

*Welders/Generators
for engine-driven welders
with SMAW welding process*



 **sincro**®

Selection Guide for the choice of our Welders/Generators



Sincro welders/generators range is one of the most complete in the market including more than 20 models with SCR or electromechanical technology in 4 series (SW - ARC - ED - EA), developed for stick arc welding (SMAW Shielded Metal Arc Welding) and completely manufactured in Italy. Developed as power electric component on engine-driven welders for on site applications, they can be used intuitively as welders or generators.

CHOICE OF THE MODEL		1					2					3																										
		ON SITE APPLICATIONS					ELECTRODES					TECHNICAL FEATURES																										
		MILD			HEAVY		COATINGS		MATERIALS			ENGINE		WELDER											AC GENERATOR													
SERIES	MODELS	FABRICATION ⁽¹⁾	GENERAL MAINTENANCE ⁽²⁾	CONSTRUCTION ⁽³⁾	PIPELINE ⁽⁴⁾ HYDRO & GAS SYSTEMS ⁽⁵⁾	HEAVY MAINTENANCE ⁽⁶⁾	RUTILE	BASIC	CELLULOSIC	INOX	CAST-IRON	SPECIAL	RPM	HP (suggested) 50/60HZ	TECHNOLOGY	I DC	I AC	Amps				A JUMP STARTER	V BATTERY CHARGER	HOT START	ARC FORCE	ANTI STICK	REMOTE CONTROL	THERMAL PROTECTION	BRUSHLESS (exciter)	BRUSHLESS (capacitor)	BRUSHES	KVA S1 3PH 400V/50HZ	KVA S1 1PH 230V/50HZ	KVA S1 60HZ	IP			
																		A MIN 50/60HZ	A MAX 50/60HZ	A 35% 50/60HZ	A 60% 50/60HZ																	
SW	SW-I500 TDC/4	•	•	•	•	•	••••	••••	••••	••••	••••	••••	1500/1800	40	SCR ELECTRONIC	•	-	30	500	500	400	500	12/24/ 36/48	•	•	•	•	•	•	•	•	-	-	•	15	6	SPECIFIC RATINGS AND VOLTAGES CAN BE MADE ON REQUEST	23
	SW-F300 TDC/2	•	•	•	•	•							20	•		-	30	300	300	250	300	•		•	•	•	•	-	-	•	10	4						
	SW-F300 MDC/2	•	•	•	•	•							20	•		-	30	300	300	250	300	•		•	•	•	•	-	-	•	-	6						
	SW-E220 TDC/2 • SW-E250 TDC/2	•	•	•	•	•							12,5/16	•		-	30	220/250	220/250	170/190	250/300	•		•	•	•	•	-	-	•	6,5	3						
ARC	ARC400 TDC/2	•	•	•			••••	•••	•••	•••	•••	•••	3000/3600	30	ELECTRO MECHANICAL	•	-	50	400	400	320	-	-	-	-	-	•	-	-	•	10	4	23					
	ARC300 TDC/2	•	•										20	•		-	40	300	300	250	-	-	-	-	•	-	-	•	8	3								
	ARC300 MDC/2	•	•										20	•		-	40	300	300	250	-	-	-	-	•	-	-	•	-	6								
	ARC280 TDC/4	•	•										1500/1800	18,5		•	-	40	280	280	220	-	-	-	-	•	-	-	•	8	3							
ED	ED220 TDC/2 • ED240 TDC/2	•	•				••••	••	••	••	••	••	3000/3600	12,5/15	ELECTRO MECHANICAL	•	-	40/50	220/240	220/240	170/180	-	-	-	-	-	•	-	-	•	6,5	3,5	23					
	ED220 MDC/2 • ED240 MDC/2	•	•										12,5/15	•		-	40/50	220/240	220/240	170/180	-	-	-	-	•	-	-	•	-	5								
	ED200 MDC/2 • ED210 MDC/2	•	•										11,5/13	•		-	50	200/210	200/210	170	-	-	-	-	•	-	-	•	-	4								
	ED170 MDC/2 • ED190 MDC/2	•	•										9,5/11	•		-	45/50	170/190	170/190	130/140	-	-	-	-	•	-	-	•	-	3								
EA	EA200 MAC/2 • EA220 MAC/2	•					•••	•	•	•	•	•	3000/3600	12/13	ELECTRO MECHANICAL	-	•	60	200/220	200/220	180	-	-	-	-	-	•	-	•	-	-	-	7	23				
	EA180 MAC/2 • EA190 MAC/2	•											11/12	-		•	60	180/190	180/190	125/135	-	-	-	-	•	-	•	-	-	5								
	EA130 MAC/2 • EA140 MAC/2	•											8,5/9	-		•	60	130/140	130/140	100/110	-	-	-	-	•	-	•	-	-	4								

