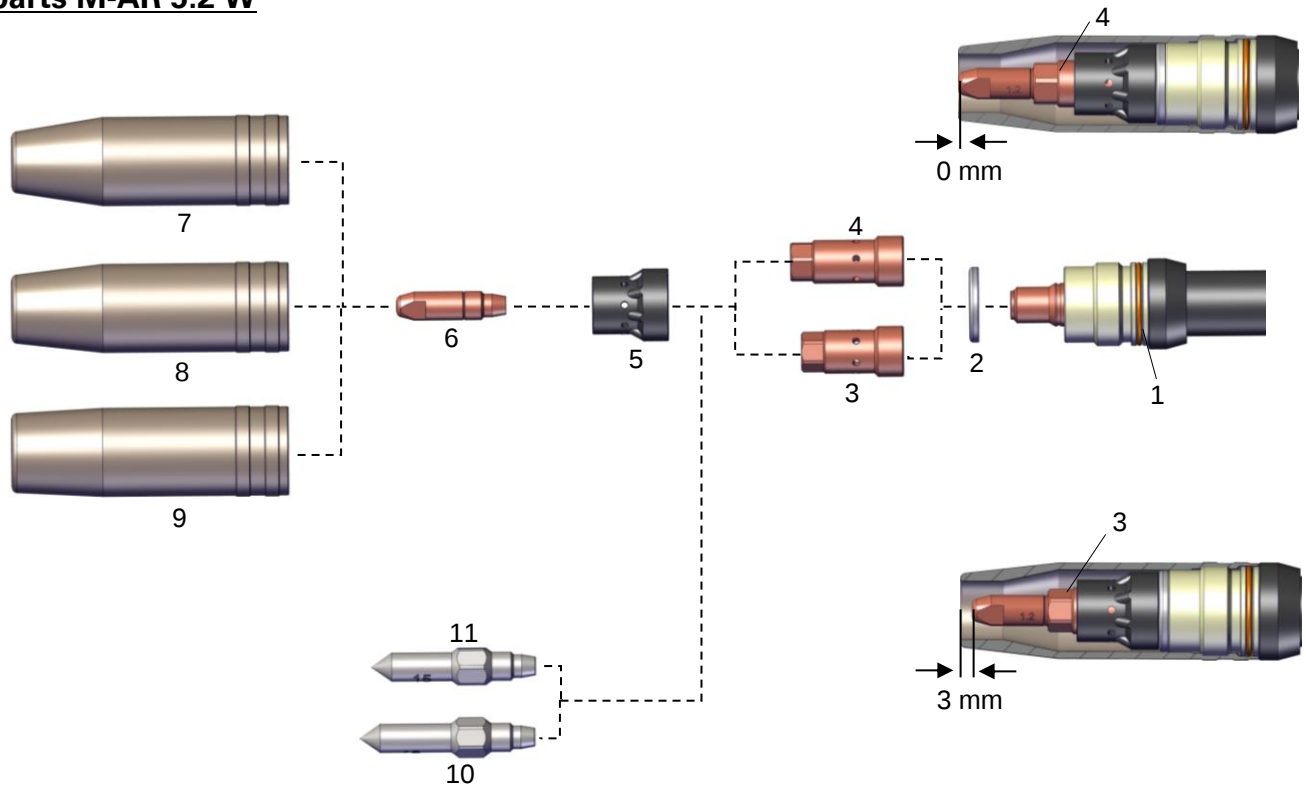
### Spare Part List

| Pos. | Part No.  | Description                        | Pos. | Part No.   | Description                                |
|------|-----------|------------------------------------|------|------------|--------------------------------------------|
| 1    | 2001M6000 | Torch neck M-AR 5.2W, 0°           | 5    | 7050223S   | Neckliner (Ø0,8-1,0) (5) incl. cutting aid |
| 2    | 2001M6225 | Torch neck M-AR 5.2W, 22,5°        |      | 7050224S   | Neckliner (Ø1,2-1,6) (5) incl. cutting aid |
| 3    | 2001M6450 | Torch neck M-AR 5.2W, 45°          | 6    | 2004M00561 | Torch neck nut                             |
| 4    | 7050230   | Collet for neckliner Ø4,0mm (PU=5) | 7    | 0041100    | O-ring 4x1,1mm (PU=20)                     |
|      | 7050231   | Collet for neckliner Ø4,7mm (PU=5) | 8    | 0051200    | O-ring 5x1,2mm (PU=20)                     |

Special torch necks (for example: extended torch necks or different bending) on request.



## Spare parts M-AR 5.2 W

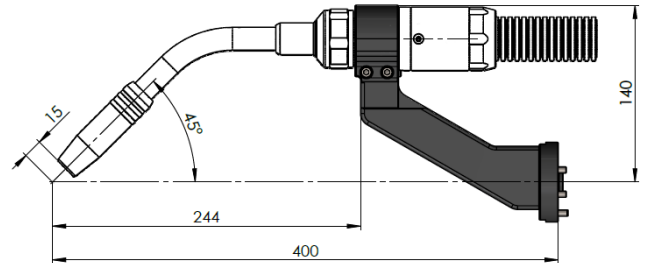
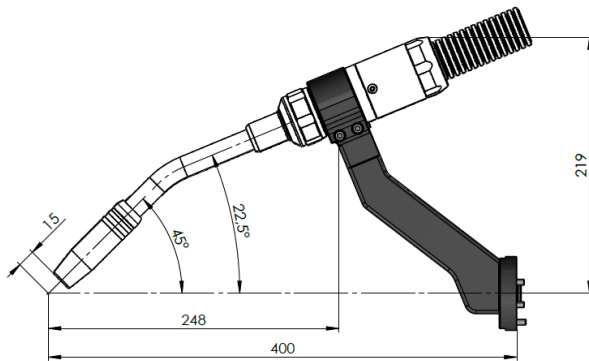


