

TIG 101 | 201 | 221 | 301 | 321 | 401 | 451



MICATRONIC

Migatronic TIG ERGO

- new ergonomically designed welding hoses



Continuous control of the welding current with one finger on the control knob allows control of critical functions during the welding operation.

Being a total supplier of welding equipment, Migatronic also develops and produces welding hoses. Quality demands increase as welding technology improves the possibility of communication between torch handle and welding machine and as the individual welders increase their expectations for operational comfort, ergonomics and user-friendliness. The latest result of this development is a complete range for TIG welding: the Migatronic TIG ERGO welding hoses.

The new range of TIG welding hoses consists of four families: the aircooled TIG 101, TIG 201 and TIG 301 and the watercooled TIG 301, 401 and 451. From the small, lightweight TIG 101 to the TIG 451 which is designed for high performance TIG welding with high duty cycle and up to 400A DC welding current.

The 50 variants differ in current intensity, flexible torch body, length of cable (4 or 8 m). 6 or 7 pole plug and choice of built-in control unit in the torch handle.

Handle with softgrip

In the new design, ergonomics, flexibility and reliability have been brought into focus.

The torch handle is available in two sizes, both of which have ball and socket joint relief and softgrip on the sides of the handle for safe, pleasant grip.

The first 80 cm of the cable from the handle has a leather cover which, combined with the ball and socket joint relief, gives op-

imum flexibility, even in difficult to access places. At the same time the leather cover increases the wearability of the welding hose.

The Migatronic TIG ERGO range has been developed for two optional control units: a keypad unit or a unit with both keypad and control knob that allows communication of current control directly from the torch handle to the welding machine. You make the choice upon purchase of the welding hose but the unit is easily replaced later.

MIGATRONIC ABBREVIATIONS

- TIG 201** = Model
- HD** = Heavy duty
- R** = Control for Migatronic TIG machines (Dialog)
- FLEX** = Flexible torch body
- 8 m** = Length
- RH** = Horizontal regulation
- RV** = Vertical regulation



Cable connector for watercooled TIG 321/401/451 welding hose.



cable connector for watercooled TIG 301 welding hose.

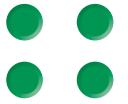


Cable connector for aircooled TIG 101/201 welding hose.



Cable connector for aircooled TIG 221 welding hose.

Configurable control

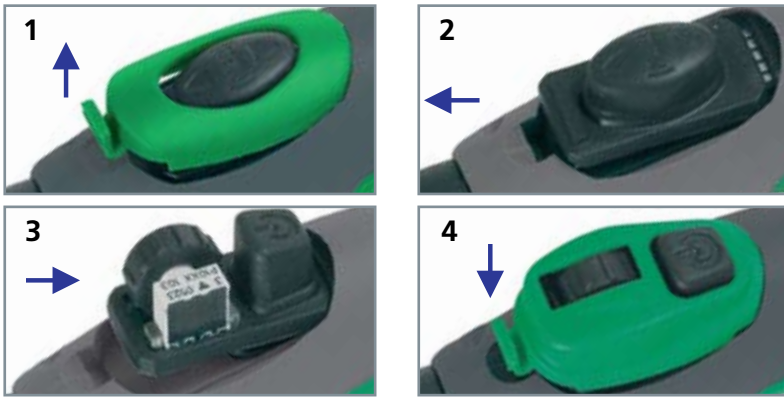


A Migatronic TIG welding hose is equipped with an easily replaceable control unit on the torch handle.

As standard the control unit consists of a keypad unit but for use on Migatronic TIG machines, we recommend a control unit with both keypad unit and control knob.



7/16 pole adaptor, 80300116



6 pole plug	7 pole plug
MTA	Pilot
MDU	Navigator*
MTE	Commander*
TDE	BDH Puls Sync Tripple
LTE	
LDH	
BDH Tripple	

* All Navigator and Commander MK III as of 1996.



80300102
Blank cover.
For use with e.g. foot switch.



80300100
Keypad unit



80300101
Keypad unit with vertical TIG control knob (RV).



80300130
Keypad unit with horizontal TIG control knob (RH).
Applicable for most Migatronic machines

Small aircooled TIG welding hose - ideal for hard-to-reach locations

Model TIG 101/101V Aircooled



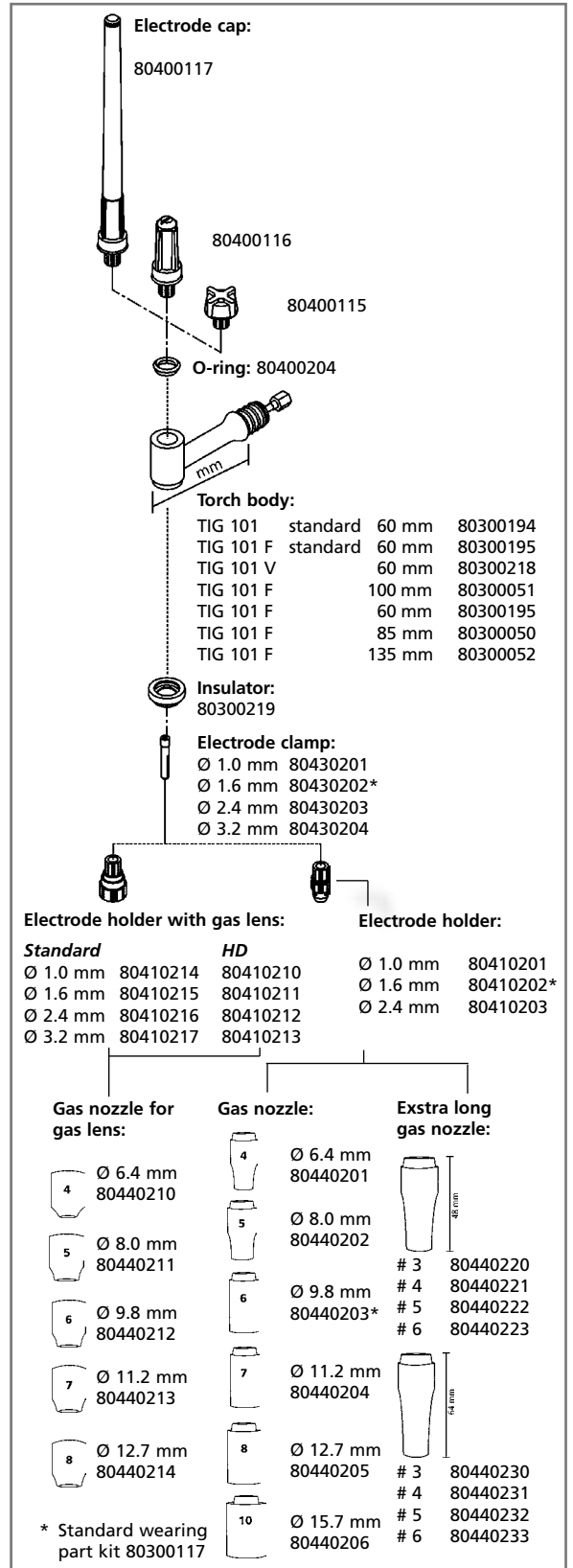
TIG 101	4 m	6 pole	80392601
TIG 101	8 m	6 pole	80392602
TIG 101 Flex	4 m	6 pole	80392604
TIG 101 Flex	8 m	6 pole	80392603
TIG 101RH	4 m	6 pole	80392610
TIG 101RH	8 m	6 pole	80392609
TIG 101RH Flex	4 m	6 pole	80392612
TIG 101RH Flex	8 m	6 pole	80392611