⁽¹⁾ Mild assembly works. ⁽²⁾ Repairs that require amperages of moderate intensity. ⁽³⁾ Welding of carpentry structures on site. ⁽⁴⁾ Welding with high level of complexity on oil and gas pipelines. ⁽⁵⁾ Welding of pipes on civil and industrial distribution systems. ⁽⁶⁾ Repairs that require amperages of high intensity.

CHOICE OF THE MODEL

The identification of the right welder/generator depends on the application, the type of electrode and the features of the machine.

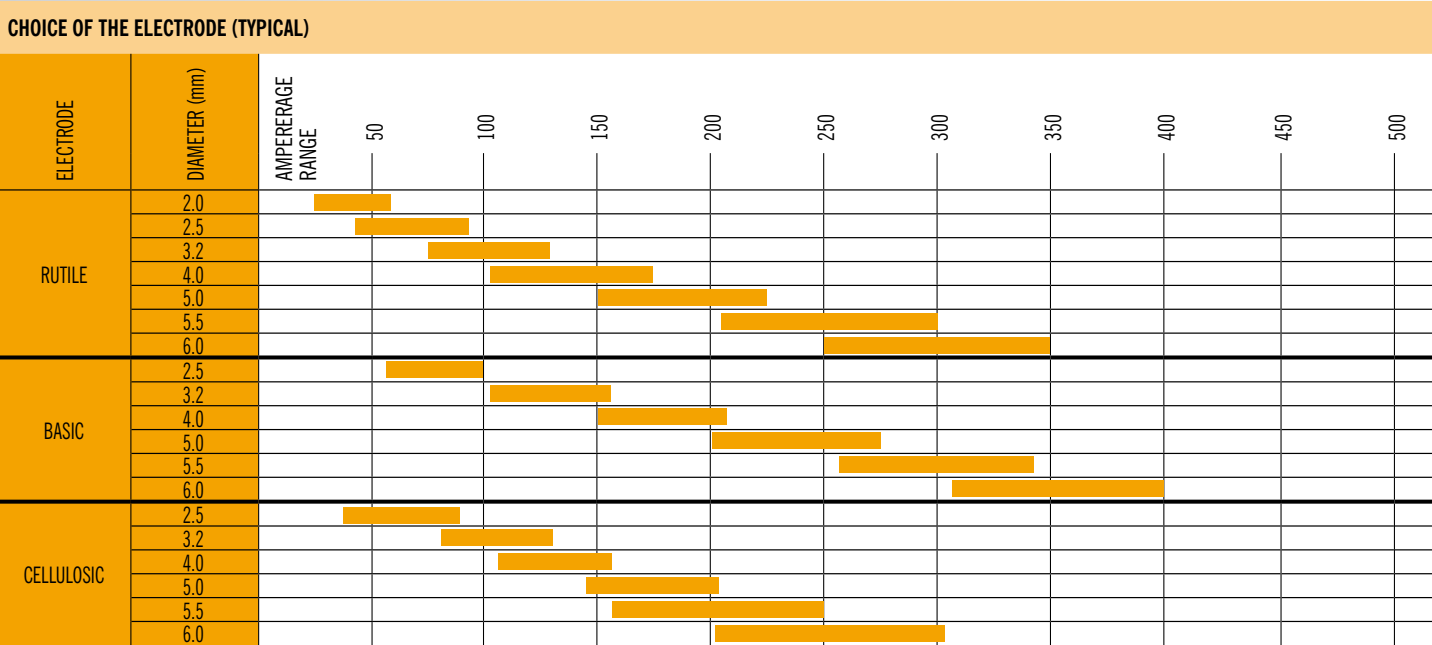
- 1) The first step is to determine the main **application** context. If you need to operate on mild works, an electromechanical model is suitable. If welding operations are carried out in a heavy context, then focus on a SCR technology model.
- 2) The choice of the model also depends on the type of **electrode**. For example, if cellulosic electrodes are necessary, we recommend our SW electronic models.
- 3) Let's finally concentrate on the specific **technical features** of our welders/generators. Is the engine working at 3000/3600 or at 1500/1800 rpm? After this first distinction, focus on the output current (DC or AC), the amps, the generator rating and any other data that, all together, uniquely define a specific model.