### Spare Part List

| Pos.                                                         | Part No.   | Description                                 | Pos. | Part No.    | Description                                  |
|--------------------------------------------------------------|------------|---------------------------------------------|------|-------------|----------------------------------------------|
| 1                                                            | 20010160   | O-Ring, 20,0x1,6mm, heavy duty (PU=5)       | 7    | 2001600201  | Gas nozzle, screw-on con. NW13 l=76mm (PU=5) |
| 2                                                            | 2410205    | Insulating ring (PU=3)                      | 8    | 20016002    | Gas nozzle, screw-on con. NW15 l=76mm (PU=5) |
| 3                                                            | 1000350010 | Tip adapter M8 Cu short, l=28mm (PU=5)      | 9    | 2001600202  | Gas nozzle, screw-on con. NW18 l=76mm (PU=5) |
| 4                                                            | 1000350011 | Tip adapter M8 Cu long, l=31mm (PU=5)       | 10   | 100033700T1 | Teachtip for stickout l=18mm                 |
| 5                                                            | 20010151   | Gas diffuser (PU=5)                         | 11   | 100033700T2 | Teachtip for stickout l=15mm                 |
| 6                                                            | 100038XX   | Contact Tip M8-8, Ø in mm / E-Cu (PU=10)    | no.  | 75105105    | O-ring lubricant                             |
|                                                              | 100037XX   | Contact Tip M8-8, Ø in mm / CuCrZr, (PU=10) | fig. |             |                                              |
| <i>Tips available in ø 0.8/1.0/1.2/1.4/1.6 mm</i>            |            |                                             |      |             |                                              |
| <i>Please insert wire diameter at <b>XX</b>.</i>             |            |                                             |      |             |                                              |
| <i>Example: ø 1.0 mm is: 10; Part No.: = 100038<b>10</b></i> |            |                                             |      |             |                                              |



## Torch holders without Robot mount



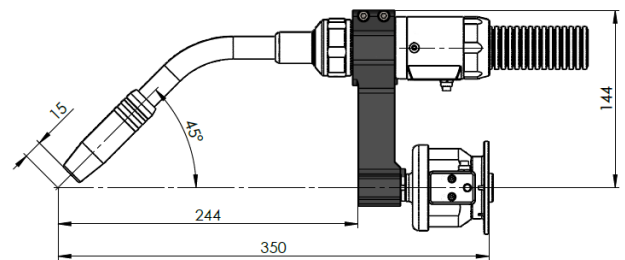
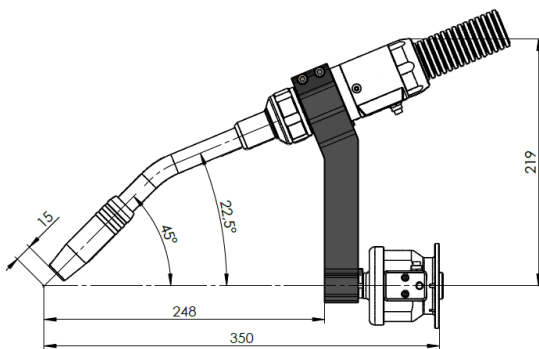
### For torch neck 22,5°

| Part No.   | Description                  |
|------------|------------------------------|
| 2004200524 | Torch holder cpl. M-AR 22,5° |

### For torch neck 45°

| Part No.   | Description                |
|------------|----------------------------|
| 2004200534 | Torch holder cpl. M-AR 45° |

## Torch holders for Robot mount



### For torch neck 22,5°

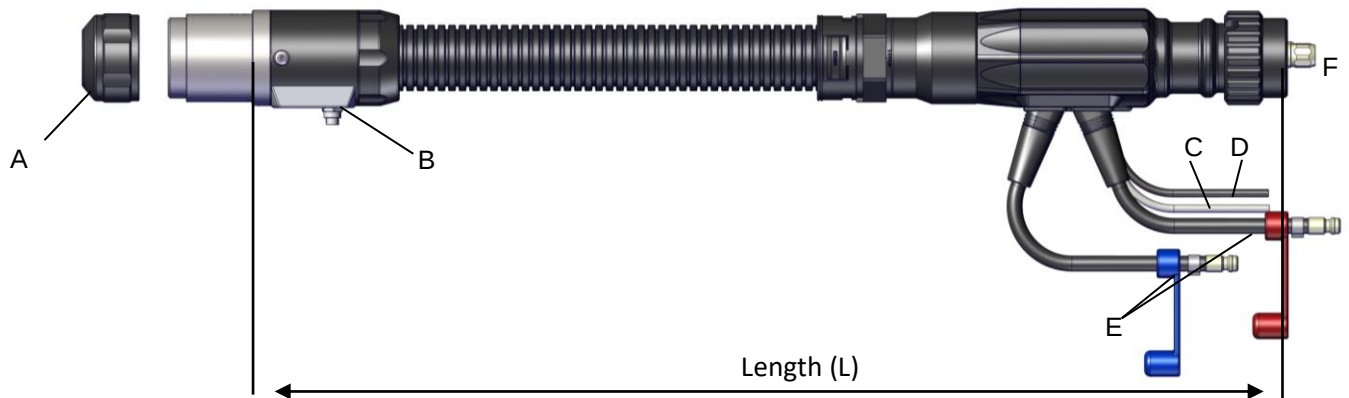
| Part No.   | Description                                   |
|------------|-----------------------------------------------|
| 2004200525 | Torch holder M-AR 22,5° for robot mount ARB-2 |