TIG 101	4 m	7 pole	80392655
TIG 101	8 m	7 pole	80392656
TIG 101 Flex	4 m	7 pole	80392658
TIG 101 Flex	8 m	7 pole	80392657
TIG 101RH	4 m	7 pole	80392650
TIG 101RH	8 m	7 pole	80392651
TIG 101RH Flex	4 m	7 pole	80392653
TIG 101RH Flex	8 m	7 pole	80392652
TIG101RV	4 m	7 pole	80392659
TIG101RV	8 m	7 pole	80392660
TIG101V	4 m	7 pole	80392615

TIG 101 is a small, lightweight aircooled TIG welding hose for use in hard-to-reach locations and where welding current does not exceed approx. 100 A DC.

TIG 101 is typically used for production and on-site repairs in stainless materials.

TIG 101 can be equipped with all wearing parts displayed to the right, and the control unit is easily replaced.



Robust and flexible welding hose - easy to operate

Model TIG 201 aircooled



Electrode cap:
80300201

O-ring:
80300223

Torch body:
TIG 201 std. 70 mm 80300196
TIG 201 F std. 70 mm 80300197
TIG 201 F 90 mm 80300198

Insulator:
80300189
80300220 for gas lens

Electrode clamp:
Ø 1.0 mm 80330100
Ø 1.6 mm 80330101
Ø 2.4 mm 80330102*
Ø 3.2 mm 80330103
Ø 4.0 mm 80330104

Electrode holder with gas lens:		Electrode holder:	
Ø 1.0 mm	80310411	Ø 1.6 mm	80310000
Ø 1.6 mm	80310412	Ø 2.4 mm	80310001*
Ø 2.4 mm	80310413	Ø 3.2 mm	80310002
Ø 3.2 mm	80310414	Ø 4.0 mm	80310003

Gas nozzle for gas lens:		Gas nozzle:	
4	Ø 6.4 mm 80340400	4	Ø 6.4 mm 80340001
5	Ø 8.0 mm 80340401	5	Ø 8.0 mm 80340002
6	Ø 9.8 mm 80340402	6	Ø 9.8 mm 80340003*
7	Ø 11.2 mm 80340403	7	Ø 11.2 mm 80340004
8	Ø 12.7 mm 80340404	8	Ø 12.7 mm 80340005
10	Ø 15.7 mm 80340406	10	Ø 15.7 mm 80340006
		12	Ø 19.0 mm 80340007

* Standard wearing part kit 80300118

TIG 201	4 m	6 pole	80392780
TIG 201	8 m	6 pole	80392781
TIG 201 Flex	4 m	6 pole	80392783
TIG 201 Flex	8 m	6 pole	80392782
TIG 201RH	4 m	6 pole	80392785
TIG 201RH	8 m	6 pole	80392786
TIG 201RH Flex	4 m	6 pole	80392788
TIG 201RH Flex	8 m	6 pole	80392787
TIG 201	4 m	7 pole	80392795
TIG 201	8 m	7 pole	80392796
TIG 201 Flex	4 m	7 pole	80392801
TIG 201 Flex	8 m	7 pole	80392794
TIG 201RH	4 m	7 pole	80392797
TIG 201RH	8 m	7 pole	80392798
TIG 201RH Flex	4 m	7 pole	80392802
TIG 201RH Flex	8 m	7 pole	80392799

TIG 201 is supplied with a small handle and a very flexible cable.

TIG 201 is typically used for production and on-site repairs in stainless materials and aluminium.

TIG 201 can be equipped with all wearing parts displayed to the left, and the control unit is easily replaced.

