



One machine – complete electrode preparation!



Grinding electrodes:  
4 different angles and  
6 different electrode sizes



Facing electrodes



Cutting electrodes  
(ESG MAX)



Durable storage and  
shipping case



ESG MAX:  
Laterally adjustable  
grinding head with  
72 holes

# Tungsten Grinder

- Repeatable points every time due to preset grinding angles
- Easy and fast to use
- Optimum preparation for orbital and manual welding
- Longitudinal grinding for optimum arc ignition and excellent arc stability
- Guarantees longer tool life and ease of ignition of the tungsten electrode
- Specially designed for one-off jobs on site
- Compact design, optimum resilience and perfect reproducibility
- Solid, functional design
- Precise orbital grinding
- Facility for easy trimming of the electrodes (optional)
- External dust extractor can be easily adapted
- Short preparation times with high grinding performance
- No adjustment needs to be done before operation



ESG MAX

## ESG MAX, ESG Plus, ESG Plus<sup>2</sup>

The perfect hand-held grinder for cutting, grinding and planing electrodes which are used in WIG/TIG welding machines. Consider country-specific regulations, standards and guidelines when using tungsten electrodes with thorium.

### Additional properties ESG MAX:

- Lateral adjustment of the head for increased service life of the grinding wheel
- Grinding head with 72 holes: 36 holes for the grinding wheel with coarse grain, 36 holes for the grinding wheel with fine grain and cutting edge
- Continuously adjustable cutting device from 9.0 to 34.5 mm / 0.354" to 1.358" (available option)
- Including dust protection against grinding dust
- Adapter for extraction device for up to 96% less grinding dust particles (available option)
- Table mount included

### Additional properties ESG Plus<sup>2</sup> and ESG MAX:

- Portable tungsten grinder with two different grinding wheels. This allows the electrode to be pre-ground with the coarse diamond wheel then finished with the fine diamond wheel.



ESG Plus



ESG Plus<sup>2</sup>

Scope of supply	ESG MAX	ESG Plus	ESG Plus <sup>2</sup>	
Tungsten Grinder, including:				
Storage and shipping case	1 pcs. x	x	x	
Grinding head for electrodes Ø 1.0 - 1.6 - 2.0 - 2.4 - 3.2 - 4.0 mm* (0.04" - 1/16" - 0.08" - 3/32" - 1/8" - 5/32")*	1 pcs. x	x	x	
Grinding head for grinding angle 15° - 18° - 22.5° - 30° - 45° - 60°	1 pcs. x			
Grinding head for grinding angle 15° - 18° - 22.5° - 30° or 15° - 30° - 45° - 60°	1 pcs.	x	x	
Diamond grinding wheel Fine (790 052 517)	1 pcs. x			
Diamond grinding wheel Coarse (790 052 518)	1 pcs. x			
Diamond grinding wheel Fine (790 052 487)	1 pcs.		x	
Diamond grinding wheel Medium (790 052 488)	1 pcs.	x		
Diamond grinding wheel Coarse (790 052 550)	1 pcs.		x	
Table mounting plate	1 pcs. x			
Tool to replace the grinding wheel	1 pcs. x	x	x	
Set of operating instructions & spare parts list	1 pcs. x	x	x	
<b>Technical data</b>	<b>Electric drive with single-phase AC motor</b>			
Dimensions (with drive)	[mm]	Ø 65 x 350	Ø 65 x 350	Ø 65 x 350
	[inch]	Ø 2.56 x 13.78	Ø 2.56 x 13.78	Ø 2.56 x 13.78
Power	[W]	500	500	500
Power-on time	[%]	100	100	100
Rotary speed	[rpm]	30.000	30.000	30.000

# Tungsten Grinding Technology

Scope of supply		ESG MAX	ESG Plus	ESG Plus <sup>2</sup>
Main supply cable (length)	[m]	3	3	3
	[inch]	118.1	118.1	118.1
Vibration level in accordance with 28662, part 1	[m/s <sup>2</sup> ]	< 2.5	< 2.5	< 2.5
Noise level at the workplace (Idle running)	[dB (A)]	approx. 83	approx. 83	approx. 83

\* An electrode holder is required to grind electrodes with 4.0 mm (5/32") diameter (available option).

Article	Version	Grinding angles [°]	Code		Weight of machine kg	Dispatch weight kg
ESG MAX	230 V, 50/60 Hz EU	15 / 18 / 22,5 / 30 / 45 / 60	790 052 591		1.560	3.680
ESG MAX	110 V, 50/60 Hz EU/US	15 / 18 / 22,5 / 30 / 45 / 60	790 052 592		1.560	3.680
ESG Plus	230 V, 50/60 Hz EU	15 / 18 / 22,5 / 30	790 052 485		1.430	3.560
ESG Plus	110 V, 50/60 Hz EU/US	15 / 18 / 22,5 / 30	790 052 486		1.430	3.560
ESG Plus	230 V, 50/60 Hz EU	15 / 30 / 45 / 60	790 052 545		1.430	3.560
ESG Plus	110 V, 50/60 Hz EU/US	15 / 30 / 45 / 60	790 052 645		1.430	3.560
ESG Plus <sup>2</sup>	230 V, 50/60 Hz EU	15 / 18 / 22,5 / 30	790 052 585		1.520	3.825
ESG Plus <sup>2</sup>	110 V, 50/60 Hz EU/US	15 / 18 / 22,5 / 30	790 052 586		1.520	3.825
ESG Plus <sup>2</sup>	230 V, 50/60 Hz EU	15 / 30 / 45 / 60	790 052 546		1.520	3.825
ESG Plus <sup>2</sup>	110 V, 50/60 Hz EU/US	15 / 30 / 45 / 60	790 052 646		1.520	3.825



Diamond grinding wheels

## Diamond grinding wheels

### Replaceable grinding wheel diamond-coated on both sides for optimal performance.

For 1.0 and 1.6 mm (0.039"/0.063") electrodes we recommend the standard grinding wheel. For 2.0 and 2.4 mm (0.078"/0.094") electrodes a medium grained grinding wheel and for 3.2 and 4.0 mm (0.126"/0.157") a coarse grained grinding wheel is advisable.