CHOICE OF THE ELECTRODE

Electrodes, made of a conductive metal core, can have many types of coatings, whose composition influence the stability of the electric arc, the deposition of the material and the purity of the bath, and are divided into 3 main classes:

- 1) **Rutile (E6013)**: to weld in any position as it is greatly easy to operate;
- 2) **Basic (E7018)**: when weldings of high level are required;
- 3) **Cellulosic (E6010)**: tipically for pipeline.

The electrode diameter and the welding current (Amp) are interdependent. The ones on the table on the side are the typical international diameters.



DC & AC Welders/Generators 130 ÷ 500A with SCR or Electromechanical technology

SW

SW welders/generators based on **SCR** technology are the result of years of evolution in the design and manufacturing know-how of our technical team, in the ceaseless search for implementation and optimization of the performances. Developed on synchronous brushless (SW-I500) and brushes (SW-F300 and SW-E220/E250) machines, thanks to the **electronic regulation of the welding current** these latest models are suitable for the heaviest applications as pipeline, assuring an excellent stability and precision of the welding and the highest compatibility with any type of electrode. Besides the typical functions of **DC welder** (220 ÷ 500A) and **AC generator**, they are also featured with **Jump Starter** and **Battery Charger** with protection against reverse polarity. Other important functions are: **Hot Start**, **Arc Force** and **Anti-Stick**.

The polycarbonate front panel is equipped with a useful arrangement for remote control.



SW-I500

SW-F300

SW-E220

ARC

The ARC series with **electromechanical** technology includes 4 strong and high performing models used as a **DC welder** (280 ÷ 400A) or an **AC generator** for mild applications requiring amperages of medium intensity. The welding current can be finely adjusted up to 36 steps, depending on the electrode diameter and the type and thickness of the material.

All these models allow to weld with the most common types of electrodes.



ARC400
ARC280

ARC300

ED

ED welders/generators with **electromechanical** technology are strong and reliable, suitable for mild applications and compatible with the most common types of electrodes.

They can be used as a **DC welder** (170 ÷ 220A) or an **AC generator** with a great precision of the welding current, manually adjustable up to 21 steps.

The light weight and the compact dimensions are ideal for realizing easy to carry engine-driven welders.

Constantly improved over the years thanks to the introduction of always new performing components and a constant evolution in the materials and production processes, nowadays the ED series is well known and appreciated all over the world, representing an absolute must for our customers.