### For torch neck 45°

| Part No.   | Description                                 |
|------------|---------------------------------------------|
| 2004200535 | Torch holder M-AR 45° for robot mount ARB-2 |



## Order information cable hose package cpl. M-AR 5.2W



A

Torch neck nut

B\*

Trigger or socket for  
robot mount ARB-2

C\*

Control cable for  
trigger or robot mount  
ARB-2

D

Control cable for  
gas nozzle sensor

E

Water in- / return

F

Euro-connector

The torch neck nut (A) is included in the scope of delivery of all cable hose packages.  
\*only available with cable hoses suitable for trigger or robot mount ARB-2

### Technical data:

|          |                         |
|----------|-------------------------|
| Rating:  | 450A at 100% duty cycle |
| Cooling: | Water cooled            |
| Wire-Ø:  | 0,8 – 1,6mm             |

## Order information for cable hose package cpl.

|          |             |      |
|----------|-------------|------|
| Version: | Length (L): | 3,5m |
|----------|-------------|------|

Cable hose package standard M-AR 5.2W cpl.  
with torch mount and euro-connection

2004M8003500

Cable hose package Push-button M-AR 5.2W  
cpl. with torch mount and euro-connection

2004M8013500

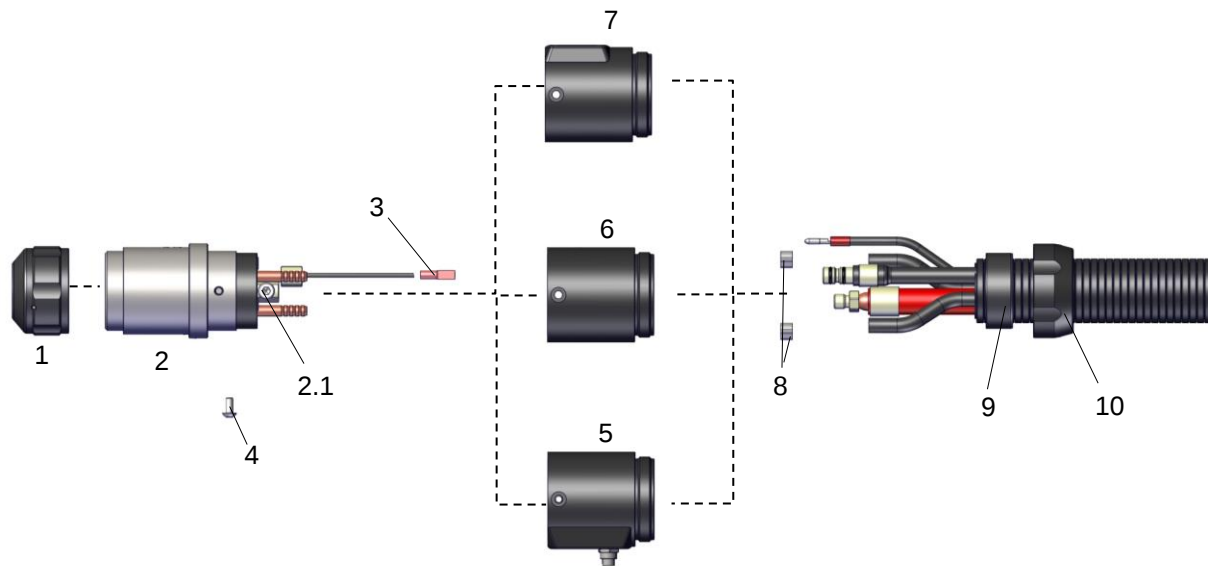
Cable hose package ARB-2 ready M-AR 5.2W  
cpl. with torch mount and euro-connection

2004M8023500

Different lengths and connections on request.



## Torch mount M-AR 5.2W



### Spare Part List

| Pos. | Part No.   | Description                                  | Pos. | Part No.    | Description                                       |
|------|------------|----------------------------------------------|------|-------------|---------------------------------------------------|
| 1    | 2004M00561 | Torch neck nut                               | 5    | 20040054022 | Kink protection for M-AR 5.2W ARB-2 ready         |
| 2    | 2004M00533 | Torch mount M-AR 5.2W                        | 6    | 2004005402  | Kink protection for M-AR 5.2W                     |
| 2.1  | 0050500    | Screw M5x5 (PU=20)                           | 7    | 20040054023 | Kink protection for M-AR 5.2W single button ready |
| 3    | 2155200    | Male electrical connector, insulated (PU=20) | 8    | 03210871    | Single ear clamp D=8,7 (PU=100)                   |
| 4    | 0040401    | Screw M4x4 (PU=20)                           | 9    | 2004005411  | Ring for nut                                      |
|      |            |                                              | 10   | 2004005410  | Nut for kink protection                           |