Article	Applicable with	Grain	Wheel Ø		s		Code		kg
			[mm]	[inch]	[mm]	[inch]			
Diamond grinding wheel	ESG MAX	Fine	40.0	1.574	2.1	0.083	790 052 517		0.017
Diamond grinding wheel	ESG MAX	Coarse	37.0	1.574	2.2	0.087	790 052 518		0.016
Diamond grinding wheel	ESG 4	Standard	32.0	1.290	1.2	0.047	790 052 460		0.005
Diamond grinding wheel	ESG Plus, ESG Plus <sup>2</sup>	Fine	33.5	1.319	2.2	0.087	790 052 487		0.010
Diamond grinding wheel	ESG Plus, ESG Plus <sup>2</sup>	Medium	33.5	1.319	2.2	0.087	790 052 488		0.011
Diamond grinding wheel	ESG Plus, ESG Plus <sup>2</sup>	Coarse	33.5	1.319	2.2	0.087	790 052 550		0.011

## Cutting devices

### For simple separating of the electrodes.

Electrode minimum length for grinding with ESG MAX:

15° = 24.8 mm (0.976")

18° = 22.3 mm (0.878")

22.5° = 20.6 mm (0.811")

30° = 19.1 mm (0.752")

45° = 18.6 mm (0.739")

60° = 19.5 mm (0.768")

Article	Applicable with	Setting	Cutting lengths [mm]	Cutting lengths [inch]	Code		kg
Cutting device	ESG MAX	continuous	9.0 - 34.5	0.354 - 1.358	790 052 613		0.033
Cutting device	ESG Plus, ESG Plus <sup>2</sup>	fixed*	12.0	0.472	790 052 513		0.030
			13.0	0.512			
			15.0	0.591			
			17.0	0.669			

\* Further cutting lengths possible on request.



Cutting device for ESG MAX

## Electrode holder and collets

For machining smaller electrodes. The **electrode holder for the ESG MAX** is available in a set including collets for 6 different electrode diameters.

The **electrode holder for the ESG Plus** or **ESG Plus<sup>2</sup>** is supplied including 1 flexible collet.



*Electrode holder with 6 collets  
(for ESG MAX)*

Article	Applicable with	Setting	Electrode Ø [mm]	Electrode Ø [inch]	Code	kg
Electrode holder with 6 collets	ESG MAX	fixed	1.0	0.039	<b>790 052 614</b>	0.025
			1.6	1/16		
			2.0	0.080		
			2.4	3/32		
			3.2	1/8		
			4.0	5/32		
Electrode holder with collet	ESG Plus, ESG Plus <sup>2</sup>	continuous	1.0 - 3.2	0.039 - 0.126	<b>790 052 457</b>	0.023
Spare collet	ESG Plus, ESG Plus <sup>2</sup>	continuous	1.0 - 3.2	0.039 - 0.126	<b>790 052 481</b>	0.002



*Electrode holder with collet  
(for ESG Plus, ESG Plus<sup>2</sup>)*



*Spare collet  
(for ESG Plus, ESG Plus<sup>2</sup>)*

## Wall-/table-/vice-mounting plate

For stationary use of the ESG Plus and ESG Plus<sup>2</sup>. Simple and rapid mounting to a wall, a table or a vice.

Article	Applicable with	Code	kg
Wall-/table-/vice-mounting plate	ESG Plus, ESG Plus <sup>2</sup>	<b>790 052 483</b>	0.102



*Wall-/table-/vice-mounting plate*

## Adapter for extraction device

This adapter for an extraction device can be placed rapidly and simply on the ESG MAX grinding head and reduces grinding dust by up to 96% less particles. For use on electrodes with thorium. Consider country-specific regulations, standards and guidelines.

Article	Applicable with	Code	kg
Adapter for extraction device ESG MAX	ESG MAX	<b>790 052 612</b>	0.077

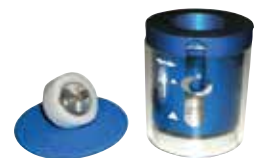


*Adapter for extraction device ESG MAX*

## Protective cover

**Easy to adapt on the ESG Plus head.** With integrated retainer for suction units. For use on electrodes with thorium. Consider country-specific regulations, standards and guidelines.

Article	Applicable with	Code	kg
Protective cover ESG Plus	ESG Plus	<b>790 052 496</b>	0.220
Protective cover ESG Plus <sup>2</sup>	ESG Plus <sup>2</sup>	<b>790 052 596</b>	0.220



*Protective cover*

## Double-Decker Kit

Easy to mount to the ESG Plus. This attachment makes it possible to use 2 different grinding wheels at the same time. Including 1 grinding head, 1 diamond grinding wheel (coarse), 1 cylinder-head screw with collar (M4x34); 1 shaft extension.

Article	Applicable with	Grinding angles [°]	Code	kg
Double-Decker Kit	ESG Plus	15 / 18 / 22.5 / 30	<b>790 052 490</b>	0.160
Double-Decker Kit	ESG Plus	15 / 30 / 45 / 60	<b>790 052 390</b>	0.160



*Double-Decker Kit*