Robust aircooled TIG welding hose

Model TIG 221 Aircooled



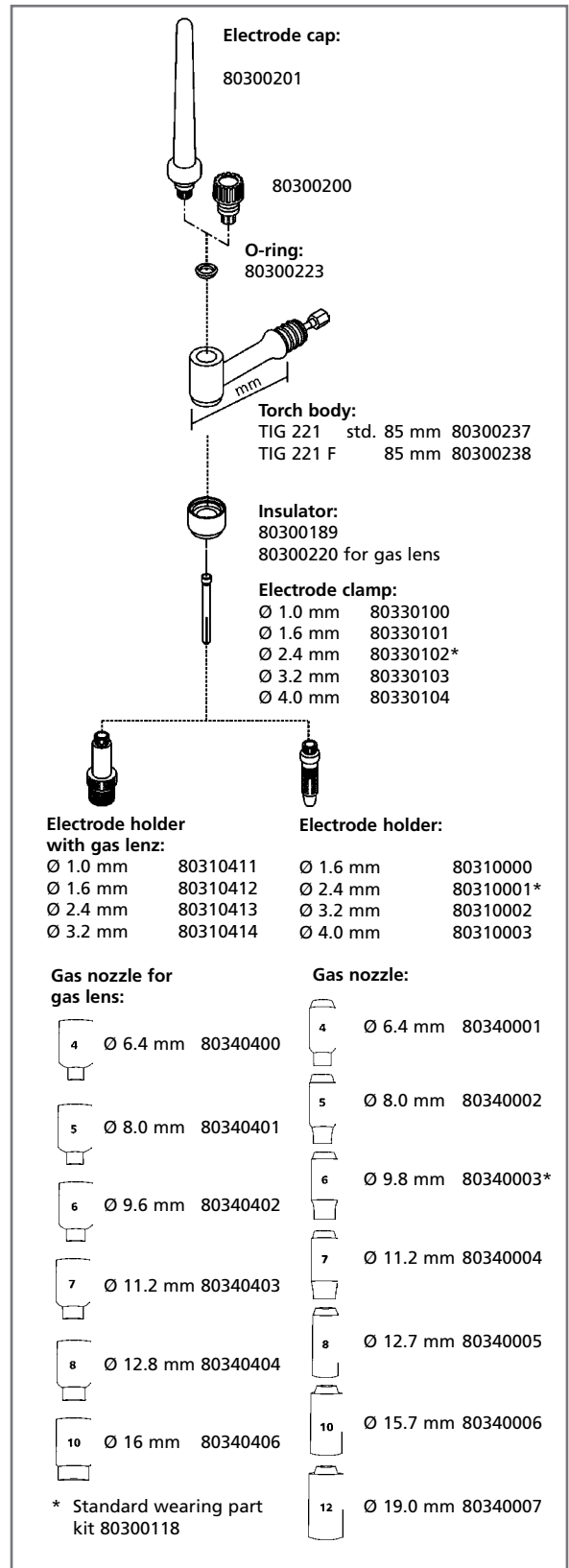
TIG 221	4 m	6 pole	80392860
TIG 221	8 m	6 pole	80392861
TIG 221RH	4 m	6 pole	80392865
TIG 221RH	8 m	6 pole	80392866
TIG 221	15 m	6 pole	80392885
TIG 221RH	15 m	6 pole	80392886
TIG 221	4 m	7 pole	80392875
TIG 221	8 m	7 pole	80392876
TIG 221RH	4 m	7 pole	80392877
TIG 221RH	8 m	7 pole	80392878
TIG 221	15 m	7 pole	80392887
TIG 221RH	15 m	7 pole	80392888
TIG221RV	4 m	7 pole	80392879
TIG221RV	8 m	7 pole	80392880

TIG 221 is an extra robust aircooled TIG welding hose.

TIG 221 is equipped with a large handle and a very flexible cable. For higher performance, use the gas for cooling of the cable.

TIG 221 is typically used for production and heavy duty welding in aluminium and stainless steel.

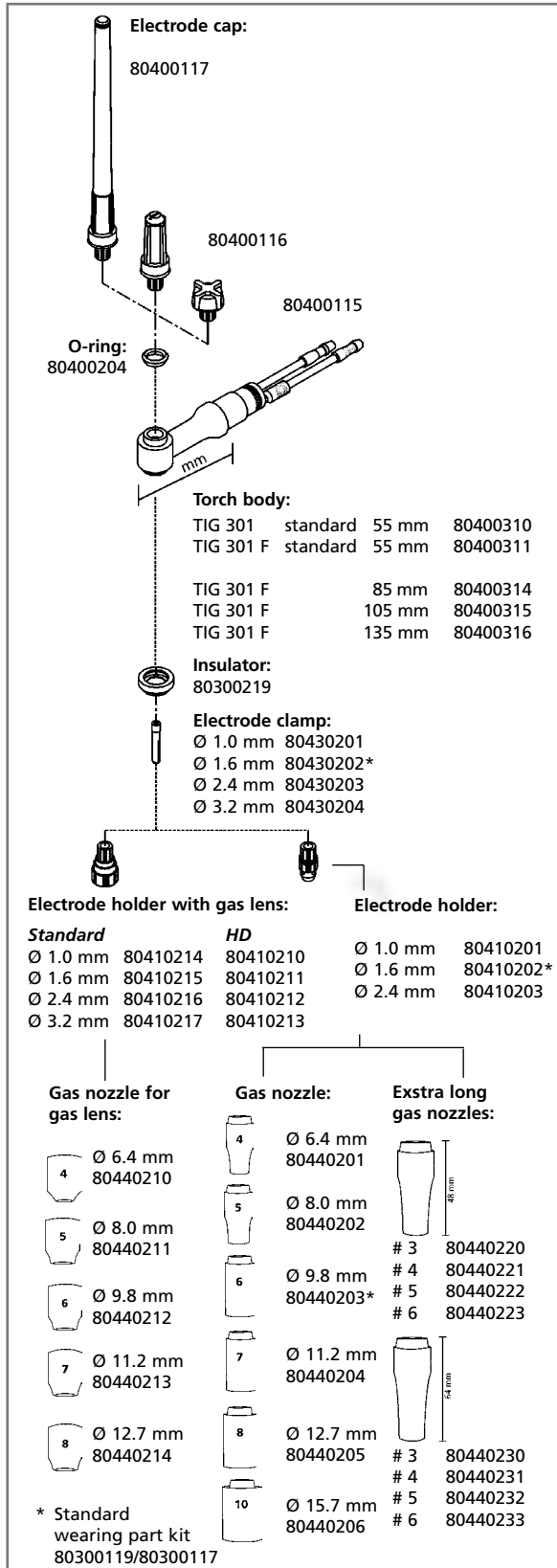
TIG 221 can be equipped with all wearing parts displayed to the right, and the control unit is easily replaced.



Small watercooled TIG welding hose - high performance compared to its size



Model TIG 301/ TIG 321 watercooled



TIG 301	4 m	6 pole	80492100
TIG 301	8 m	6 pole	80492101
TIG 301 Flex	4 m	6 pole	80492103
TIG 301 Flex	8 m	6 pole	80492102
TIG 301RH	4 m	6 pole	80492119
TIG 301RH	8 m	6 pole	80492120
TIG 301RH Flex	4 m	6 pole	80492122
TIG 301RH Flex	8 m	6 pole	80492121

TIG 301	4 m	7 pole	80492140
TIG 301	8 m	7 pole	80492141
TIG 301 Flex	4 m	7 pole	80492143
TIG 301 Flex	8 m	7 pole	80492142
TIG 301RH	4 m	7 pole	80492135
TIG 301RH	8 m	7 pole	80492136
TIG 301RH Flex	4 m	7 pole	80492138
TIG 301RH Flex	8 m	7 pole	80492137
TIG 301RV	4 m	7 pole	80492144
TIG 301RV	8 m	7 pole	80492145

TIG 321	4 m	7 pole	80492150
TIG 321	8 m	7 pole	80492151
TIG 321 RH	4 m	7 pole	80492152
TIG 321 RH	8 m	7 pole	80492153

Watercooling ensures low temperatures in torch and torch handle which also increases welding comfort and durability.