## Cable hose package M-AR 5.2W

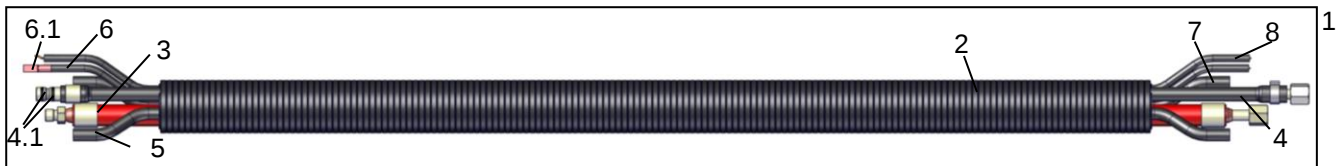
### Standard cable hose package



#### Spare Part List

| Pos. | Part No.   | Description                                | Pos. | Part No. | Description                                    |
|------|------------|--------------------------------------------|------|----------|------------------------------------------------|
| 1    | 2004M83935 | Cable hose package standard M-AR 5.2W 3,5m | 4.1  | 0171200  | O-Ring 17x1,2mm (PU=20)                        |
| 2    | 2004M84735 | Cover hose for 3,5m torch cpl.             | 5    | 0550111  | Gas hose Ø4x1,5mm (PU=100m)                    |
| 3    | 2004M84135 | Power cable 3,5m cpl.                      | 6    | 0500102  | Control cable 1-pol.for Gas nozzle sensor      |
| 4    | 2004M84635 | Outer liner 3,5m cpl.                      | 6.1  | 2155100  | Female electrical connector, insulated (PU=20) |
|      |            |                                            | 7    | 0550104  | Water hose black Ø 5,0x1,5 (PU=100m)           |

### Standard cable hose package for ARB-2 ready / push-button function



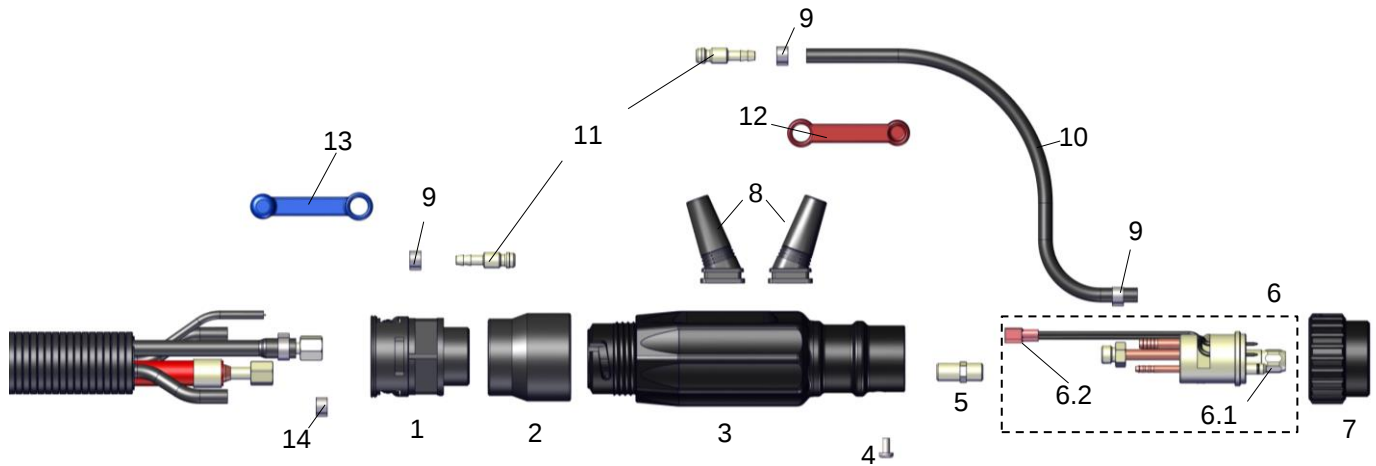
#### Spare Part List

| Pos. | Part No.    | Description                                                 | Pos. | Part No. | Description                                                 |
|------|-------------|-------------------------------------------------------------|------|----------|-------------------------------------------------------------|
| 1    | 2004M839351 | Cable hose package ARB-2 ready / push-button M-AR 5.2W 3,5m | 5    | 0550111  | Gas hose Ø4x1,5mm (PU=100m)                                 |
| 2    | 2004M84735  | Cover hose for 3,5m torch cpl.                              | 6    | 0500102  | Control cable 1-pol.for Gas nozzle sensor                   |
| 3    | 2004M84135  | Power cable 3,5m cpl.                                       | 6.1  | 2155100  | Female electrical connector, insulated (PU=20)              |
| 4    | 2004M84635  | Outer liner 3,5m cpl.                                       | 7    | 0550104  | Water hose black Ø 5,0x1,5 (PU=100m)                        |
| 4.1  | 0171200     | O-Ring 17x1,2mm (PU=20)                                     | 8    | 0510301  | Control cable 3-pol. für Push-button / ARB-2 ready function |