ED220
ED200
ED170

EA

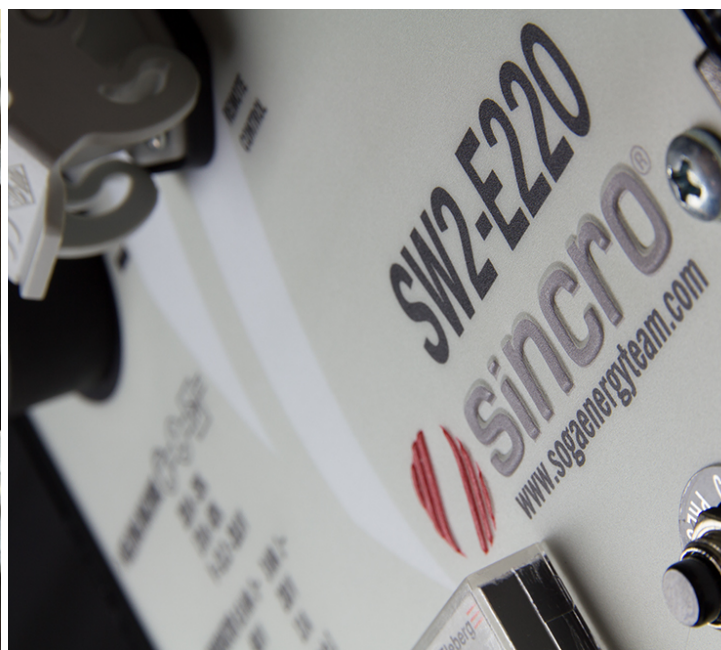
The EA series is developed on **electromechanical** technology and is particularly suitable for mild assembly works with rutile electrodes. Used as an **AC welder** (130 ÷ 200A) or an **AC generator**, these models allow the operator to manually adjust the welding current up to 14 steps.

In their original design, these AC models were the first ones Sincro developed 20 years ago, among the very first manufacturers of welders/generators specifically developed for engine-driven welders. Today, made perfect in performances, they still represent a long-seller of our company production.

EA200
EA180
EA130

ALWAYS AT WORK.

SW-I500 model is realized on IB alternator with brushless excitation system. A precise technological choice that allows to avoid any periodic maintenance operation as there are neither brushes nor slip ring. Moreover, thanks to the 12 lead exit, the use as generator is possible with many different output voltages.



POLYCARBONATE FRONT PANEL.

All models (except for ARC400 and ARC280) are equipped with an innovative polycarbonate front panel resistant both to wear and chemical agents (hydrocarbons), for a very intuitive use of each function. Its design makes our welders/generators very pleasant to use and see.

INTUITIVE WELDING REGULATION.

On the electromechanical models, the welding current can be easily adjusted manually, depending on the electrode diameter and the type and thickness of the material.

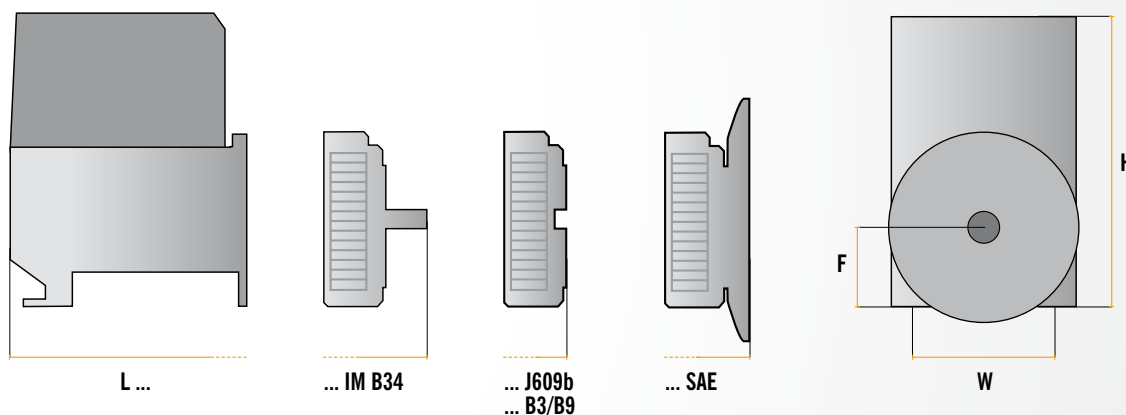
In this way job can always be carried out highly professionally, for a very smooth and uniform final result.



A GREAT CARE FOR EACH DETAIL.

