FastMig

SF 52W, SF 53W

Operating manual EN

Bruksanvisning DA

Gebrauchsanweisung DE

Manual de instrucciones ES

Käyttöohje FI

Manuel d'utilisation FR

Manuale d'uso IT

Gebruiksaanwijzing NL

Brugsanvisning NO

Instrukcja obsługi PL

Manual de utilização PT

Инструкции по эксплуатации RU

Bruksanvisning SV

操作手册 ZH

KEMPPI
The Joy of Welding

OPERATING MANUAL

English

CONTENTS

EN

1. PREFACE

1.1 General

Congratulations on choosing the SF panel. Used correctly, Kemppi products can significantly increase the productivity of your welding, and provide years of economical service.

This operating manual contains important information on the use, maintenance and safety of your Kemppi product. The technical specifications of the equipment can be found at the end of the manual.

Please read the manual carefully before using the equipment for the first time. For your own safety and that of your working environment, pay particular attention to the safety instructions in the manual.

For more information on Kemppi products, contact Kemppi Oy, consult an authorised Kemppi dealer, or visit the Kemppi web site at www.kemppi.com.

The specifications presented in this manual are subject to change without prior notice.

Important notes

Items in the manual that require particular attention in order to minimise damage and personal harm are indicated with the *'NOTE!'* notation. Read these sections carefully and follow their instructions.

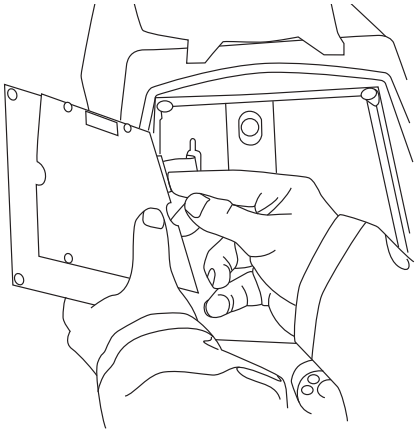
Disclaimer

While every effort has been made to ensure that the information contained in this guide is accurate and complete, no liability can be accepted for any errors or omissions. Kemppi reserves the right to change the specification of the product described at any time without prior notice. Do not copy, record, reproduce or transmit the contents of this guide without prior permission from Kemppi.

2. USE

FastMig SF 52W and SF 53W control panels are designed to be used only with synergic power sources FastMig KMS 300, 400, or 500. SF 52W panel can be mounted to MXF 63 (200 mm wire spool) wire feeder and SF 53W panel to MXF 65 and 67 (300 mm wire spool) wire feeders.

2.1 Connecting and mounting the panel



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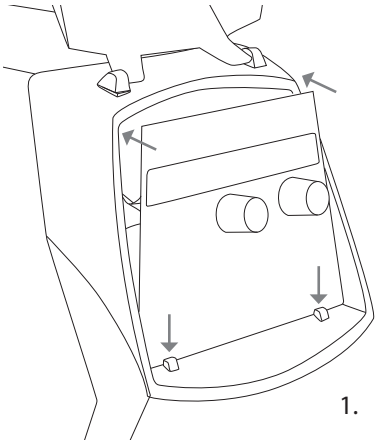
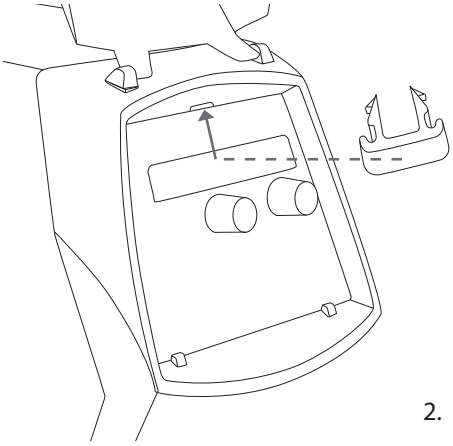
Fasten the ribbon cable connector from the MXF wire feed unit to the function panel.

MXF 65



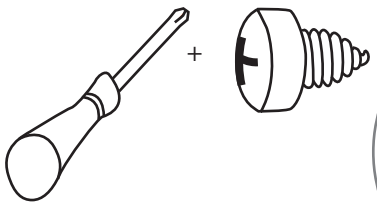
1.

