

WELDYCAR MINISAF MEGASAF

*A complete range
of self-propelled carriages
for MIG-MAG
and submerged
arc welding.*

Welding carriage applications.

All-terrain welding

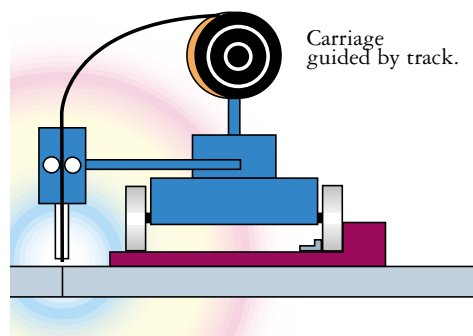
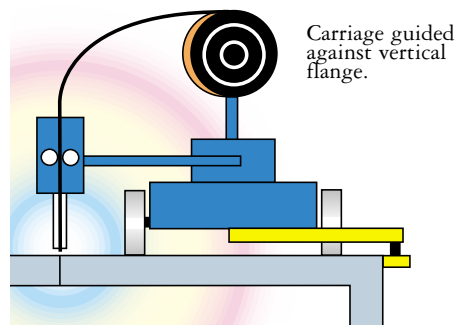
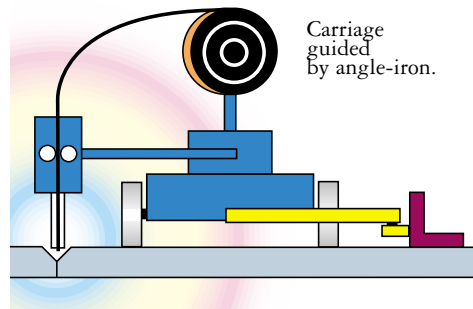
Automatic welding often requires heavy and expensive plant which can pay for itself only by this high productivity.

Also, the geometry of some parts and handling difficulties sometimes make automation difficult by conventional means (boom, gantry).

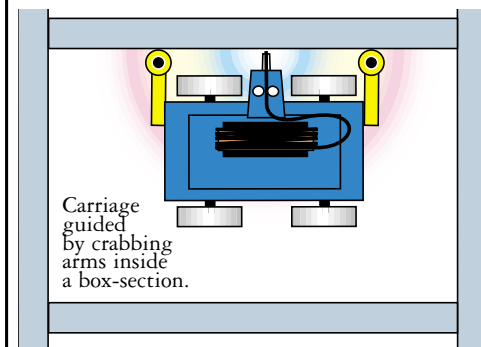
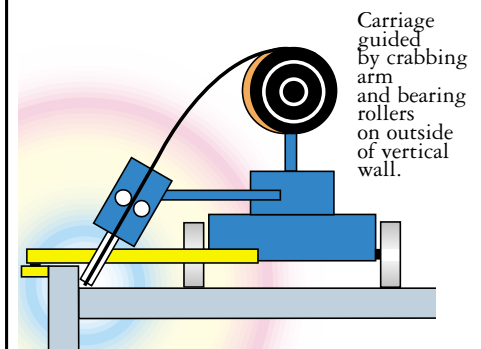
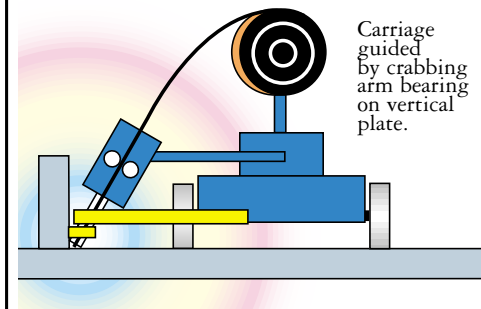
In such cases, self-propelled welding carriages are the best solution to the problems of productivity associated with the welding of large workpieces that are difficult to handle. SAF offers a range of lightweight but rugged self-propelled carriages providing the versatility and adaptability for even your most demanding applications:

- long welds,
- welding of thick plate in one or more runs,
- welding of stiffeners,
- welding in restricted spaces,
- welding inside cylinders and box-sections.