TIG 301 is typically used for industrial production of boilers and tanks in steel, stainless steel and aluminium. TIG 301 can be equipped with all wearing parts displayed to the left, and the control unit is easily replaced.

TIG 321 is an extra robust watercooled TIG welding hose.

TIG 321 is equipped with a small torch body and a large handle. For higher performance, use a strong power cable.

TIG 321 is typically used for welding in steel, stainless steel and aluminium.

TIG 321 can be equipped with all wearing parts displayed to the right, and the control unit is easily replaced.

Strong watercooled TIG welding hose - for heavy-duty welding

Model TIG 401 watercooled



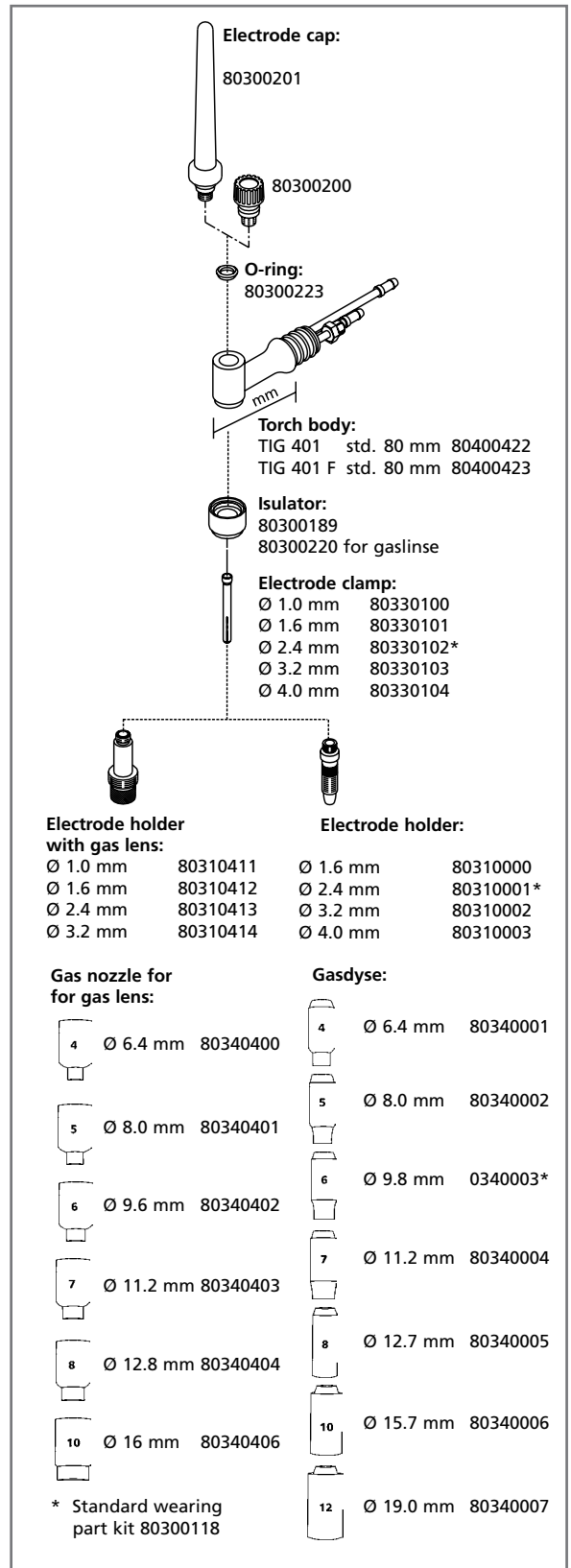
TIG 401	4 m	6 pole	80492110
TIG 401	8 m	6 pole	80492111
TIG 401RH	4 m	6 pole	80492203
TIG 401RH	8 m	6 pole	80492204
TIG 401	4 m	7 pole	80492215
TIG 401	8 m	7 pole	80492216
TIG 401RH	4 m	7 pole	80492235
TIG 401RH	8 m	7 pole	80492236
TIG 401RV	4 m	7 pole	80492237
TIG 401RV	8 m	7 pole	80492238

TIG 401 is one of the strongest model in our range of TIG welding hoses. TIG 401 is watercooled and constructed for heavy-duty welding.

TIG 401 is designed for high performance welding with high duty cycle and up to 400A DC welding current.

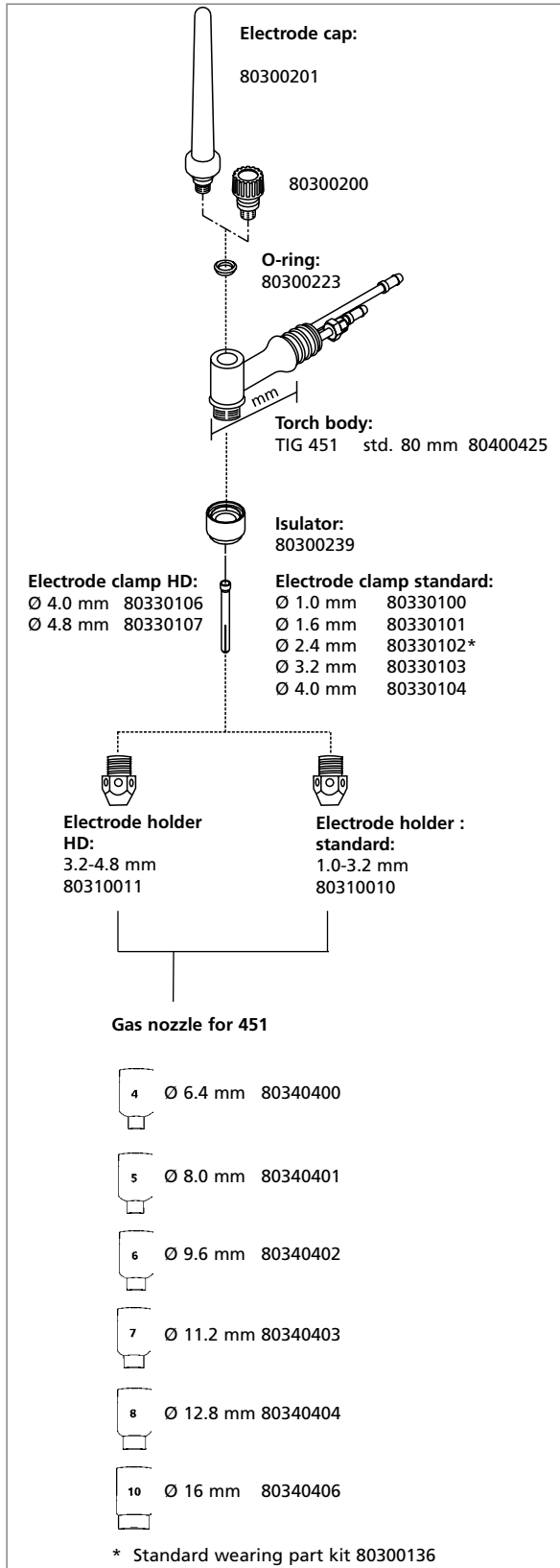
TIG 401 is typically used for production and on-site repairs in stainless steel and aluminium in thick wall-thicknesses.

