SAF-FRO

DIGIPULS III 420/520
DIGISTEEL III 420/520

Boost your welding performance and save energy

www.saf-fro.com

DIGIPULS III / DIGISTEEL III

DIGIPULS III / DIGISTEEL III are the only product on the MIG/MAG welding market offering superior quality welding and advanced welding processes with a simple interface at a competitive price. Moreover DIGIPULS III is designed in a modular system to fit with all users' requirements.

ECO FRIENDLY WELDING & CUTTING

Superior quality welding with advanced processes and features

- New inverter generation offering 30% less primary consumption regarding conventionnal equipment. Due to its performant efficiency you are saving significant amount on your energy cost
- More than 100 synergic lines for any base material
- Full range of processes:
  - Standard MIG/MAG
  - Pulsed MIG/MAG
  - Special arc transfer
  - MIG brazing
  - MMA coated electrodes
  - Gouging *(up to 6.3 mm diameter electrode)*
- Powerful installation up to 500 A at 60%
- Full A1 automatic interface.
  This level of synchronization does not require an additional card, for simpler automatisation
- Storage of 99 welding programs *(with expert wire feeder DVU P500 or advanced remote control RC JOB)*
- Parameter locking with a digit code *(with expert wire feeder DVU P500 or advanced remote control RC JOB)*.
  When this function is activated, the welder can still fine-tune the parameters in a +/- 20% range
- Call programs by trigger torch

The DIGIPULS/DIGISTEEL high tech MIG/MAG equipment fits perfectly with the needs of the most demanding welding applications in various segments. Whatever your requirements, you will find with the DIGIPULS/DIGISTEEL a superior welding quality with advanced processes with simple settings through an easy to use interface.

A user friendly interface for a really easy to use front panel

- Power source and wire feeder

A modular concept to fit with all users' requirements

Specify and build your own installation:

- Power source
- Wire feeders
- Cooling unit
- Harnesses *(up to 50 m for shipbuilding applications)*
- Trolleys for the installation and the wire-feeder
- Remote control
- Torches *(standard, with potentiometer, push-pull, automatic...)*

More benefits for the user

- Small machine for easier access
- Light installation *(34 kg for the power source)*
- Compatible with motor generator
- A powerful 4-wheel feeder unit

WARRANTY 2 YEARS + 1 YEAR FREE WITH YOUR REGISTRATION

Focus on advanced processes

Speed Short Arc™ (SSA™) | MIG Brazing | Cold Double Pulse | High Penetration Speed (HPS™)

Speed Short Arc™ (SSA™)

Speed Short Arc™ provides a transfer mode using short circuits in a wire speed domain usually governed by globular conditions.

The current values used in this mode are very different from those used in conventional “short arc” operation.

Faster wire speeds require a medium current together with a large peak current in order to form and detach the droplet more quickly.

High Penetration Speed (HPS™)

HPS (High Penetration Speed) is welding characteristic available with the high range of MIG/MAG inverter power sources manufactured by Air Liquide Welding. Using welding current usually given by Spray Arc behaviour, HPS arc transfer is combining two different main advantages:

- Provides lower voltage and so lower energy,
- A very accurate and dynamic regulation of the welding parameters.

This association is able to carry out very high productivity with the optimal welding performance.

Puls

Puls mode is a Puls current waveform offering a very stable arc without any spatters. This is the best to weld thin sheets in stainless steel and aluminium. Moreover, you will keep high performance whatever your welding position.

Soft Silence Pulse™ (SSP™)

This is a pulse transfer with a special waveform producing a soft and silent arc. The behavior of the Soft silent puls is very suitable for stainless steel application request the best wetting possible.

Silence because the noise of the arc is divided by two regarding a normal puls mode what can be really appreciated when you have to weld in a confident area.

Moreover the stability given by this transfer allows to weld in all positions and especially in vertical up without weaving when it is associated to a sequencer welding cycle.

Sequencer

The sequencer or cold double Puls produces very high quality welds on thin material while avoiding distortion.

The operating technique is made easier due to good control of the weld pool even on badly-prepared sheets. This sequencer mode automatically chains arc and cold arc regimes together.

The sequencer is available within flat or Puls current.

MIG Brazing

MIG brazing appeared in the late 1990’ s as a better replacement for flame brazing.

Since this time, it has gone from strength to strength and has become an essential process in automobile construction.

The use of digital technology further increases the performance of this process both from the point of view of the quality of the joint produced, the productivity obtained and also the preservation of coatings applied to steel sheets for corrosion protection.