Flat downhand butt welding



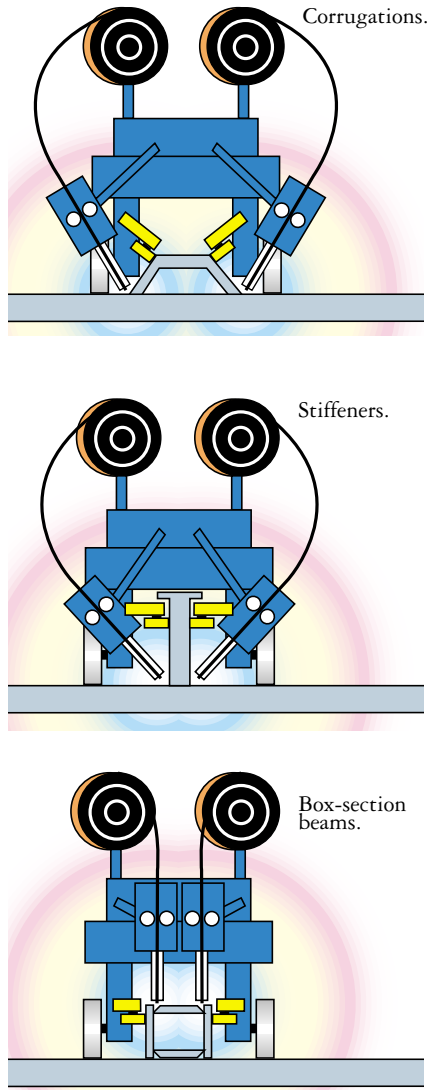
Fillet welding



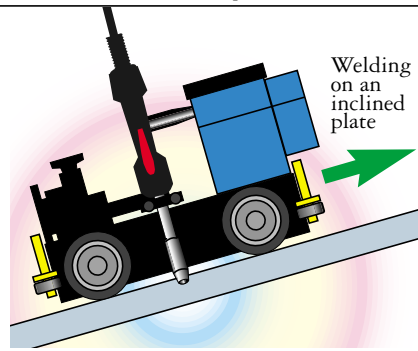
The SAF offer includes a range of carriages to suit the many applications typical of all-welded structures. Your choice will depend on welding process, size and thickness of workpieces, types of welded joint and associated preparation steps and the welding equipment to be carried.

Criteria of choice	SA welding process	MIG welding process	Automatic welding equipment	Manual welding equipment	Two-head welding
MINISAF 01-02		•		•	
MEGASAF 4	•		•		
MEGASAF 6	•		•		•
MEGASAF 7	•	•	•		•
WELDYPAR		•		•	