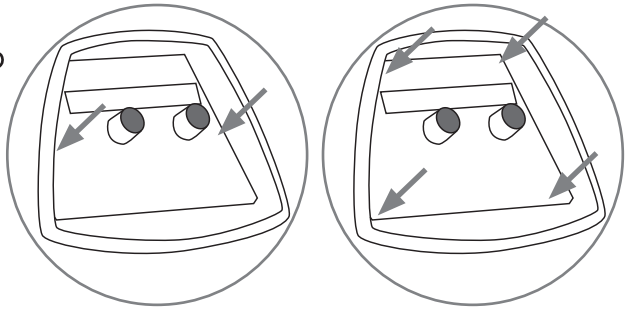


2.

1. Place the bottom edge of the panel behind the securing clips on the machine. Remove the fixing pin from the top edge with, for example, a screwdriver. Then gently push the upper part of the panel into place. Make sure that the cables do not get damaged, continue gently pushing the upper part of the panel until it clips into place.
2. Finally secure the panel into place with the additional black plastic security clip provided (MXF 65 only). Ensure that the clip is positioned correctly. You will notice that the clip does not seat snuggly if it's positioned upside down.

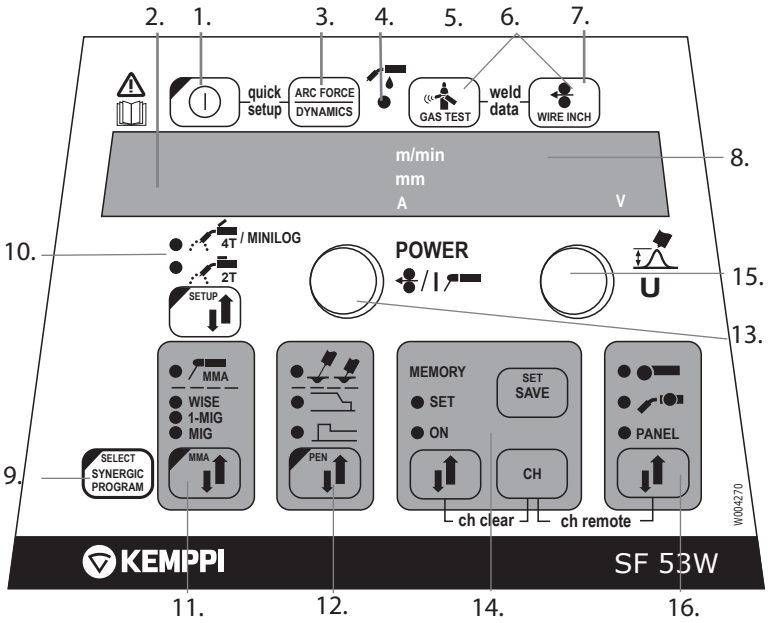
MXF 63 + MXF 67





MXF 63 MXF 67

2.2 Functions of SF 52W and SF 53W function panel



1. ON/OFF button
2. a) Wire feed speed/welding current/sheet thickness display
   b) Selected SETUP entry display
3. MIG dynamics/MMA Arc Force/Wise Forming Pulse selection **)
4. Display of air/liquid cooled MIG gun (selection from setup)
5. Gas test
6. Weld data: Show last used welding parameters in displays
7. Wire inch
8. a) Welding voltage display
   b) Selection display for adjustable parameters
9. a) 1-MIG/WISE synergic welding program check **)
   b) 1-MIG/WISE synergic welding program selection (long press) **)
10. a) Selection of switching logic: 2T/4T/4T Minilog *)
    b) Long press: Setting the basic parameters (SETUP)
11. Selection of welding process MIG, 1-MIG, MMA, WISE **)
12. Selection of additional MIG functions/WisePenetration **) (long press)
13. a) Adjustment of wire feed speed
    b) Adjustment of welding power setting 1-MIG/WiseRoot/WiseThin **
    c) Adjustment of MMA current
    d) Selection of SETUP parameter
    e) Selection of 1-MIG/WiseRoot/WiseThin welding program (material group) **
14. Memory channels, storage of MIG parameters
15. a) Welding voltage adjustment
    b) Adjustment of length of welding arc (1-MIG)
    c) Adjustment of MIG dynamics
    d) Adjustment of SETUP parameter
    e) Selection of 1-MIG/WiseRoot/WiseThin welding program (program number) **
    f) WiseRoot and WiseThin base current adjustment **
16. Manual control/remote control unit selection

*) Minilog is not included in standard delivery.