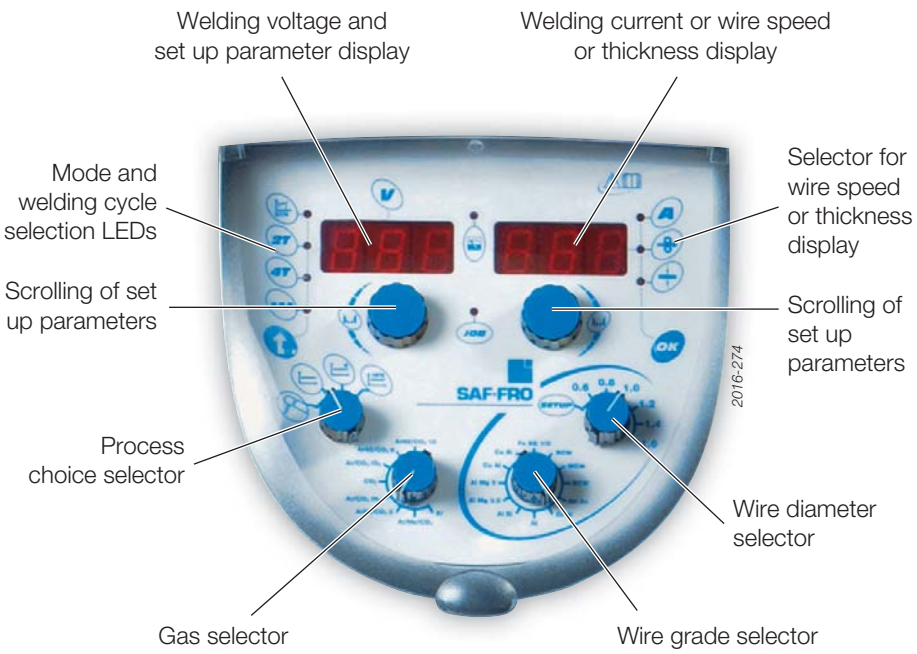
Which process in which machine *– overview table*

	DIGISTEEL III 420	DIGISTEEL III 520	DIGIPULS III 420	DIGIPULS III 520
SSA *(Speed short Arc)*	✓	✓	✓	✓
HPS *(High Penetration Speed)*	✓	✓	✓	✓
PULS			✓	✓
SSP *(Soft Silent Puls)*			✓	✓
SEQUENCER	✓	✓	✓	✓
MIG BRAZING	✓	✓	✓	✓

Front panels are easy to understand and use

DIGIPULS/DIGISTEEL power source and wire feeder have been designed to improve welding processes. They are built with a user interface designed for a really easy to understand and to use front panel.