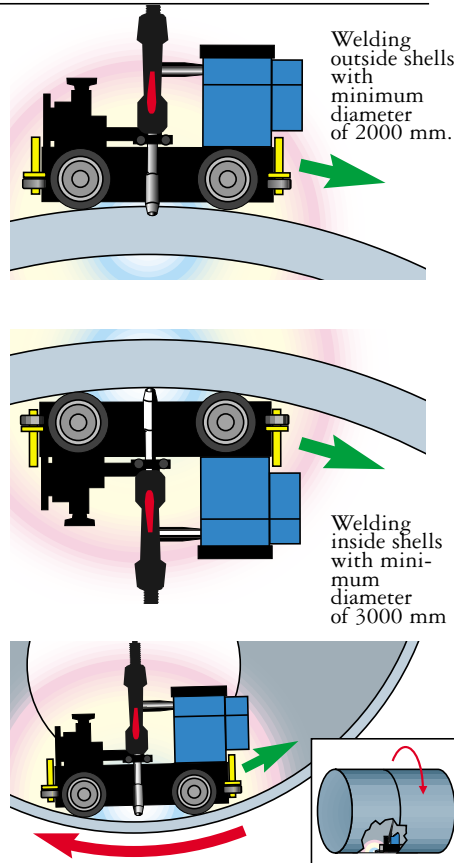
Two-head welding on flat panels



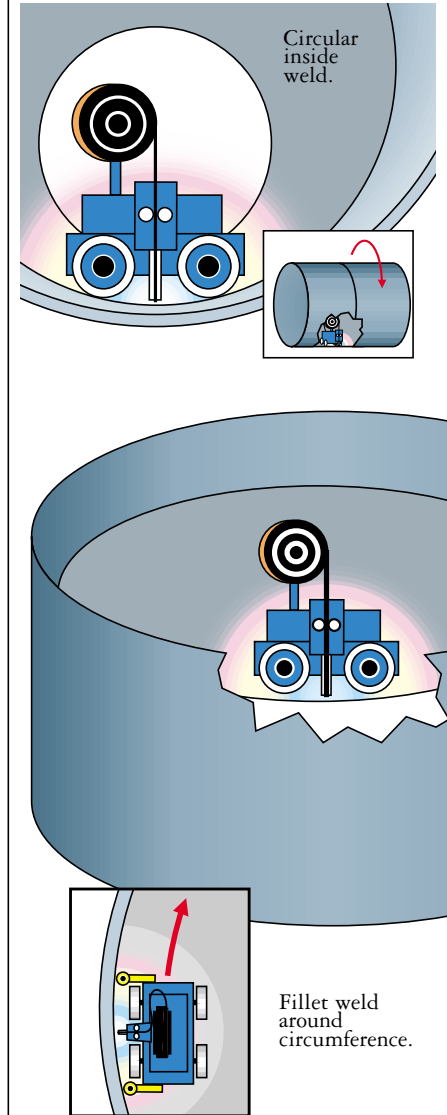
Welding on an inclined plate



Welding on shells



Circular welds in large storage tanks



Welding thick plates	Two-head welding of stiffeners, sections to flat panels	Circular welds in large storage tanks	Fillet welding guided by vertical flange	Flat downhand welding	Carriage with clutch for manual movement	Portable carriage weight ≤ 15 kg	Self-propelled carriage	
		●	●	●	●		●	MINISAF 01-02
		●	●	●	●			MEGASAF 4
●		●	●	●	●	●		MEGASAF 6
●	●		●	●*	●	●		MEGASAF 7
			●			●	●	WELDYPAR

* Depending on model

WELDYCAR: a range of self-contained carriages very light and easy to use.



WELDYCAR
4-wheel drive autonomous portable welding carriages are dedicated to mechanising MIG/MAG welding using manual equipment. They suit or can be adapted to suit many applications in industry: long seam welds (structural steelwork, carriages, etc), welding inside and outside shells (pressure vessels), welding stiffeners (shipbuilding). Simple to use and quick to prepare for use, they bring you the quality of automatic welding in return for a small investment with a quick return.

Autonomy, accuracy, ruggedness and easy maintenance.

The WELDYCAR carriage is totally autonomous. No external power supply is required. Its battery can be fully recharged in just 65 minutes, enabling it to operate continuously for 6 hours. It can be instantly added to any manual welding installation, without any connections.

Guidance principle and applications

The WELDYCAR carriage is simple and quick to position relative to the joint to be welded. As it moves, two rollers on adjustable arms bear against the workpiece.

Of simple and robust mechanical design,



the WELDYCAR positions the torch on the joint with great flexibility and has two 40 mm-travel cross slides and a ball joint for swivelling the torch.



WELDYCAR

Basic model for routine applications

WELDYCAR S

This model is particularly intended for vertical welding with oscillation of the welding torch.

WELDYCAR SP

This is the basic model plus a programming unit for continuous or discontinuous welding and programming the welded length and the total length to an accuracy of 1 mm.