We think details can make the difference in the creation of an excellent product. This is why the shields have been manufactured with the greatest care, gently engraved with Sincro logo.

main overall dimensions



SEE THE DATASHEETS
FOR FURTHER DATA

	F	L IM B34	L J609b	L B3/B9	L SAE	W	H	mass
	mm	mm	mm	mm	mm	mm	mm	Kg
SW-I500 TDC/4	160	861	N.A.	N.A.	803	254	516	220
SW-F300 TDC/2	120	494	428	428	440	200	433	88
SW-F300 MDC/2	120	494	428	428	440	200	433	88
SW-E220 TDC/2 • SW-E250 TDC/2	100	470	433	417	445	160	398	45
ARC400 TDC/2	140	565	500	500	548	220	542	110
ARC300 TDC/2	120	494	428	428	440	200	433	85
ARC300 MDC/2	120	494	428	428	440	200	433	85
ARC280 TDC/4	140	565	500	500	548	220	542	110
ED220 TDC/2 • ED240 TDC/2	100	470	433	417	445	160	335	44
ED220 MDC/2 • ED240 MDC/2	100	470	433	417	445	160	335	44
ED200 MDC/2 • ED210 MDC/2	100	470	433	417	445	160	335	43
ED170 MDC/2 • ED190 MDC/2	100	415	378	362	429	160	335	34
EA200 MAC/2 • EA220 MAC/2	100	470	433	417	445	160	335	42
EA180 MAC/2 • EA190 MAC/2	100	415	433	362	429	160	335	37
EA130 MAC/2 • EA140 MAC/2	100	415	378	362	429	160	335	32

N.A. = NOT AVAILABLE

Condizioni di garanzia

Soga garantisce ai propri clienti gli alternatori, prodotti al suo interno, per un periodo di 18 mesi a decorrere dalla data di fatturazione, oppure di 12 mesi a decorrere dalla data di prima messa in funzione, a seconda di quale delle due avvenga per prima.

Si precisa che detta garanzia è rivolta ai soli clienti di Soga ai quali direttamente risponde.

Soga non riconosce direttamente la garanzia ad alcun soggetto che, pur in possesso dei suoi prodotti, non li abbia da essa acquistati direttamente.

Entro i suddetti termini Soga si impegna a fornire gratuitamente pezzi di ricambio di quelle parti che, a giudizio di Soga o di un suo rappresentante autorizzato, presentino difetti di fabbricazione o di materiale oppure, a suo giudizio, ad effettuare la riparazione direttamente o per mezzo di officine autorizzate senza assumersi alcun onere per il trasporto.

Rimane comunque esclusa qualsiasi altra forma di responsabilità o obbligazione per altre spese, danni e perdite dirette o indirette derivanti dall'uso o dalla impossibilità d'uso dei prodotti, sia totale che parziale. La riparazione o la fornitura sostitutiva non prolungherà, né rinnoverà la durata del periodo di garanzia. La garanzia decadrà: qualora si manifestassero inconvenienti o guasti dovuti ad imperizia, utilizzo oltre ai limiti delle prestazioni nominali, se il prodotto avesse subito modifiche o se dovesse ritornare disassemblato o con dati di targa alterati o manomessi.

Warranty conditions

Soga guarantees the own alternators for a period of 18 months starting from the invoice date or 12 months starting from the first start up, whichever occurs first.

We confirm that warranty is directed only to Soga customers to which we respond. Soga does not grant warranty to those who have not directly purchased the product from the factory, in spite of the possession of it.

Within the above mentioned terms, Soga commits itself to supply free of charge those spare parts that, according to its judgment or to the one of an authorized representative, appear with manufacturing or material defects or, always to its judgment, to directly or through an authorized center carry out the repairing without undertaking transport costs. We anyhow exclude forms of responsibility or obligation for other costs, damages and direct or indirect loss caused by total or partial usage or impossible usage of the products.

The repairing or the substitution will not extend or renew the warranty duration.

Warranty will not be granted: whenever break-downs or problems may appear because of lack of experience, usage over the nominal performances, if the product had been modified or should return incomplete, disassembled or with modified nameplate data.



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