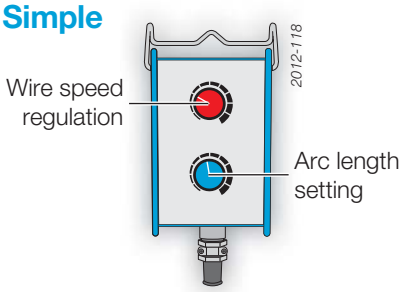
Power source



Remote control

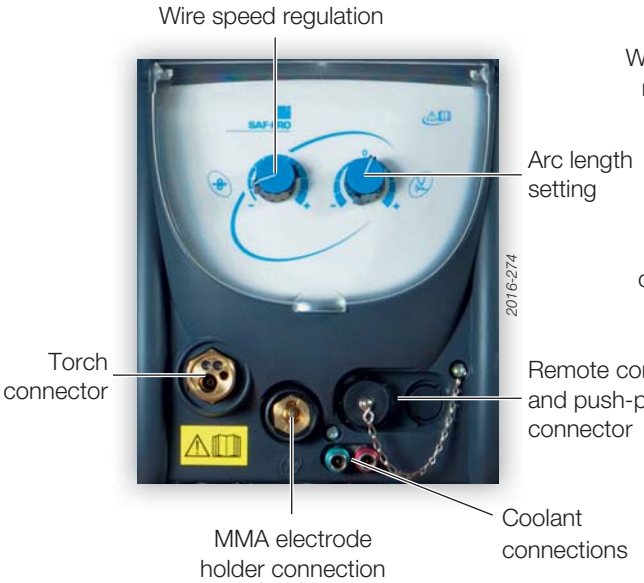
RC-JOB

Simple

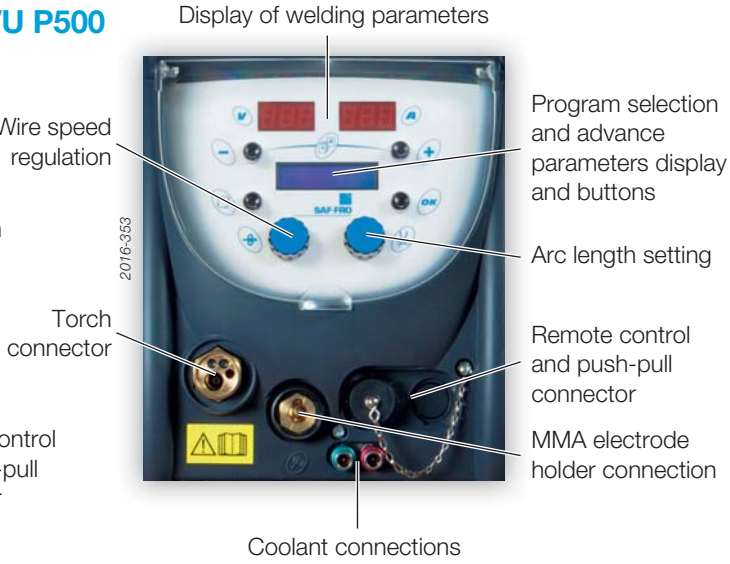


Wire feeders

DVU P400



DVU P500



Technical characteristics



Power source	DIGIPULS III 420 DIGISTEEL III 420	DIGIPULS III 520 DIGISTEEL III 520
PRIMARY		
Power supply – 3 Phases - 50/60 Hz	400 V (+ 20% / - 20%)	
Maximum primary consumption (100%)	26 A	33,9 A
Temporised fuses	25 A	32 A
Power factor	0.96	0.94
Efficiency	87%	89%
SECONDARY		
Open circuit voltage	73 V	
Welding range	15 A - 420 A	15 A - 500 A
Duty cycle 60%	420 A*	500 A
Duty cycle 100%	350 A	450 A
APPLICATION		
Processes	MIG-MAG / Speed Short Arc™ / MIG-MAG pulsed / High Penetration Speed (HPS) / Cold Double Pulse / MIG Brazing / MMA / Gouging / Soft Silent Puls (SSP)	
Programs	99 (with expert wire feeder or RC JOB)	
GENERAL		
Standard	EN 60974-1 - EN 60974-10	
Protection index	IP 23	
Dimensions (l x w x h)	720 x 295 x 525 mm	
Weight	34 kg	40 kg

Wire feeder	DVU P400	DVU P500 expert
Rollers	4 drive rollers	
Wire speed	1 to 25 m/min	
Wire Ø - Carbon steel - Stainless steel	0.6 / 0.8 / 1.0 / 1.2 / 1.4 / 1.6 mm	
Wire Ø Cored wires	1.0 / 1.2 / 1.4 / 1.6 mm	
Wire Ø Aluminium	1.0 / 1.2 / 1.4 / 1.6 mm	
Regulation	2 potentiometers	2 encoders
Additional feature	-	Program management
Display	-	3 LCD displays
GENERAL		
Protection / Insulation	IP 23S - H	
Standards	EN 60974-5 - EN 60974-10	
Dimensions (l x w x h)	265 x 590 x 383 mm	
Weight	17.5 kg	

Cooling unit	COOLER III
Cooling power	1.3 kW
Maximum pressure	4.5 bar
Dimensions (l x w x h)	720 x 280 x 270 mm
Weight	16 kg

* DIGISTEEL III 420 (420A @ 40%)

To order

The modular concept of DIGIPULS III / DIGISTEEL III allows you to build the perfect configuration for your requirement.
From offshore & shipbuilding to boiler makers, train production and small workshops.

1 Power sources

2016-525 2016-368

420 A @ 60 %	DIGIPULS III 420	**W000383661**
500 A @ 60 %	DIGIPULS III 520	**W000383662**

2016-273 2016-369

420 A @ 60 %	DIGISTEEL III 420	**W000383615**
500 A @ 60 %	DIGISTEEL III 520	**W000383617**

2 Cooling unit

2010-464r

COOLER III	**W000273516**
Safety device for cooler	**W000376539**

3 Wire feeders

2016-384 2016-388

Standard

DVU P400 (Standard)	**W000275266**
DVU P500 (Expert)	**W000275267**

Expert

- 100 programs
- possibility to lock welding parameters
- LCD display

4 Trolley for installation

2015-030

TROLLEY II
W000383000

5 Trolley On site

2011-377

Trolley On site
W000372274

6 Trolley for wire feeder

2010-462

TROLLEY WF II
W000275908

7 Support for wire feeder in vertical suspension

W000377985

8 Harnesses

Length	Air	Water	
		Standard	Aluminium
2 m	**W000275894**	**W000275898**	**W000371044**
5 m	**W000275895**	**W000275899**	**W000371045**
10 m	**W000275896**	**W000275900**	**W000371175**
15 m	**W000275897**	**W000275901**	**W000371174**
25 m	**W000276901**	**W000276902**	**W000371239**
30 m	**W000371246**	-	-
40 m	**W000371245**	-	-
50 m	**W000371244**	-	-

9 Push-pull Puls II electronic circuit

2011-113

Push-pull puls II
W000275907

Allowing to connect a push-pull torch or gun.

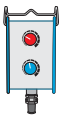
10 Flowmeter to mesure gas flowrate

Flowmeter	**W000275905**

11 Remote control

2008-778

RC JOB (10 m)
W000273134



RC SIMPLE (10 m)
W000275904

12 Anti-dust filter for power sourc protection

2011-458

W000373703

13 Aluminium welding kit

ALUKIT DVU 1.0 -1.2	**W000277622**
ALUKIT DVU 1.2-1.6	**W000277623**

A composition of wire guides and rollers for perfect aluminium welding

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CUSTOMER ASSISTANCE POLICY

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectriceurope.com for any updated information.

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