Catalogue number	9130-0100	9130-0105	9130-0110
Supply voltage	Battery 14 V	Battery 14 V	Battery 14 V
Autonomy	without oscillator 6 hours continuous with oscillator 4 hours continuous	6 hours continuous 4 hours continuous	6 hours continuous 4 hours continuous
4 drive wheels diameter	75 mm Ø width 30 mm	75 mm Ø width 30 mm	75 mm Ø width 30 mm
Weight without oscillator	10 kg	10 kg	12 kg
Dimensions L x W x D	250 x 300 x 260 mm	250 x 300 x 260 mm	250 x 300 x 260 mm
Speed	5 to 70 cm/min	15 to 140 cm/min	15 to 140 cm/min
Speed presetand	yes	yes	yes
Continuous/discontinuous welding presetting of distances	no	no	yes
Fine torch adjustments	vertical 40 mm horizontal 40 mm	vertical 40 mm horizontal 40 mm	vertical 40 mm horizontal 40 mm

Spares • Battery Cat. N°: 9130-0106 • Battery charger Cat. N°: 9130-0107.

With three models, one is bound to cover your conditions of use

2000-438



Simple and easy:



the control panel is simply laid out and easy to use: a digital display is used to preset and indicate the carriage speed in cm/min.

Low weight: 10 kg



Its built-in carrying handle and its compact size make the WELDYPAR carriage a tool that is easy to carry by hand to the production site.

A photoelectric cell



Means that automatic movement of the carriage can be synchronized to striking of the arc, if required.

Add-ons

Protection kit

- includes eye protection against radiation from the arc and a pipe for connection to a welding fume suction system. Cat. N°: 9130-0108.

Oscillator

- oscillates the torch with variable speed and amplitude, connects to the 14 V battery of the carriage, reducing the autonomy of the carriage to four hours continuous operation,
 - oscillation frequency from 0 to 100 sweeps/min,
 - weight 2 kg.Cat. N°: 9130-0101.

MEGASAF 4: for the small and medium boiler making

Dedicated to light and medium pressure vessel fabrication, MEGASAF 4 is particularly recommended for Submerged Arc welding applications where access is difficult... Weighing just 58 kg (with welding equipment), MEGASAF 4 can quickly be taken anywhere welding is needed. With its modular design, different welding configurations are possible:

- flat welding in the carriage axis (by a bevelled guide front wheel rolling in the bevel),
- internal fillet joint welding (guidance by lateral crabbing arms.)
- etc ...

MEGASAF 4



Référence: 9105-3501
Releasable automatic speed.

Support equipment:

- 2 motorized polyurethane tyred and 1 steel guidance wheel,
- 2 crabbing arms,
- 1 central mast supporting the welding accessories, the wire feeds and the lifting ring,
- a vertical slideway.

Welding equipment:

- D5/2 motor gearbox unit,
- insulated reel support for maximum 30 kg reel,
- straight wire feed with shoe,
- central flux feeding with manual valve,
- 6 liters flux tank.

Electrical equipment

All controls are grouped on the SUBARC 3 control box with build-in welding and intensity display (wire speed display in option).

- Presetting and display of welding current and voltage before welding.
- Precise parameters setting with ten turn potentiometer.
- Storage of welding current and voltage during welding.
- 15 meters length* control harness.

Options

Equipment for support:

- 4 polyurethane tyred wheels
Cat. n°: 9105-3515,
- 2 steel wheels
Cat. n°: 9105-3516,
- 1 horizontal slide way
Cat. n°: 9120-5128.

Equipement for welding:

- larger apacity flux tank
Cat. n°: 9109-4442,
- wire straightener
Cat. n°: 9109-5125,
- automatic flux valve
Cat. n°: 9109-5275.

Technical specifications

	MEGASAF 4
Supply voltage	24 V and 42 V - 50-60 Hz
Overall dimensions (mm)	500 x 720 x 700
Wheel diameter (mm)	100
Polyurethane tyres	yes
Weight (carriage only) (kg)	18
Minimum diameter of shell for transversal welding (mm)	1 400
Weight (SA carriage, no wire, no flux)(kg)	58
Travel speed (cm/min)	12 to 150
Clutch	yes
Digital display	option
Guidance equipment:	
joint follower wheel	yes
crabbing arm	yes
railways	on special request
two-wheel front axis	option
Catalogue number Submerged Arc welding equipment	9105-3501

* harness of specific length: please consult us.

For more information, please consult the specification n° 1515-4632 and the standard offer LA 01-170.

