

3 - TIG welding



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*For: clamps, connectors, cables,
hammers, miscellaneous, ceramic backings,
see chapter “Other arc welding”*




EN 60974-7

Simplify your life

TIG torches must be reliable, flexible and use common wear parts. Connection and handles have to be adapted to the different habits.





• HANDLE

The different type of handle

EB	 <p>2008-259</p>
RL	 <p>2008-257</p>
V	 <p>2008-255</p>



• CONNECTIONS

C5B	 <p>2008-260 <i>Air cooled</i></p> <p>Connector: Ø 13 mm</p>	 <p>2008-273 <i>Water cooled</i></p> <p>Connector: Ø 13 mm</p>
	S	 <p>2008-268 <i>Air cooled</i></p> <p>Connector: Ø 13 mm</p>
V		 <p>2008-256</p> <p>Connector: Ø 9 mm</p>

• LENGTH

Harness length is 4 or 8 m (except V only 4 m)



The WTT range

EN 60974-7

Air cooled: 3 torches using electrode 1.0 to 3.2 mm

WTT 9 or 9 V

Welding current: 125 A at 35% - 80 A at 60%

Fitted with: - cap medium
- nozzle Ø 1.0 mm
- electrode Ø 1.6 mm



2008-265



2008-257



2008-259

WTT 17 or 17 V

Welding current: 150 A at 35% - 100 A at 60%

Fitted with: - cap medium
- nozzle Ø 1.0 mm
- electrode Ø 2.0 mm



2008-261



2008-263



2008-264

WTT 26 or 26 V

Welding current: 200 A at 35% - 130 A at 60%

Fitted with: - cap medium
- nozzle Ø 1.2 mm
- electrode Ø 2.4 mm



2008-266



2008-267



2008-269

To order

Air cooled

Handle connection	Torch	4 m	8 m
RL/S	WTT 9 RL S	W 000 306 115	W 000 306 116
	WTT 17 RL S	W 000 306 117	W 000 306 118
	WTT 26 RL S	W 000 306 119	W 000 306 120
RL/C5B	WTT 9 RL C5B	W 000 306 125	W 000 306 126
	WTT 17 RL C5B	W 000 306 127	W 000 306 128
	WTT 26 RL C5B	W 000 306 129	W 000 306 130
EB/S	WTT 9 EB S	W 000 266 572	W 000 266 571
	WTT 17 EB S	W 000 266 570	W 000 266 569
	WTT 26 EB S	W 000 266 568	W 000 266 567
EB/C5B	WTT 9 EB C5B	W 000 306 105	W 000 306 106
	WTT 17 EB C5B	W 000 306 107	W 000 306 108
	WTT 26 EB C5B	W 000 306 109	W 000 306 110
V/V	WTT 9V	W 000 266 434	-
	WTT 17V	W 000 266 574	-
	WTT 26V	W 000 266 573	-

Tel.: + 33 134 213 333 - Web: www.weldline-alw.com

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PROFESSIONAL WELDING PRODUCTS BY