**) Wise products are available as optional welding process solutions. Not included in the standard delivery. Please visit www.kemppi.com or Kemppi Datastore.

2.3 SF 52W and SF 53W operations

ON/OFF button (1)

The wire feed unit remains in the OFF position when the power source is switched on, thus preventing start-up. 'OFF' is shown on the display.

When the ON/OFF button is pressed for more than 1 second, the unit starts up. The unit is now ready for welding and will automatically return back to it previous position, before the power was cut off. The wire feed unit starts up also by pressing three (short) times the switch of the welding gun.

Basic settings and displays

With MIG welding the wire feed speed is set via left potentiometer (control knob) and the value is shown on the left display. The welding voltage is set via right potentiometer (control knob) and the value is shown on the right display. During welding, the left display shows the actual welding current value and the display on the right shows the welding voltage.

With electrode welding (MMA) the welding current value is set via the potentiometer and the value is shown on the left display. The display on the right shows the idling voltage of the power source. During welding the left display shows the actual welding current value and the display on the right shows the welding voltage.

When MIG dynamics/electrode welding Arc force adjustment is activated with Arc Force/ Dynamics button the value is adjusted via right potentiometer (control knob) (see the information on adjustment of MIG dynamics/arc force).

With Synergic 1-MIG welding, the power value is set via left potentiometer (control knob) and the length of the arc via right potentiometer (control knob) (see '1-MIG welding').

Adjustment of MIG dynamics/Arc Force (3)

With MIG welding dynamics adjustment is influenced on welding stability and spatter amount. Zero setting is recommended basic setting. Values –> min (-1 ... -9), softer arc for reduced spatter amount. Values –> max (1 ... 9), harder arc for increased stability and when 100 % CO_2 shielding gas is used when welding steel.

With electrode welding Arc Force adjustment is influenced on welding stability. Adjustment is needed for using different types of electrodes. Control range (-9 ... 0) is commonly used for welding electrodes for stainless steel. Control range (0 ... +9) is used for harder arc characteristic to increase stability, e.g. for welding with thicker basic electrodes and using lower current value than recommendated. Factory set value (0) is a good general use for adjusting the roughness of the arc.

Indication of liquid-cooled MIG gun (4)

You can activate either liquid- or air-cooled MIG gun with a setup parameter. For more information, see chapter 2.6.

If the LED (4) is lit, liquid-cooling is activated in the system. In this case, ensure that you have connected a liquid-cooled MIG gun to the equipment. The cooling units starts on the next machine startup.

Gas test (5)

The gas test button opens the gas valve without activating the wire feed or power source. Gas flows for 20 seconds by default. The display shows the remaining gas flow time. The default time of gas flow can be adjusted via the right-hand potentiometer within a range of 0 to 60 seconds. The new time setting is recorded in the memory. The gas flow can be discontinued by pressing the ON/OFF button or the start switch of the gun.

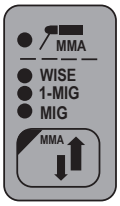
Weld data (6)

The weld data function is activated by pressing buttons 5 and 7 simultaneously. The weld data function returns the welding current and voltage values to the displays that were in use during the last weld.

Wire inch (7)

The wire inch button starts the wire feed motor without opening the gas valve and without engaging the power source. The default wire feed speed is 5 m/min. The speed can be adjusted via the right-hand potentiometer. When the button is released, the wire feed stops. Operation returns to normal approx. 3 seconds after release of the button or if the ON/OFF button is pressed briefly.

Selection of welding process (11)



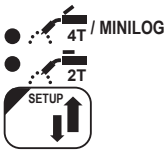
The welding process – normal MIG, 1-MIG or Wise – can be chosen by the welding process selection button. In normal MIG welding wire feed speed and welding voltage is adjusted separately. In synergic 1-MIG and Wise welding the welding voltage and other parametres related to welding are optimally bound to each other! In synergic welding the setting for power and arc lenght are adjusted.

Wise welding is the facility provided separately, so the function is not in every equipment.