MEGASAF 6: dedicated to the manufacture of big dimension beams, of box section girders and the assembly of thick sheets

Rugged and compact, the carriage is specially designed for intensive work: fabrication of large beams and box-sections, and butt-jointing of thick plate in one or more runs, plus shipbuilding, off-shore engineering and oil tankers. Based on a four-wheel self-propelled chassis, despite its compact size the welding equipment is totally stable. MEGASAF 6 is available in 2 versions:

- SUBARC 3C,
- SUBARC 5,
- MECACYCLE C.

Common options

Support Equipment:

- 4 steel wheels
cat. n°: 9105-3480,
- 4 motorized wheels
cat. n°: 9105-3475,
- 3rd guidance wheel with setting system
cat. n°: 9105-3460,
- 1 horizontal slide way
cat. n°: 9120-5128,

Welding equipment support:

- larger capacity flux tank
cat. n°: 9109-4442,
- automatic flux valve
cat. n°: 9109-4388
- recycling unit
cat. n°: 9109-5145.

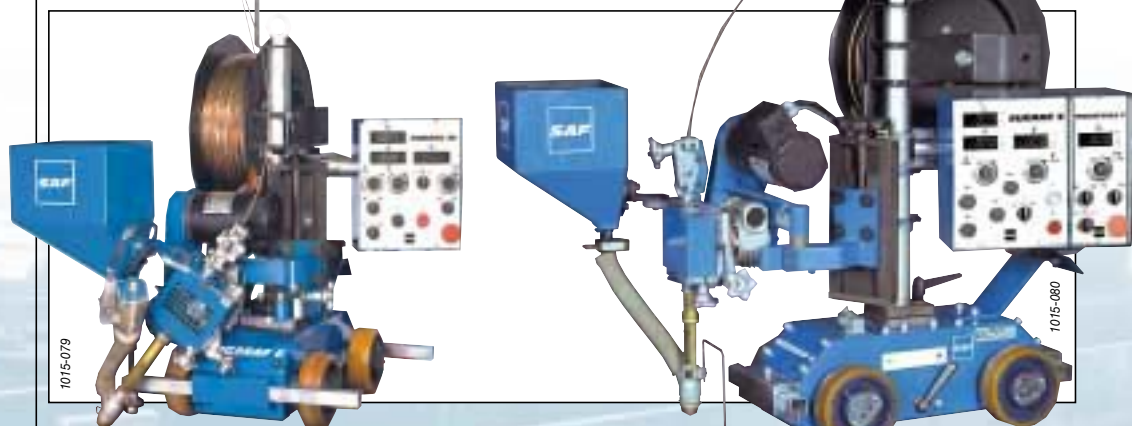
MEGASAF 6

42 V - 50-60 Hz
1 000 x 650 x 900
150
yes
44
1 600
101 (SUBARC 3C) - 105 (SUBARC 5)
10 to 200
yes
yes
option
yes
on special request
yes
9105-3401 (SUBARC 3C)
9105-3402 (SUBARC 5)

MEGASAF 6

Support Equipment:

- 2 motorized and 2 free polyurethane tyred wheels,
- 2 crabbing arms,
- 1 central mast supporting the welding accessories, the wire feeder and the lifting ring,
- 1 vertical 120 mm slide-way,
- 2 handling system (option in SUBARC 3C version)..



SUBARC 3C

Cat. n°: 9105-3401

Declutchable and equipped with DX3 motor gearbox unit and wire straighter. Single wire feeding standard diam. 3.2 mm.

Welding equipment:

- DX 3 motor gearbox unit;
- insulated reel support for maximum 30 kg wire reel;
- straight wire feed with shoe;
- central flux feeding with manual valve;
- 6 liters flux tank.

SUBARC 5

Cat. n°: 9105-3402

Declutchable and equipped with DX5 motor gearbox unit and wire straighter. Single wire feeding standard diam. 3.2 mm.

Welding equipment:

- DX 5 motor gearbox unit;

Electrical equipment SUBARC 3C

All controls are grouped on the SUBARC 3C control box with build-in welding voltage and current display (wire speed display in option).