Water cooled: 2 torches using tungsten electrode 1.0 to 4.0 mm

WTT 20 W

Welding current: 250 A at 60%

- Fitted with: - cap medium
 - nozzle Ø 1.2 mm
 - electrode Ø 2.4 mm



WTT 18 W

Welding current: 350 A at 60%

- Fitted with: - cap medium
 - nozzle Ø 1.2 mm
 - electrode Ø 2.4 mm



To order

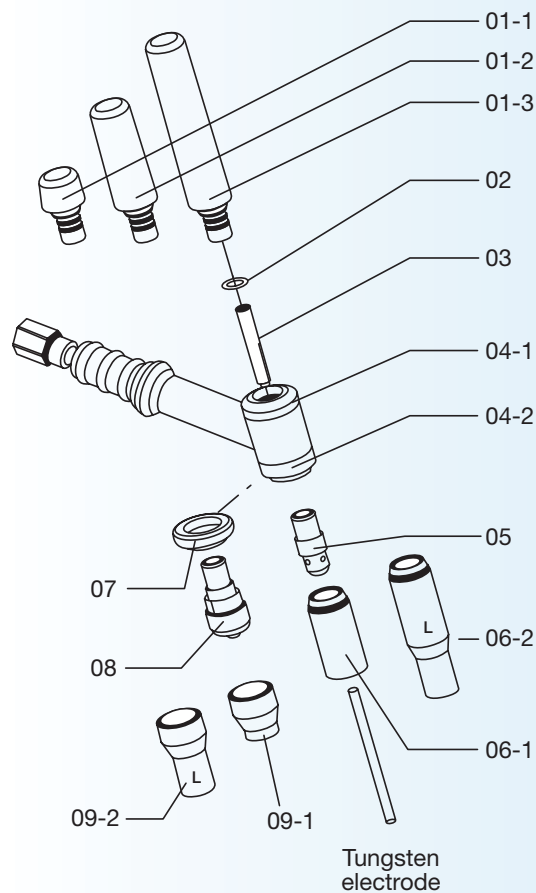
Water cooled

Handle connection	Torch	4 m	8 m
RL/S	WTT 20W RL S	W 000 306 121	W 000 306 122
	WTT 18W RL S	W 000 306 123	W 000 306 124
RL/C5B	WTT 20W RL C5B	W 000 306 131	W 000 306 132
	WTT 18W RL C5B	W 000 306 133	W 000 306 134
EB/S	WTT 20W EB S	W 000 266 566	W 000 266 565
	WTT 18W EB S	W 000 266 564	W 000 266 563
EB/C5B	WTT 20W EB C5B	W 000 306 111	W 000 306 112
	WTT 18W EB C5B	W 000 306 113	W 000 306 114



TIG torches wear parts

		Ø	REP	WTT 9 / 9 V WTT 20 W	WTT 17 / 17 V WTT 26 / 26 V WTT 18 W
Back cap	Short		01-1	W 000 306 398	W 000 306 399
	Medium		01	W 000 306 400	-
	Long		01-2	W 000 306 402	W 000 306 403
Back cap O-ring			02	W 000 306 404	W 000 306 405
Collet	1,0	03		W 000 306 406	W 000 306 411
	1,6			W 000 306 407	W 000 306 412
	2,0			W 000 306 408	W 000 306 413
	2,4			W 000 306 409	W 000 306 414
	3,2			W 000 306 410	W 000 306 415
	4,0			-	W 000 306 416
Insulating ring			04-1	W 000 270 780	W 000 306 395
Sealing ring			04-2	W 000 306 396	W 000 306 397
Collet body	1,0	05		W 000 306 376	W 000 306 380
	1,6			W 000 306 377	W 000 306 381
	2,0			W 000 306 378	W 000 270 781
	2,4			W 000 306 455	W 000 306 382
	3,2			W 000 306 379	W 000 306 383
	4,0			-	W 000 306 384
Short nozzle	6,4	06-1		W 000 306 417	W 000 306 423
	8,0			W 000 306 418	W 000 306 424
	9,6			W 000 306 419	W 000 306 425
	11,2			W 000 306 420	W 000 306 426
	12,8			W 000 306 421	W 000 306 427
	16,0			W 000 306 422	W 000 306 428
	19,2			-	W 000 306 461
Long nozzle	4,8	06-2		W 000 306 456	-
	6,4			W 000 306 457	W 000 306 462
	8,0			W 000 306 458	W 000 306 463
	9,6			W 000 306 459	W 000 306 464
	11,2			-	W 000 306 465
Gas L. sealing ring			07	-	W 000 306 466
G.L. collet body	1,0	08		W 000 306 385	W 000 306 389
	1,6			W 000 306 386	W 000 306 390
	2,0			W 000 306 460	-
	2,4			W 000 306 387	W 000 306 391
	3,2			W 000 306 388	W 000 306 392
	4,0			-	W 000 306 393
Gas L. nozzle	6,4	09-1		W 000 306 429	W 000 306 434
	8,0			-	W 000 306 435
	9,6			W 000 306 431	W 000 306 436
	11,2			W 000 306 432	W 000 306 437
	12,8			W 000 306 433	W 000 306 438
	16,0			-	W 000 306 439
Long G.L. nozzle	8,0	09-2		-	W 000 306 467
	9,6			-	W 000 306 468
	11,2			-	W 000 306 469
	12,8			-	W 000 306 470





Tungsten electrodes

A complete range of tungsten electrodes:

- Pure tungsten,
- Tungsten + thorium,
- Tungsten + cerium,
- Tungsten + lanthanum.
- Tungsten + rare earths*.