Electrode welding (MMA) is selected by pressing the button for >1 second.

NOTE! *When electrode welding is selected, the power source, the electrode holder connected to it and the MIG gun become energised (open circuit voltage).*

Selection of MIG operating procedure (10)



MIG 2T: MIG welding with two-sequence procedure of welding gun start switch
1. switch pressed: welding starts
2. switch released: welding stops

MIG 4T: MIG welding with four-sequence procedure of welding gun start switch
1. switch pressed: shielding gas flow starts
2. switch released: welding starts
3. switch pressed: welding stops
4. switch released: shielding gas flow stops

Minilog: When Minilog is selected, 4T/Minilog LED flashes. Minilog is an additional function, which can be purchased separately. (Minilog is also referred as 'Matchlog' in DataStore.)

Without Minilog license, press of the button chooses between 2T and 4T.

Setup (10)

When the adjustment of SETUP parameters has been confirmed with a long press of the SETUP button (10), the adjustable parameter is selected via left potentiometer (control knob) and the name of the parameter is shown on the left display. The parameter's value is set via right potentiometer (control knob) and the value is shown on the display on the right (see 'SETUP functions').

Synergic 1-MIG or Wise welding (9, 11)

In Synergic 1-MIG welding, the optimal welding parameters for the welding wires and gas used are recorded in the unit. The welding is controlled by adjusting the welding power and arc length.

Synergic Wise processes are additional functions, which can be purchased separately.

Welding program selection:

Before starting to weld, a welding program suitable for the welding wire and gas used must be chosen based on this Operating Manual.

Welding program selection is activated by pressing Synergic Program button longer than one second. In this case both displays begin to flash and the material group is selected from the left-hand potentiometer and the welding program for the material group in question from the right potentiometer; see the enclosed table.

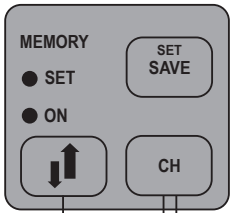
The selected programme is immediately recorded in the memory. To get back to normal status press ON/OFF (1) key, or Synergic PROGRAM button (9).

Use of a selected welding program:

Select the relevant welding process with the 1-MIG selection button (11). Check that the welding program corresponds to the welding wire and shield gas in use. The check is performed by briefly pressing the Synergic PROGRAM button (9), after which the displays show the material group and the welding program number. Consult the above-mentioned table for the wire type and gas that correspond with the welding program.

Set the desired welding power via the left-hand potentiometer (control knob) and the arc length via the potentiometer (control knob) on the right.

Memory functions (15)



Storage of settings

The memory functions can be used to record useful welding values in the memory. There are ten different memory locations: 0 … 9.

In addition to welding values (wire feed speed, welding voltage), function options such as 2T/4T, Creep Start, and Crater Level are recorded in the memory.

Storage in memory is performed as follows:

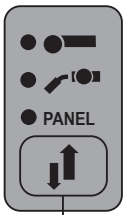
1. Press the MEMORY button twice; the SET light begins to flash if the channel is not in use. If the channel is in use, the light remains lit. If the memory is empty, press the MEMORY key once to get in SET mode.
2. Select the desired memory channel with the CH key.
3. Make the settings and store them in the memory by pressing the SAVE button.
4. Press the MEMORY key twice. Notice that the ON light is lit.
5. Begin welding.

If you wish to change some values, the light must be switched from the ON setting to the SET setting to enable you to select the required parameters. Press the SAVE button to complete the procedure. It is also possible to save the parameters of the current weld by pressing SET when the memory function is in OFF status (all lights off). The channel can be cleared by pressing MEMORY and the CH button simultaneously in SET mode.

Use of stored settings

1. Press the MEMORY button.
2. Select the memory channel via the CH button.
3. Begin welding.

Remote Selection Button (17)



Short Press: Panel /Gun Remote / Hand remote selection. If remote auto recognition is selected ON, only those remote controls which can be found are selected.

Long Press: CH remote function ON/OFF. Gun remote or Hand remote control must be first selected before CH remote function can be selected ON/OFF. When active, memory channels are selectable from the remote control device.

The Ch remote function enables selection of memory channels via the selection controller located on the gun. The function is activated by pressing REMOTE and CH buttons simultaneously. When the CH-remote is activated the light in remote control or in gun control starts to flash.