## Torch connections for power source M-AR 5.2W

### Euro-connection with water: plug-in nipple NW5

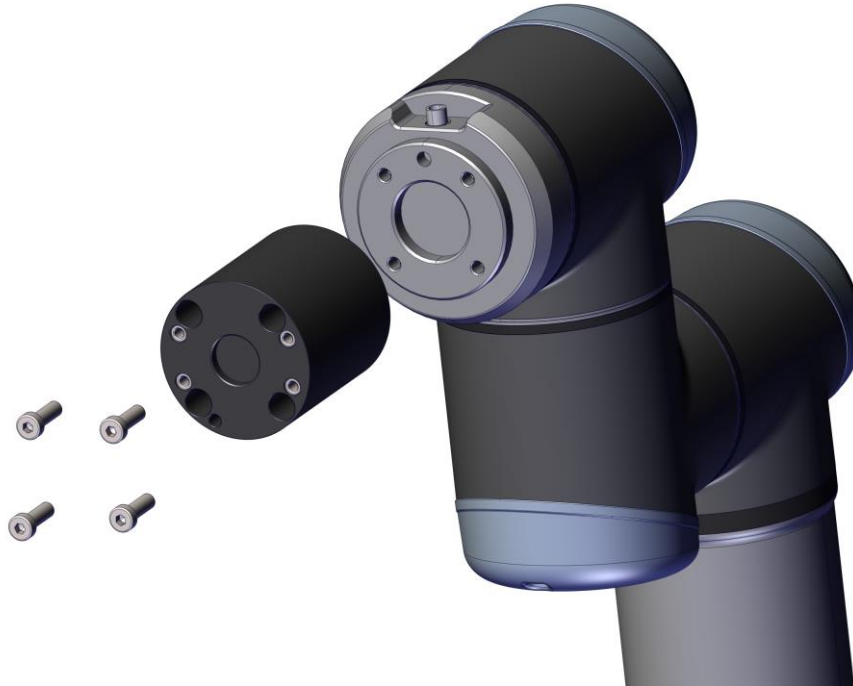


### Spare Part List

| Pos. | Part No.  | Description                                    | Pos. | Part No. | Description                           |
|------|-----------|------------------------------------------------|------|----------|---------------------------------------|
| 1    | 35004999  | Hose adapter                                   | 9    | 03211001 | Single ear clamp D=10,0 (PU=100)      |
| 2    | 2411692   | Adapter for gun plug housing                   | 10   | 0550104  | Water hose black Ø5,0x1,5mm (PU=100m) |
| 3    | 2411600S1 | Gun plug housing                               | 11   | 2990800  | Water plug-in nipple NW5 (PU=10)      |
| 4    | 0040601   | Screw M4x6 (1) (PU=20)                         | 12   | 45050340 | Water stop red (PU=10)                |
| 5    | 2411501   | Threaded Nipple (PU=10)                        | 13   | 45050339 | Water stop blue (PU=10)               |
| 6    | 2411505   | Euro-connector, water-cooled                   | 14   | 03210871 | Single ear clamp D=8,7 (PU=100)       |
| 6.1  | 2151501   | Liner Positioner Nut                           |      |          |                                       |
| 6.2  | 2155100   | Female Electrical Connector, insulated (PU=20) |      |          |                                       |
| 7    | 2151700   | Plug nut                                       |      |          |                                       |
| 8    | 6051610   | Rubber kink protection 3-T (PU=2)              |      |          |                                       |



## Intermediate flange



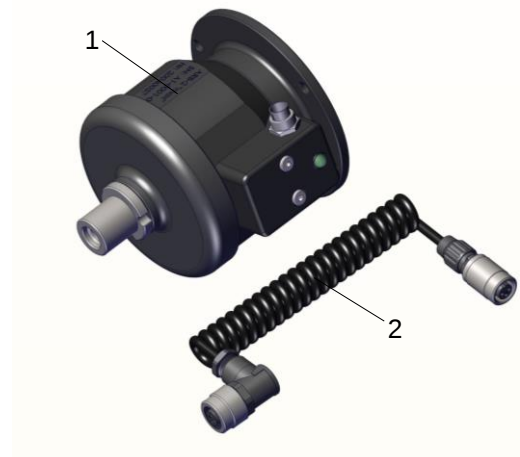
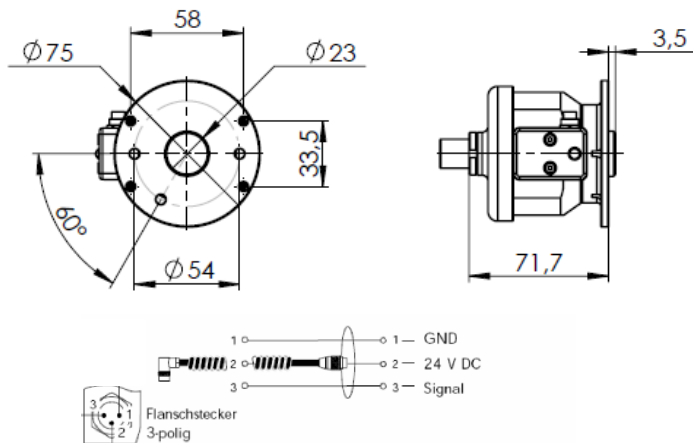
### Oder information

| Suitable for robot   | Part No.  | Description                          | Length [mm] |
|----------------------|-----------|--------------------------------------|-------------|
| Universal Robots: UR | 2004006U1 | Intermediate flange cpl. with screws | 10          |
|                      | 2004006U3 | Intermediate flange cpl. with screws | 70          |

Different intermediate flange on request.



## Robot mount (Saftey-off Mechanism) ARB-2



### Technical data:

|                                |                |                                               |                   |               |
|--------------------------------|----------------|-----------------------------------------------|-------------------|---------------|
| models:                        | ARB-2 soft     | ARB-2 medium                                  | ARB-2 medium-plus | ARB-2 max     |
| Release torque on axis (Mx,My) | approx. 7,5 Nm | approx. 14 Nm                                 | approx. 25 Nm     | approx. 33 Nm |
| Weight:                        |                | approx. 0,56 kg                               |                   |               |
| Repeatability:                 |                | + / - 0,2 mm at 400 mm distance to the flange |                   |               |
| Max. deflection                |                | + / - 14 °                                    |                   |               |

### Order information

| Pos. | Part No. | Description                            | Pos.    | Part No.  | Description                   |
|------|----------|----------------------------------------|---------|-----------|-------------------------------|
| 1    | 20040035 | Robot mount ARB-2, "soft", cpl.        | 2       | 20040027  | Helix cable 3-pol. cpl.       |
|      | 20040034 | Robot mount ARB-2, "medium", cpl.      | no. fig | 200400175 | Mounting kit ARB-box standard |
|      | 20040036 | Robot mount ARB-2, "medium-plus", cpl. |         |           |                               |
|      | 20040037 | Robot mount ARB-2, "max", cpl.         |         |           |                               |