ISO 6848
EN 26848

* Rare earths = any of the abundant metallic elements, including scandium (atomic number 21), yttrium (39), and the 15 elements from 57 to 71 (lanthanide series include lanthanum and cerium) in the Mendeleev classification.

Choice criteria

Type	Metal		Arc stability	Striking	Lasting	Thermal resistance
	Light Alloys	Steel & Stainless steel				
WP Pure tungsten	*		**	*	*	*
WT 20 Thorium 2%		*	*	***	**	**
WC 20 Cerium 2%		*	**	*	**	**
WL 20 Lanthanum 2%	*	*	**	***	***	***
WS 20 Rare earths 2%	*	*	**	***	***	***

Please note: special regulations regarding thorium in Switzerland.

*** Excellent - ** Good - * Average

The lanthanum electrodes (2%):

The non consumable electrode that has no radioactive elements and excellent performance.

Radiation free

Arc striking, arc stability and life duration are the main criteria when choosing a tungsten electrode. To obtain these qualities, oxides are added to the thorium. Traditionally it was thorium oxide.

It is however known that under some conditions (for example sharpening) the thorium dust contains radioactive elements. Even though the radioactive element is very low and well below considered dangerous levels. Producers have and are constantly trying to replace this thorium by other oxides that contain no radioactive elements.

Lanthanum is the best electrode considering the following arguments:

- Possibility of use with alternative or continuous current,
- Better striking than all the other types of tungsten electrodes,
- Better arc stability due to the lower deformation of the electrodes tip,
- Better life duration,
- No radioactivity at all.



Thorium is radioactive and may present hazardous by external and internal exposure. If alternatives are technically feasible, they should be used.

Tungsten electrodes

WP - Pure tungsten - Light alloy (green tip)

Ø mm	150 mm length	175 mm length
	Cat N°	
1.0	W 000 010 009	-
1.6	W 000 010 010	W 000 010 375
2.0	W 000 010 011	W 000 010 376
2.4	W 000 010 012	W 000 010 377
3.0	W 000 010 013	-
3.2	W 000 010 014	W 000 010 378
4.0	W 000 010 015	W 000 335 152

WT 20 - Thorium 2% - Steel and stainless steel (red tip)

Ø mm	150 mm length	175 mm length
	Cat N°	
1.0	W 000 010 002	W 000 335 151
1.6	W 000 010 003	W 000 010 030
2.0	W 000 010 004	W 000 010 390
2.4	W 000 010 005	W 000 010 031
3.0	W 000 010 006	-
3.2	W 000 335 156	W 000 010 032
4.0	W 000 010 008	W 000 010 374

WC 20 - Cerium 2%

Steel and stainless steel (grey tip)

Ø mm	150 mm length	175 mm length
	Cat N°	
1.0	W 000 010 022	-
1.6	W 000 010 023	W 000 335 153
2.0	W 000 010 024	W 000 010 381
2.4	W 000 010 025	W 000 335 154
3.0	W 000 010 026	-
3.2	W 000 335 150	W 000 335 157
4.0	W 000 010 028	W 000 335 155

WL 20 - Lanthanum 2%

Light alloy (using AC current), steel and stainless steel (using DC current) (blue tip).

Ø mm	75 mm length	150 mm length	175 mm length
	Cat N°		
1.0	W 000 011 144	W 000 010 373	-
1.6	W 000 011 145	W 000 010 016	W 000 010 385
2.0	-	W 000 010 017	W 000 010 386
2.4	W 000 011 146	W 000 010 018	W 000 010 387
3.0	-	W 000 010 019	-
3.2	-	W 000 010 020	W 000 010 388
4.0	-	W 000 010 021	W 000 010 389

WS 20 - Rare earths 2% - Light alloy

(using AC current), steel and stainless steel (using DC current) turquoise tip.