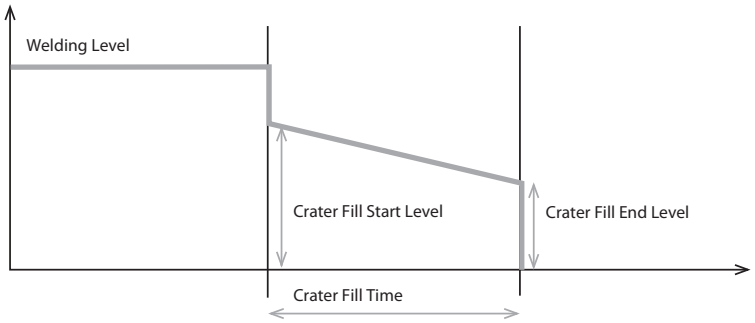
2.4 Additional welding functions

Activation with the MIG function selection button (11)

The selection button for additional MIG functions can be used to activate the Hot Start, Crater Fill or WisePenetration (licence required) function. Further presses of the selection button can select one or more of the above functions. Only the available additional functions for each method can be selected.

- **HotStart function** is meant to reduce initial welding errors when welding highly heat-conductive materials such as aluminium. Hot Start can be selected when using Synergic 1-MIG welding and when the 4T operating mode is selected. In this case, when the start switch of the gun is held down, a fixed pre-gas time is displayed after which welding starts at the level determined by the SETUP mode's Hot Start parameter, returning to the normal level when the gun switch is released.
- **WisePenetration™** is a welding function for delivering constant welding power regardless of changes in the stick out length. It is an optional feature, which can be purchased through Kemppi DataStore.
- **Crater Fill** is meant to reduce welding defects caused by end cratering. The Crater Fill function can be selected when using Synergic 1-MIG welding and when the 4T operating mode is selected. When the gun switch is pressed down in connection with termination of welding, the welding power drops to the crater-filling level selected previously. The crater filling function is discontinued by releasing the gun switch.

  NOTE! *In crater fill, the initial value of the welding power must be greater than the final value, and therefore the adjustment ranges for the initial and final values are restricted automatically, if necessary.*



Parameters related to these functions are set via the SETUP function (see 'SETUP functions').

Stopping is performed as with the normal 4T function.

The values of parameters related to additional MIG functions can be changed either with the SETUP function (see 'SETUP') or with the Quick SETUP function. Quick SETUP is activated by simultaneously pressing buttons 1 and 3. In this way, parameters related to MIG additional functions can be set.

Parameters are selected for adjustment via potentiometer on the left. The value of the parameter is set via potentiometer on the right. The value is immediately recorded in the memory.

Activation through SETUP

Other additional MIG functions are activated through SETUP.

- **Creep Start** is meant to facilitate the initial weld – e.g., when welding with a high wire feed speed. The wire feed speed is kept low until the wire touches the work piece and the current begins to flow. Creep Start can be selected with normal MIG welding or with Synergic 1-MIG welding.
- **WiseFusion™** is a welding function for ensuring consistent weld quality in all positions. It is an optional feature, which can be purchased through Kemppi DataStore.
- **MatchLog™** contains **MiniLog™** function for quickly changing welding parameters on the run. It is an optional feature, which can be purchased through Kemppi DataStore.
- If your welding needs change and you wish to update your system in the future, you can order additional welding programs or other welding software and load them to your system with **Kemppi DataGun** field programming device.

For further information about the available welding programs, modified processes and special enhanced arc performance solutions, visit Kemppi web site at www.kemppi.com or contact the local Kemppi dealer.