TIG 401 can be equipped with all wearing parts displayed to the left, and the control unit is easily replaced.



Strong watercooled TIG welding hose - for heavy-duty welding

Model TIG 451 watercooled



TIG 451	4 m	7 pole	80492315
TIG 451	8 m	7 pole	80492316
TIG 451RH	4 m	7 pole	80492335
TIG 451RH	8 m	7 pole	80492336
TIG 451RV	4 m	7 pole	80492337
TIG 451RV	8 m	7 pole	80492338

TIG 451 is the strongest model in our range of TIG welding hoses. TIG 451 is watercooled and constructed for heavy-duty welding.

TIG 451 is designed for high performance welding with high duty cycle and up to 400A DC welding current.

TIG 451 is typically used for production and on-site repairs in stainless steel and aluminium in thick wall-thicknesses.

TIG 451 can be equipped with all wearing parts displayed to the left, and the control unit is easily replaced.

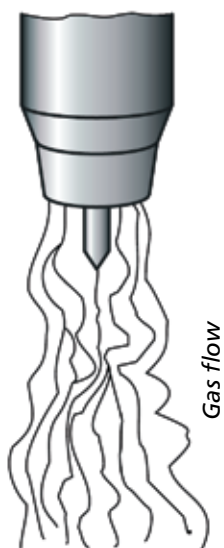
Wearing parts according to individual requirements

As standard, the Migatronic TIG welding hoses are supplied without wearing parts. This allows welders to equip their TIG welding hoses with wearing parts according to individual requirements.

We offer two solutions:

1. Standard

The TIG torch body can be equipped with electrode holder and electrode clamp in dimensions that fit the desired tungsten electrode diameter. In addition, there are various designs of the ceramic gas nozzle for optimization of gas shielding for a given welding operation. The function of the gas nozzle is to guide the shielding gas towards the weld zone and displace atmospheric air. The size of the gas nozzle (inside diameter) is printed on the side, e.g. #4 = $4 \times 1.6 \text{ mm} = 6.4 \text{ mm}$.



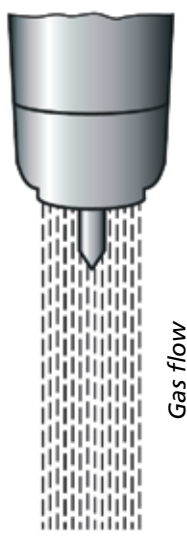
Shielding gas jet

Standard

2. Advanced

The TIG torch body can be equipped with special gas lenses for better control of the shielding gas. Passage through a special wire mesh will keep the gas jet more stable over a longer distance. This allows a longer electrode stickout which gives a better view of the weld pool. Use of gas lens may reduce the gas consumption compared to the gas consumption when standard equipment is used.

For wearing parts for the individual TIG welding hoses, please see previous pages.

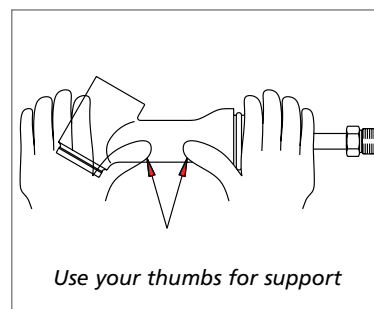


With gas lens

Migatronic gas lenses are made of brass for better control and uniformity.

TIG FLEX torch body

The Migatronic TIG FLEX torch bodies are flexible and shapeable for difficult welding operations. If several shapings are required, we recommend a turnable TIG torch body (please see custom-built and special solutions on pages 13 and 14). Cautiousness is required for shaping the torch body. The torch body must be cooled off and max. bending angle is 45° . Use your thumbs for support of the torch body as shown below.



Migatronc TIG Adjust



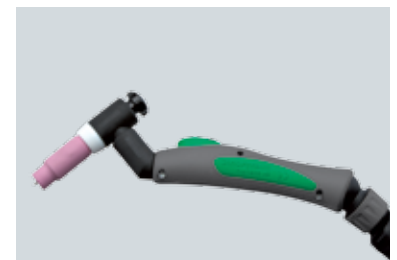
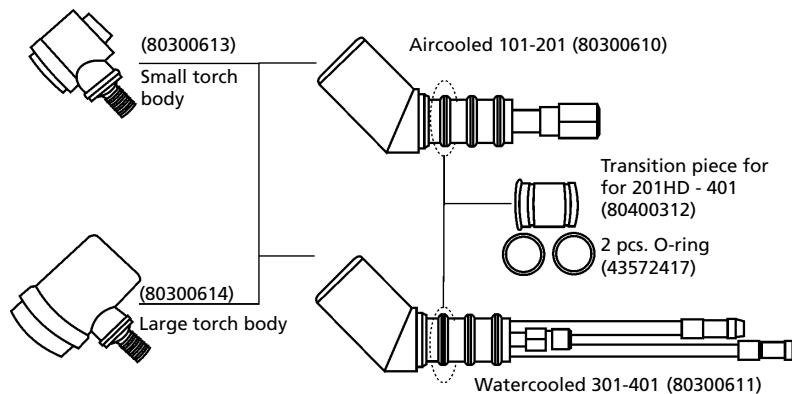
The versatile TIG Adjust aircooled or watercooled torches allow you to weld in hard-to-reach locations.