## Spare part Kit

### **Starter-kit for M-AR 5.2W**

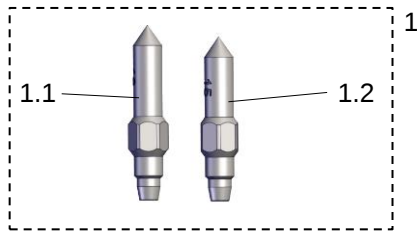


#### **Starter-kit for M-AR 5.2W (99400001649), consists of:**

| Part No.   | Description                                | Part No. | Description                     |
|------------|--------------------------------------------|----------|---------------------------------|
| 10003710   | Contact Tip M8-8, Ø1,0mm / CuCrZr, (10)    | 0041100  | O-ring 4x1,1mm (20)             |
| 10003712   | Contact Tip M8-8, Ø1,2 mm / CuCrZr, (10)   | 0051200  | O-ring 5x1,2mm (20)             |
| 20010160   | O-Ring 20,0x1,6mm, heavy duty (3)          | 7050223  | Neckliner (Ø0,8-1,0) (2)        |
| 20016002   | Gas nozzle, screws-on con. NW15 l=76mm (2) | 7050224  | Neck liner (Ø1,2-1,6) (2)       |
| 20010151   | Gas diffuser (3)                           | 7050230  | Collet for neckliner Ø4,0mm (1) |
| 1000350010 | Tip adapter M8 Cu short, l=28mm (2)        | 7050231  | Collet for neckliner Ø4,7mm (1) |
| 1000350011 | Tip adapter M8 Cu long, l=31mm (2)         | 75105105 | O-ring lubricant (1)            |
| 2410205    | Insulating ring (3)                        |          |                                 |



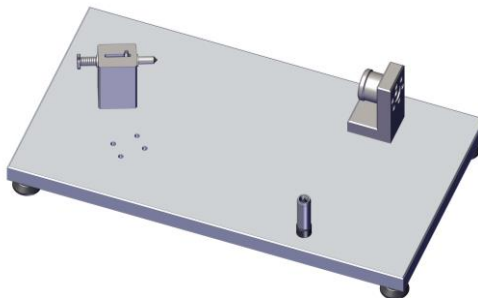
## Teaching Tip Kit



### Spare Part List

| Pos. | Part No.    | Description                  | Pos. | Part No.    | Description                  |
|------|-------------|------------------------------|------|-------------|------------------------------|
| 1    | 100033700T0 | Teachtip-kit                 | 1.2  | 100033700T2 | Teachtip for stickout l=15mm |
| 1.1  | 100033700T1 | Teachtip for stickout l=18mm |      |             |                              |

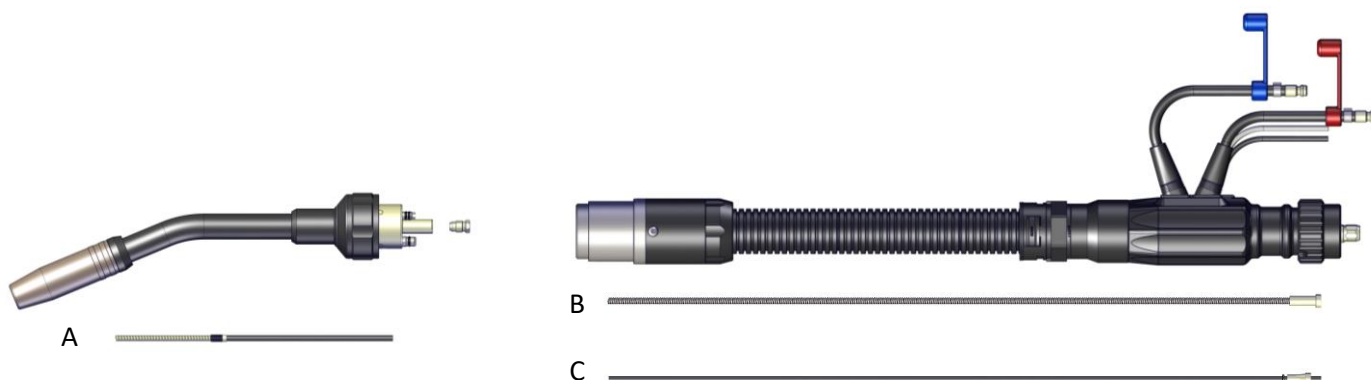
## Testing gauge



### Order information

| Suitable for torch neck | Part No.    | Description                           |
|-------------------------|-------------|---------------------------------------|
| M-AR 5.2W 22,5° / 45°   | 2001M001P01 | Testing gauge M-AR 5.2W (22,5° / 45°) |

## Wire conduits and liners



### Neckliner – suitable torch necks M-AR 5.2W

(Aluminum (AlMg, AlSi etc.), Stainless steel (chrome-nickel, VA, V2A etc.), Special alloys (CuSi etc.), Carbon steel (G3Si1, SG2 etc.))

| A | Wire-Ø<br>[mm] | Part No. | Color      | Collet<br>(PU=5) | Fig.                                                                                 |
|---|----------------|----------|------------|------------------|--------------------------------------------------------------------------------------|
|   | 0,8 – 1,0      | 7050223  | anthracite | 7050230          |   |
|   | 1,2 – 1,6      | 7050224  | anthracite | 7050231          |  |

### Steel liners, not insulated – for Euro connection

(Carbon steel, G3Si1, G4Si1, SG2, SG1 etc.)