- Presetting and display of welding voltage and current before welding.
- Precise parameters setting with ten turn potentiometer.
- Memorization of welding current and voltage after welding.
- 22 meters* length control harness.

Electrical equipment SUBARC 5

The SUBARC 5 control box is equipped with current, voltage and wire speed displays.

- Presetting and display of current and voltage parameters.
- Precise setting of parameters by ten turn potentiometer.
- Memorization of welding current and voltage after welding.
- MECACYCLE control box for movement control with welding speed display.
- Presetting and display of welding speed.
- Precise setting of welding speed with ten turn potentiometer.
- 22 meters* length control harness.

MEGASAF 7: dedicated to the welding of stiffeners, cross section pieces, buckets, boxes and flat panels.

*On-site welding of large plates is no trouble at all using a MEGASAF self-propelled carriage.
The MEGASAF 7 carriage is ideal for welding stiffeners, sections, troughs and box-sections. It can be set up for the special circumstances encountered in fabricating flat panels, capitalizing on SAF's experience with the MEGASAF carriages. It combines the ruggedness which is essential for on-site use with adaptability, fast and easy preparation for use and easy mobility using a crane.*

MEGASAF 7

A multipurpose carriage:

There is a range of four carriages with different facilities to suit different welding processes and different types and sizes of workpiece.

Model	Cat. n°	Workpiece dimensions H x W (mm)
MEGASAF 7-25	9120-9940	250 x 250 mm
MEGASAF 7-45	9120-9941	450 x 450 mm
MEGASAF 7-65	9120-9945	650 x 450 mm
MEGASAF 7-85	9120-9942	850 x 450 mm

Easy handling plus fast and easy preparation:

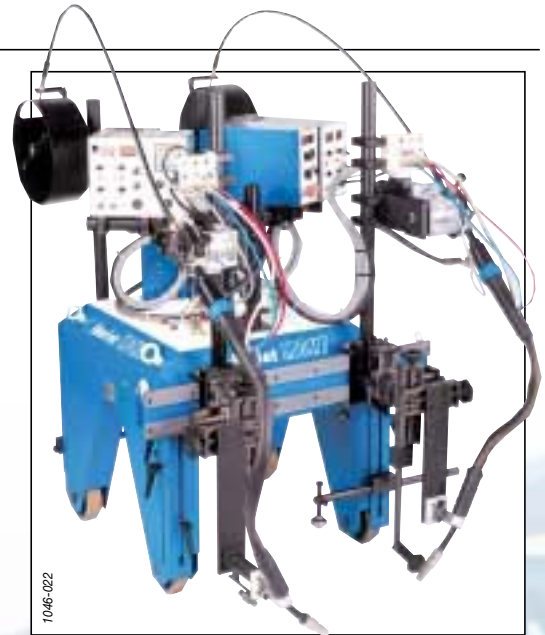
the drive motor of the carriage incorporates a clutch.

This feature and the two retractable arms allow the operator to move the carriage manually onto the weld. Quick-fit welding harness connectors and four lifting rings make this carriage easy to move around the production site in total safety.

Perfect welds:

the two welding heads can be positioned face-to-face or offset and come with a bidirectional mechanical sensing system which guarantees totally straight welds. The powerful drive motor and the four polyurethane tyred wheels ensure non-slip traction and a constant welding speed. Two "crabbing" arms with bearing rollers or rails (to order) guide the carriage over the workpiece. Shipped complete and ready for use, all models can carry two automatic welding equipments for the following processes:

- solid wire or cored wire MIG/MAG welding,
- single-wire or twin thin wire SUBMERGED ARC welding.



MEGASAF 7-45 carriage equipped for MIG welding

The distance between the two torches is continuously variable (from 0 up to 450 mm, depending on the model), whether the torches are face-to-face or offset.

The MEGASAF 7 carriage comes with a control unit offering manual or automatic operation with carriage start-up synchronized to welding, continuous adjustment of the travel speed, welding direction selection, synchronized starting of both welding heads plus option to select only one of the two heads.