Migatronc TIG Adjust provides full 360 degree-of-freedom!

TIG Adjust is designed for welding operations where repeated adjustments of the torch body are an everyday occurrence and use of conventional torches is physically impossible. The outermost part of the torch body can be turned in any direction and has almost unlimited life as opposed to a standard Flex torch.

The aircooled or watercooled TIG Adjust can be equipped with two different size torch bodies. The torch bodies can be equipped with standard wearing parts.

For the small torch body, standard wearing parts from the TIG 101-301 range can be used. For the large torch body, standard wearing parts from the TIG 201-401 range can be used. All wearing parts for these models can be used for TIG Adjust without limit. TIG Adjust is supplied without wearing parts as standard. TIG Adjust suits the two different size torch handles of the TIG Ergo range and all TIG Ergo control units are applicable. TIG Adjust is supplied in all 4 m and 8 m TIG Ergo models, but also offered in special lengths for regular orders. TIG Adjust can be ordered as a standard custom-built solution.



	Variant	Article no.
TIG 101 Small torch body 80300613	TIG 101 Adjust 4 m*	80392705
	TIG 101 Adjust 8 m*	80392706
	TIG 101R Adjust 4 m*	80392700
	TIG 101R Adjust 8 m*	80392701
TIG 201 Large torch body 80300614	TIG 201 Adjust 4 m*	80392845
	TIG 201 Adjust 8 m*	80392846
	TIG 201R Adjust 4 m*	80392847
	TIG 201R Adjust 8 m*	80392848

	Variant	Article no.
TIG 201 HD Large torch body 80300614	TIG 201 HD Adjust 4 m*	80392855
	TIG 201 HD Adjust 8 m*	80392856
	TIG 201R HD Adjust 4 m*	80392841
	TIG 201R HD Adjust 8 m*	80392842
TIG 301 Small torch body 80300613	TIG 301 Adjust 4 m*	80492190
	TIG 301 Adjust 8 m*	80492191
	TIG 301R Adjust 4 m*	80492185
	TIG 301R Adjust 8 m*	80492186

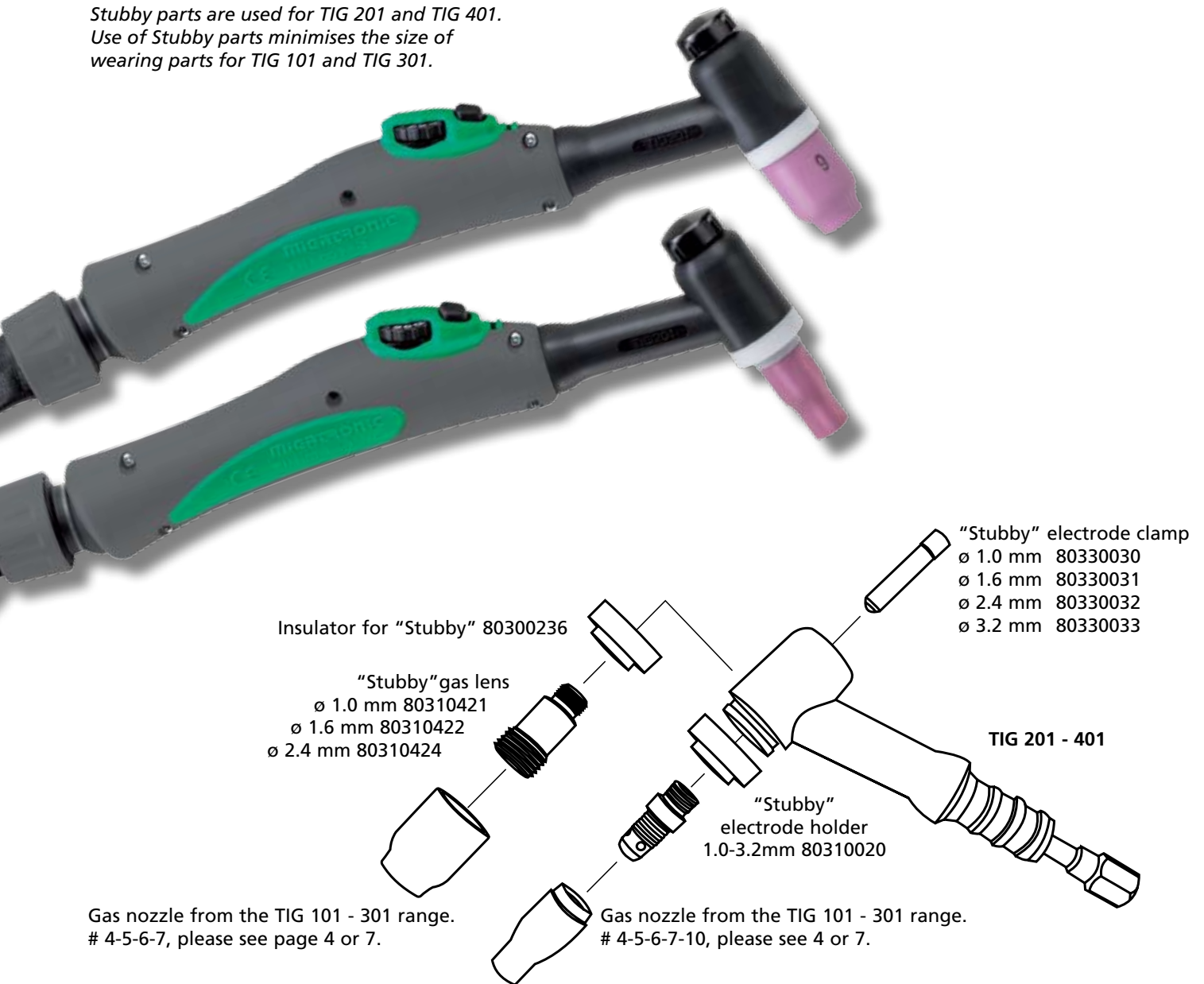
	Variant	Article no.
TIG 401 Large torch body 80300614	TIG 401 Adjust 4 m*	80492265
	TIG 401 Adjust 8 m*	80492266
	TIG 401R Adjust 4 m*	80492285
	TIG 401R Adjust 8 m*	80492286

* = 7 pole

Migatron special parts for TIG 201/221/401

Special solution for TIG 201/221/401, "Stubby" system

Stubby parts are used for TIG 201 and TIG 401. Use of Stubby parts minimises the size of wearing parts for TIG 101 and TIG 301.