| B | Wire-Ø<br>[mm] | Dimension<br>[mm] | Color      | Collet<br>(PU = 10) | Fig.                                                                                 | Liner cpl. | bundles<br>(50 m) |
|---|----------------|-------------------|------------|---------------------|--------------------------------------------------------------------------------------|------------|-------------------|
|   | 0,8 – 1,0      | 1,5 x 4,0         | not insul. | 2155740             |  | 34015X1S*  | 3401500           |
|   | 1,0 – 1,2      | 2,0 x 4,5         | not insul. | 2415747             |  | 34520X1S*  | 3452000           |
|   | 1,2 – 1,6      | 2,5 x 4,5         | not insul. | 2415747             |  | 34525X1S*  | 3452500           |

### PTFE liners – for Euro connection

(Aluminum (AlMg, AlSi etc.), Stainless steel (chrome-nickel, VA, V2A etc.), Special alloys (CuSi etc.), Carbon steel (G3Si1, SG2 etc.))

| C | Wire-Ø<br>[mm] | Dimension<br>[mm] | Color  | Collet<br>(PU = 10) | O-Ring<br>(PU = 10) | Fig.                                                                                 | Liner cpl. | bundles<br>(100 m) |
|---|----------------|-------------------|--------|---------------------|---------------------|--------------------------------------------------------------------------------------|------------|--------------------|
|   | 0,8 – 1,0      | 1,5 x 4,0         | blue   | 2155740             | 0031500             |  | 34115X0*   | 3411500            |
|   | 1,0 – 1,2      | 2,0 x 4,0         | red    | 2155740             | 0031500             |  | 34120X0*   | 3412000            |
|   | 1,2 – 1,6      | 2,7 x 4,7         | yellow | 2415747             | 0031500             |  | 34727X0*   | 3472700            |

### PA liners – for Euro connection

(Aluminum (AlMg, AlSi etc.), Stainless steel (chrome-nickel, VA, V2A etc.), Special alloys (CuSi etc.), Carbon steel (G3Si1, SG2 etc.))

| C | Wire-Ø<br>[mm] | Dimension<br>[mm] | Color      | Collet<br>(PU = 10) | O-Ring<br>(PU = 10) | Fig.                                                                                 | Liner cpl. | bundles<br>(200 m) |
|---|----------------|-------------------|------------|---------------------|---------------------|--------------------------------------------------------------------------------------|------------|--------------------|
|   | 0,6 – 0,9      | 1,4 x 4,0         | anthracite | 2155740             | 0031500             |  | 35314X0*   | 3531400            |
|   | 0,9 – 1,2      | 2,0 x 4,0         | anthracite | 2155740             | 0031500             |  | 35220X0*   | 3522000-200        |
|   | 1,2 – 1,6      | 2,3 x 4,7         | anthracite | 2415747             | 0031500             |  | 35323X0*   | 3532300-200        |

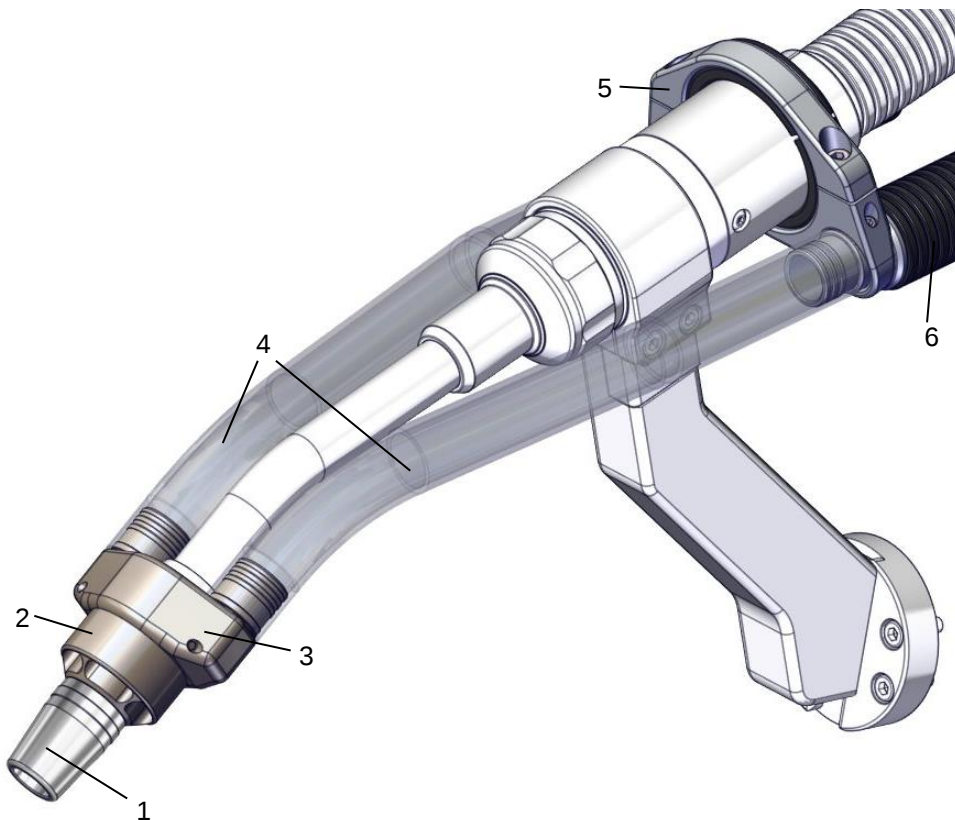
\* Wire conduits and liners available in standard length in 3,5m. Please insert the length at X.