Technical specifications

		MEGASAF 7
Supply voltage		42 V - 6 A 50-60 Hz
Overall dimensions (mm)		depends on model see specifications
Wheel diameter (mm)		150
Polyurethane tyres		yes
Weight (carriage only) (kg)		96
Weight (SA carriage, no wire, no flux) (kg)		186
Travel speed (cm/min)		11 to 165
Ten-turn potentiometer		yes
FWD/REV full-stop safety		yes
Digital display of travel speed		option
Speed preset		option
Continuous/discontinuous welding with distance preset		option
Guidance equipment:	joint follower wheel	no
	crabbing arm	yes
	railways	no
Catalogue number carriage only		depends on model see specifications
Catalogue number MIG welding equipment		depends on model see specifications
Catalogue number submerged arc welding equipment		depends on model see specifications

Options

Carriage equipment:

- an additional selector module for continuous and discontinuous or alternate welding with preselection of distances: Cat. No. 9120-9943,
- digital display of travel speed in cm/min: Cat. No. 9220-9835.

MINISAF 01/02: Portable all-terrain carriages dedicated to MIG-MAG welding.

Cost effective tool for a moderate investment, the MINISAF 01 and MINISAF 02 portable carriages are for use with manual welding equipment. They hold and automatically move forward a PROMIG manual torch (not supplied). They are recommended for all tasks entailing fillet or butt welding with guidance against a vertical flange or by means of a track.

MINISAF 01/02



Cat. n°: 9120-9250

Automatic welding quality:

MINISAF carriages bring you the quality of automatic MIG welding thanks to their faultless stability, smooth regular motion (thanks to their four-wheel drive) and strong friction on all surfaces.

Fast and easy to set up:

Weighing just 15 kg, the MINISAF 01 and MINISAF 02 carriages can be carried to the production site, so avoiding unnecessary and unproductive handling of the workpieces. A plug-in electrical connection to the carriage and a quick-release torch mount collar facilitate their use. The use of a PROMIG

manual torch lets you resume welding and finish off at the end of the workpiece using one and the same too.

Operator comfort and protection with environment protection:

The MINISAF 01 and MINISAF 02 carriages protect the operator's eyes against radiation from the arc and incorporate a welding fumes extraction device to protect the operator and the environment. They also free the welder from working in a tiring and monotonous position.

MINISAF 01 programmable carriage:

- continuous or discontinuous welding, with digital programming of distances in millimeters,
- digital setting and display of carriage speed,
- manual or automatic operation, with carriage start-up synchronized to welding,
- forward and reverse full stop safety device to stop motion and terminate welding on encountering an obstacle,
- manual control of wire feeding,
- torch support with fine adjustment by two slideways with 50 mm travel,
- carrying handle.



MINISAF 02 carriage:

- continuous welding with digital setting of carriage speed,
- manual or automatic operation with carriage start-up synchronized to welding,
- forward and reverse full stop safety device to stop motion and terminate welding on encountering an obstacle,
- manual control of wire feeding,
- torch support with fine adjustment by two slideways with 50 mm travel,
- carrying handle.

Options

Carriage equipment:

- 2 m track, quick and easy to connect end-to-end. Cat. No. 9120-9252,
- 220-500 V/24 V carriage power supply unit. Cat. No. 9300-4020.

Technical specifications

	MINISAF 01	MINISAF 02
Supply voltage	24 V - 3 A 50-60 Hz	24 V - 3 A 50-60 Hz
Overall dimensions (mm)	420 x 240 x 385	420 x 240 x 385
Wheel diameter (mm)	100	100
Polyurethane tyres	yes	yes
Weight (carriage only) (kg)	15	15
Travel speed (cm/min)	30 to 300	30 to 300
Ten-turn potentiometer	yes	yes
FWD/REV full-stop safety	yes	yes
Digital display of travel speed	yes	yes
Speed preset	yes	no
Continuous/discontinuous welding with distance preset	yes	no
Guidance equipment:		
crabbing arm	yes	yes
railways	option	option
Catalogue number carriage only	9120-9249	9120-9250

For more information, please consult the specification n° 1515-5211.