Custom-built and special solutions



Special torch body WP24



The torch body fits in everywhere.

Insulator: 80300225

Electrode clamp:

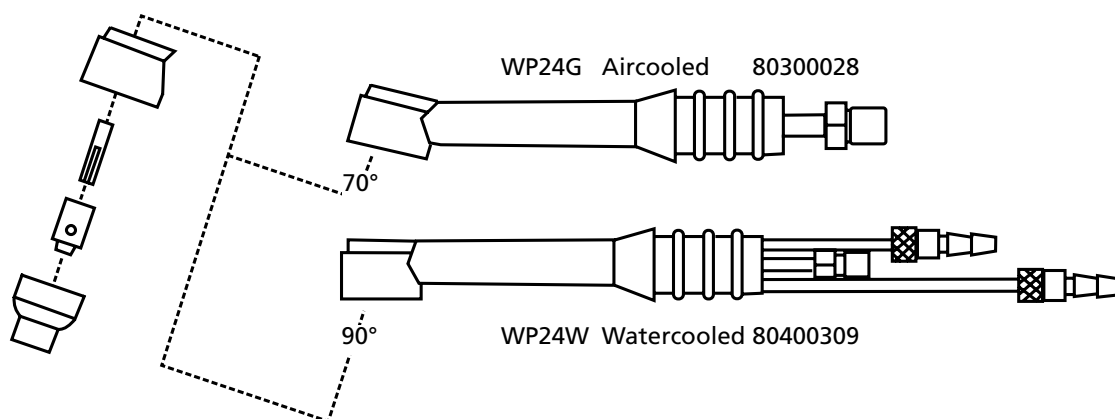
- 0.5 mm 80330008
- 1.0 mm 80330009
- 1.6 mm 80330010
- 2.4 mm 80330011

Electrode holder:

- 0.5 mm 80310005
- 1.0 mm 80310006
- 1.6 mm 80310007
- 2.4 mm 80310008

Gas nozzle:

- #4 6 mm 80340024
- #5 8 mm 80340025



Custom-built and special solutions

Special torch body/-head DSF 225 FLEX



DSF 225 FLEX is a flexible watercooled torch body with replaceable head.

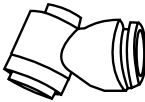
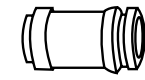
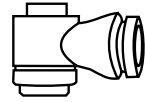
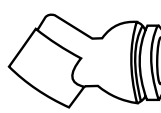
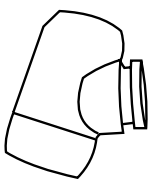



TIG 201 DSF 225x3B # 4 m 7 pole 80392889
 TIG 201 DSF 225x3B # 8 m 7 pole 80392890

TIG 301 DSF 225x3B # 4 m 7 pole 80492339
 TIG 301 DSF 225x3B # 8 m 7 pole 80492340

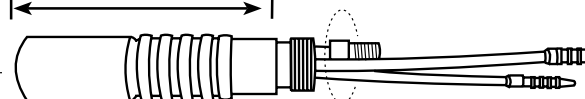
**Wear part box for
 201-203 DSF225
 Art. no. 81100238**





-  70° 80300016
Small torch body # (*)
-  180° 80300191
Small torch body # (*)
-  90° 80300017
Small torch body (*)
-  70° 80300226
Small torch body # (**)
-  70° 80300187
Large torch body (*)
-  180° 80300190
Large torch body (*)

DSF 225 FLEX torch body 80400307

75 mm



-  Transition piece for large handle 201HD - 401 80400301
-  2 pcs. O-ring ø 17.5 x 1.5 mm 80300301

* Small torch body = wearing parts 101-301 page 4. Large torch body = wearing parts 201-401 page 5. (**) wp 24 wearing parts, page 13.

Migatronik offers custom-built and special solutions for all TIG Ergo models, such as adjustment of lengths of cables and hoses, special configuration of wearing parts, change from standard to special torch body versions and adjustment of connections for other makes of welding machines.

81100228	Accessories kit for TIG 101-301	
80300219	1 pcs.	Insulator
80360092	10 pcs.	Electrode WL20, 2% L, \varnothing 1.6 mm, blue
80360094	10 pcs.	Electrode WL20, 2% L, \varnothing 2.4 mm, blue
80400115	1 pcs.	Backcap, short
80400116	1 pcs.	Backcap, medium
80400117	1 pcs.	Jacket, long
80400204	2 pcs.	O-ring for backcap
80410204	2 pcs.	Electrode holder, \varnothing 1.6 mm
80410203	2 pcs.	Electrode holder, \varnothing 2.4 mm
80430202	5 pcs.	Electrode clamp, \varnothing 1.6 mm
80430203	5 pcs.	Electrode clamp, \varnothing 2.4 mm
80440202	5 pcs.	Gas nozzle #5 x 1.6 = \varnothing 8
80440203	5 pcs.	Gas nozzle #6 x 1.6 = \varnothing 9.5
80440204	5 pcs.	Gas nozzle #7 x 1.6 = \varnothing 11.2

81100230	Accessories kit for TIG 201-401	
80300189	1 pcs.	Insulator
80360092	10 pcs.	Electrode WL20, 2% L, \varnothing 1.6 mm, blue
80360094	10 pcs.	Electrode WL20, 2% L, \varnothing 2.4 mm, blue
80300200	1 pcs.	Backcap, short
80300201	1 pcs.	Backcap, long
80300223	2 pcs.	O-ring for backcap
80310000	2 pcs.	Electrode holder, \varnothing 1.6 mm
80310001	2 pcs.	Electrode holder, \varnothing 2.4 mm
80330101	5 pcs.	Electrode clamp, \varnothing 1.6 mm
80330102	5 pcs.	Electrode clamp, \varnothing 2.4 mm
80340002	5 pcs.	Gas nozzle #5 x 1.6 = \varnothing 8
80340003	5 pcs.	Gas nozzle #6 x 1.6 = \varnothing 9.5
80340004	5 pcs.	Gas nozzle #7 x 1.6 = \varnothing 11.2