Example: 3,5m is: 4; Art.-Nr.: = 3452041S

Contact us for different length.



## **AiR WeldGuard® fume extraction kit**



### **Fume extraction kit**

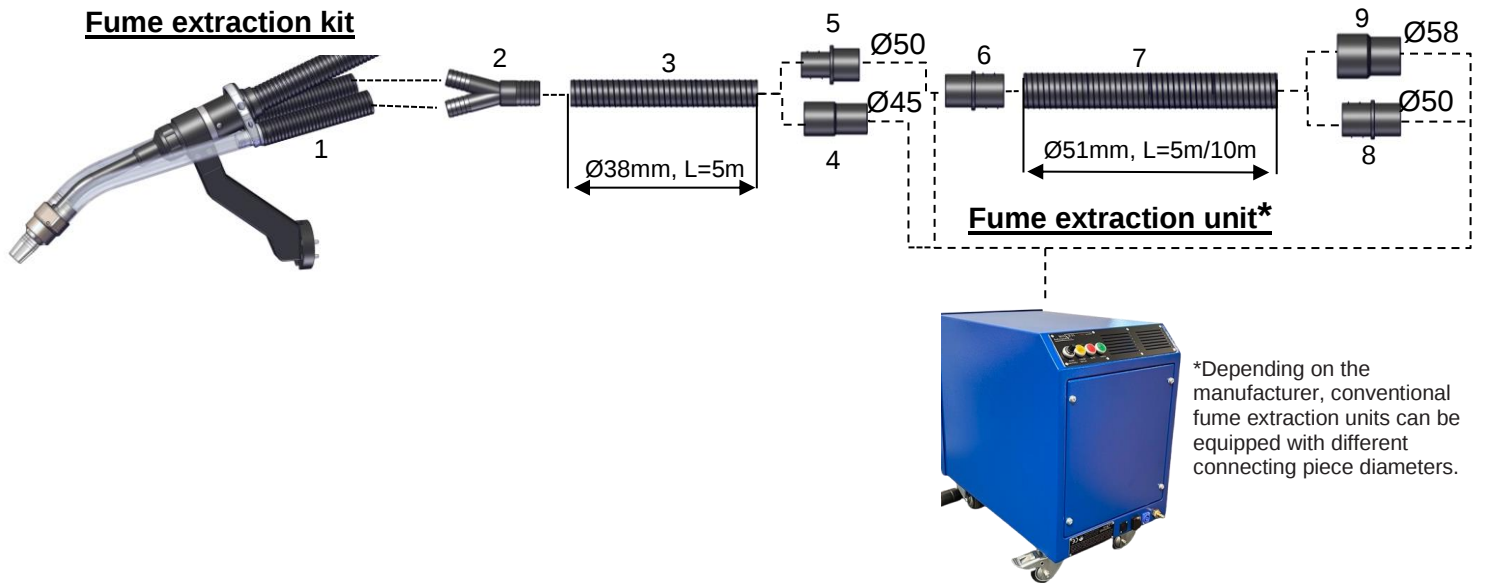
| Description                                                         | Part No.     | Consists of:                                             |                                                                            |
|---------------------------------------------------------------------|--------------|----------------------------------------------------------|----------------------------------------------------------------------------|
| AiR WeldGuard® fume extraction kit<br>suitable torch neck M-AR 5.2W | 1010305SET01 | 1x 10103050<br>1x 10103051<br>1x 10103052<br>5x 20016004 | 2x 101030550<br>2x 101030551<br>1x 10103053<br>1x 10103054<br>1x 0550501-5 |

### **Spare Part List**

| Pos. | Part No.  | Description                                         | Pos.    | Part No.  | Description                         |
|------|-----------|-----------------------------------------------------|---------|-----------|-------------------------------------|
| 1    | 20016004  | Gas nozzle AiR WeldGuard® (PU=5)                    | 6       | 101030550 | Extraction hose l=0,3m, LW25 (PU=2) |
| 2    | 10103050  | Fume extraction nozzle 45° AiR WeldGuard® M-AR 5.2W | no fig. | 10103053  | Y-Connector AiR WeldGuard®          |
| 3    | 10103051  | Connection plate 180° AiR WeldGuard® M-AR 5.2W      | no fig. | 0550501-5 | Extraction hose l=5m, LW38mm        |
| 4    | 101030551 | Extraction hose LW19 (PU=2)                         | no fig. | 10103054  | Suction adapter Ø45 for Ø38mm hose  |
| 5    | 10103052  | Holder for fume extraction AiR WeldGuard M-AR 5.2W  |         |           |                                     |



## Extraction hoses and extraction accessories



### Spare Part List

| Pos. | Part No.  | Description                             | Pos. | Part No.     | Description                       |
|------|-----------|-----------------------------------------|------|--------------|-----------------------------------|
| 1    | 101030550 | Extraction hose l=0,3m, LW25 (PU=2)     | 6    | 101030582    | Female coupling Ø50 for 51mm hose |
| 2    | 10103053  | Y-Connector AiR WeldGuard® LW25 to LW38 | 7    | 055050151-5  | Extraction hose, LW51, L=5m       |
| 3    | 0550501-5 | Extraction hose l=5m, LW38mm            |      | 055050151-10 | Extraction hose, LW51, L=10m      |
| 4    | 10103054  | Suction adapter Ø45 for Ø38mm hose      | 8    | 101030581    | Male coupling Ø50 for 51mm hose   |
| 5    | 101030580 | Male coupling Ø50 for 38mm hose         | 9    | 101030540    | Suction adapter Ø58 for 51mm hose |