Ø mm	175 mm length
	Cat N°
1.0	W 000 335 166
1.6	W 000 335 167
2.0	W 000 335 168
2.4	W 000 335 169
3.0	W 000 335 170
3.2	W 000 335 171
4.0	W 000 335 172



Recommended amperage

Electrode diameter mm	Direct current, A				Alternating current, A	
	Electrode negative (-)		Electrode positive (+)		Pure tungsten	Tungsten with oxide additives
	Pure tungsten	Tungsten with oxide additives	Pure tungsten	Tungsten with oxide additives		
1.0	10 to 75	10 to 75	No indication	No indication	15 to 55	15 to 70
1.6	40 to 130	60 to 150	10 to 20	10 to 20	45 to 90	60 to 125
2.0	75 to 180	100 to 200	15 to 25	15 to 25	65 to 125	85 to 160
2.4	120 to 220	150 to 250	15 to 30	15 to 30	80 to 140	120 to 210
3.0	150 to 300	210 to 310	20 to 35	20 to 35	140 to 180	140 to 230
3.2	160 to 310	225 to 330	20 to 35	20 to 35	150 to 190	150 to 250
4.0	275 to 450	350 to 480	35 to 50	35 to 50	180 to 260	240 to 350



TIG consumables

WELDLINE offers the most popular stainless steel and aluminium welding grades for TIG welding, within the tight constraints of the AWS standards.

These competitive priced rods are supplied without agency approvals.

All wire grades can be supplied with a 3.1 chemical analysis certificate according to EN10204.

TIG wires are stamped at both the ends of the wire rod for optimum traceability.

Stainless steel TIG rods

AWS A5.9	Description	Diam. (mm)	Packaging	Cat N°
ER 316 L	WL rod 316 L	1.2	1 000 mm long - 5 kg	W 000 274 503
		1.6		W 000 283 606
		2.0		W 000 283 607
		2.4		W 000 283 608
ER 308 L	WL rod 308 L	1.2	1 000 mm long - 5 kg	W 000 274 504
		1.6		W 000 283 609
		2.0		W 000 283 610
		2.4		W 000 283 611



Aluminium TIG rods

AWS A5.9	Description	Diam. (mm)	Packaging	Cat N°
ER 4043	WL rod ALSI5	2.0	1 000 mm long - 5 kg	W 000 283 692
		2.4		W 000 283 693
		3.2		W 000 283 694
ER 5183	WL rod ALMG4.5MN	2.0	1 000 mm long - 5 kg	W 000 283 695
		2.4		W 000 283 696
		3.2		W 000 283 697
ER 5356	WL rod ALMG5	1.6	1 000 mm long - 5 kg	W 000 274 505
		2.0		W 000 283 698
		2.4		W 000 283 699
		3.2		W 000 283 700

TIG POINT

Chemical sharpening of tungsten electrodes

Instructions for use:

- Make the electrode to be out from the torch of 15 mm.
- Use the welding current to warm the electrode to white.
- Dip the electrode in the product while rotating the electrode.
- Make sure that the result is satisfactory.
- Carefully close the pot.



Cat N°: W 000 011 101

TIG torch stand



Cat N°: W 000 010 803

Simple stand with magnetic base to keep your work place clean.

TIG SHARP

Portable electric tool for tungsten electrodes sharpening



Cat N°: W 000 011 035

Characteristics:

- All you need to sharpen your tungsten electrodes (all ranges) delivered in a practical metal case:
 - Sharpening machine
 - Clamp to lock the machine on a bench
 - Standard blue head for the electrodes diameter 1.6 / 2.0 / 2.4 / 3.2 mm
 - Nozzle connectable on a vacuum cleaner for extraction of tungsten dusts
 - Electrode holder to clamp TIG electrodes
 - Tools to assemble and dismantle
- For an accurate sharpening:
 - Choose the electrode diameter
 - Select the grinding angle (10° to 70°)
 - Start the machine
 - Insert the electrode and turn it slowly
- An incredible result:
 - The grind is perfect
 - The grinding angle is very precise
 - Longitudinal sharpening, precise and symmetric angle



Technical characteristics:

Voltage:	220-230 volts
Frequency:	50 - 60 Hz
Power:	400 W
Amperage:	1.8 A
Disk speed:	30.000 rpm
Weight:	1.85 kg

Warranty: 2 years.
Conform to EU standards

EN 50144-2-3

EN 60745-1

EN 60745-1/A1

Other products of the range:

- Red head: (for tungsten electrodes Ø 1.0 / 4.0 / 4.8 / 6.0 mm)
- Spare blue head: (for tungsten electrodes Ø 1.6 / 2.0 / 2.4 / 3.2 mm)
- Spare diamond disk:

Cat N°: W 000 011 037

Cat N°: W 000 011 038

Cat N°: W 000 011 036