TIG extension cable



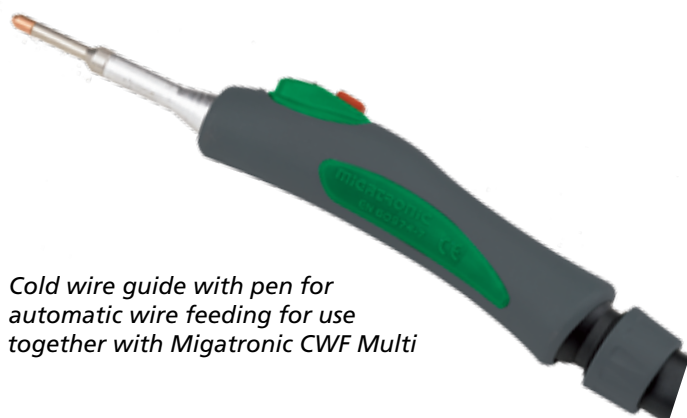
Extension cables

74303510	10 m	35 mm ²	Air	Dinse 7 pole
74303515	15 m	35 mm ²	Air	Dinse 7 pole
74355610	10 m	50 mm ²	Water	Dinse 7 pole
74355615	15 m	50 mm ²	Water	Dinse 7 pole

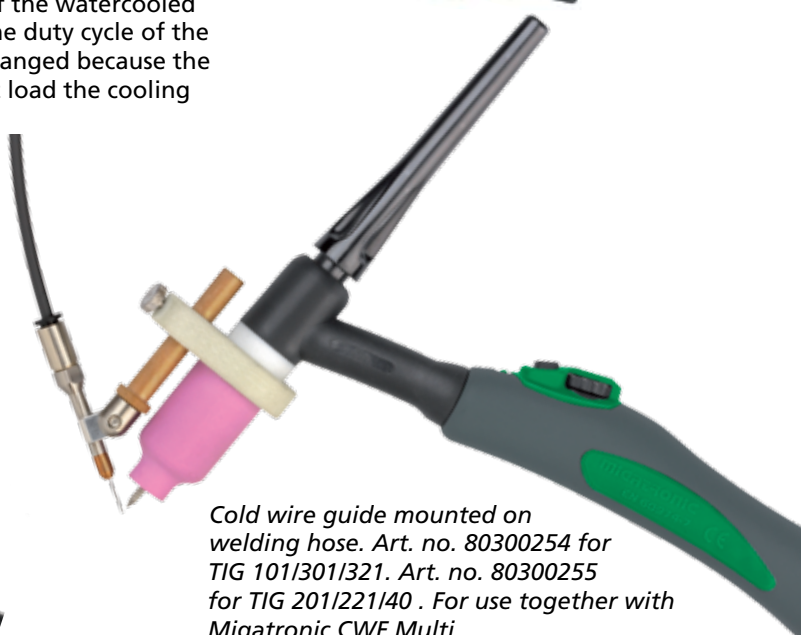
TIG extension cable for extension of the TIG welding hose. The advantage is that after use, you can choose the short TIG welding hose again. Another advantage of the watercooled TIG extension cable is that the duty cycle of the standard torch remains unchanged because the TIG extension cable does not load the cooling unit.



Migatronik cold wire guides



Cold wire guide with pen for automatic wire feeding for use together with Migatronik CWF Multi



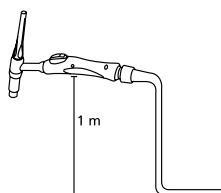
Cold wire guide mounted on welding hose. Art. no. 80300254 for TIG 101/301/321. Art. no. 80300255 for TIG 201/221/40. For use together with Migatronik CWF Multi.

TIG 101 | 201 | 221 | 301 | 321 | 401 | 451

We reserve the right to make changes.

Model	TIG101 / TIG 101V	TIG201	TIG221	TIG301	TIG 321	TIG401	TIG451
Total lengths	4 m	4 m	4 m	4 m	4 m	4 m	4 m
Duty cycle amp. 35% DC	110	135	180	230	325	400	460
Duty cycle amp. 35% AC	75	95	125	160	230	280	320
Duty cycle amp. 60% DC	90	110	130	230	325	400	460
Duty cycle amp. 60% AC	65	75	90	160	230	280	320
Duty cycle amp. 100% DC	80	90	110	225	325	400	460
Duty cycle amp. 100% AC	55	65	80	160	230	280	320
Technique:							
Electrode diameter (Tungsten) mm	1.0-2.4	1.0-2.4	1.0-2.4	1.0-3.2	1.0-3.2	1.0-4.0	1.0-4.8
Cooling	air	air	air	water	water	water	water
Watercooling min. flowrate/bar (4 m) l/hour at bar	none	none	none	45/1.5	45/1.5	55/1.0	55/2.0
Watercooling min. flowrate/bar (8 m) l/hour at bar	none	none	none	45/1.5	45/1.5	65/1.5	65/2.0
Max. water pressure	none	none	none	4 bar	4 bar	4 bar	4 bar
Max. water temperature	none	none	none	60° C	60°C	60°C	60°C
Gas flow +-5%, l / min.	7	7	7	9	9	11	
Cable mm ²	15 / 8	15	21	4 / 6 (8 m)	12/15(8 m)	12/15(8 m)	18 (8 m)
Weight at 1 m height*, kg	0.8 / 1.6	1.0	1.1	0.8	1.0	1.1	1.2
Total weight:							
4 m kg	1.7	1.9	2.0	1.5	2.0	2.2	2.7
8 m kg	2.6	2.8	3.0	2.4	2.9	3.1	5.0
15 m kg	-	-	5,0	-	-	-	-
Connection power, Bayonet	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Connection air, quick-release	Yes / 3/8"	Yes	Yes	Yes	Yes	Yes	Yes
Connection water, quick-release	-	-	-	Yes	Yes	Yes	Yes
Connection control signal, 7 polet, MIGA	Yes / none	Yes	Yes	Yes	Yes	Yes	Yes
Adaptor for 6 pole plug	(Migatronic) / -	Yes (Migatronic)	Yes (Migatronic)	Yes ((Migatronic)	Yes (Migatronic)	Yes (Migatronic)	Yes -
Norm:							
IEC 60974-7**	Yes	Yes	Yes	Yes***	Yes	Yes	Yes Yes***

* Weight of torch at 1 m height



** Migatronic TIG Ergo models comply with EN 60974-7 in terms of construction and safety requirements.

*** Because of radiant heat from the arc, the temperature of the handle may be higher than specified in the norm

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