2.5 FastMig welding programs

1-MIG (Standard welding programs)			
Fe group	**Wire (mm)**	**Material**	**Shielding gas**
101	0.8	Fe	Ar+18%-25%CO_2
102	0.9	Fe	Ar+18%-25%CO_2
103	1.0	Fe	Ar+18%-25%CO_2
104	1.2	Fe	Ar+18%-25%CO_2
106	1.6	Fe	Ar+18%-25%CO_2
111	0.8	Fe	CO_2
112	0.9	Fe	CO_2
113	1.0	Fe	CO_2
114	1.2	Fe	CO_2
116	1.6	Fe	CO_2
121	0.8	Fe	Ar+8%CO_2
122	0.9	Fe	Ar+8%CO_2
123	1.0	Fe	Ar+8%CO_2
124	1.2	Fe	Ar+8%CO_2
126	1.6	Fe	Ar+8%CO_2
152	0.9	Fe Metal	Ar+18%-25%CO_2
154	1.2	Fe Metal	Ar+18%-25%CO_2
164	1.2	Fe Metal	CO_2
174	1.2	Fe Rutil	Ar+18%-25%CO_2
184	1.2	Fe Rutil	CO_2
194	1.2	Fe Basic	Ar+18%-25%CO_2

Ss group	Wire (mm)	Material	Shielding gas
201	0.8	CrNiMo 19 12	Ar+2%CO_2
202	0.9	CrNiMo 19 12	Ar+2%CO_2
203	1.0	CrNiMo 19 12	Ar+2%CO_2
204	1.2	CrNiMo 19 12	Ar+2%CO_2
206	1.6	CrNiMo 19 12	Ar+2%CO_2
211	0.8	CrNiMo 19 12	Ar+30%He+1%O_2
212	0.9	CrNiMo 19 12	Ar+30%He+1%O_2
213	1.0	CrNiMo 19 12	Ar+30%He+1%O_2
214	1.2	CrNiMo 19 12	Ar+30%He+1%O_2
216	1.6	CrNiMo 19 12	Ar+30%He+1%O_2
221	0.8	CrNi 23 12	Ar+2%CO_2
222	0.9	CrNi 23 12	Ar+2%CO_2
223	1.0	CrNi 23 12	Ar+2%CO_2
224	1.2	CrNi 23 12	Ar+2%CO_2
231	0.8	CrNi 23 12	Ar+30%He+1%O_2
232	0.9	CrNi 23 12	Ar+30%He+1%O_2
233	1.0	CrNi 23 12	Ar+30%He+1%O_2
234	1.2	CrNi 23 12	Ar+30%He+1%O_2
242	0.9	FC-CrNiMo 19 12	Ar+18%-25%CO_2
244	1.2	FC-CrNiMo 19 12	Ar+18%-25%CO_2
252	0.9	FC-CrNiMo 19 12	CO_2
254	1.2	FC-CrNi 23 12	Ar+18%-25%CO_2
Al group	**Wire (mm)**	**Material**	**Shielding gas**
303	1.0	AlMg5	Ar
304	1.2	AlMg5	Ar
306	1.6	AlMg5	Ar
313	1.0	AlSi5	Ar
314	1.2	AlSi5	Ar
316	1.6	AlSi5	Ar
SPE group	**Wire (mm)**	**Material**	**Shielding gas**
401	0.8	CuSi3	Ar
402	0.9	CuSi3	Ar
403	1.0	CuSi3	Ar
404	1.2	CuSi3	Ar
411	0.8	CuSi3	Ar+2% CO_2
412	0.9	CuSi3	Ar+2% CO_2
413	1.0	CuSi3	Ar+2% CO_2
421	0.8	CuAl8	Ar
423	1.0	CuAl8	Ar
424	1.2	CuAl8	Ar

WiseRoot (Standard welding programs)				
Fe group	**Wire (mm)**	**Material**	**Shielding gas**	
802	0.9	Fe	Ar+18%-25%CO_2	
803	1.0	Fe	Ar+18%-25%CO_2	
804	1.2	Fe	Ar+18%-25%CO_2	
812	0.9	Fe	CO_2	
813	1.0	Fe	CO_2	
814	1.2	Fe	CO_2	
Ss group	**Wire (mm)**	**Material**	**Shielding gas**	**Backing gas**
822	0.9	CrNiMo 19 12	Ar+2%CO_2	Ar
823	1.0	CrNiMo 19 12	Ar+2%CO_2	Ar
824	1.2	CrNiMo 19 12	Ar+2%CO_2	Ar
832	0.9	CrNiMo 19 12	Ar+30%He+1%O_2	Ar
833	1.0	CrNiMo 19 12	Ar+30%He+1%O_2	Ar
834	1.2	CrNiMo 19 12	Ar+30%He+1%O_2	Ar

WiseThin (Standard welding programs)				
Fe group	**Wire (mm)**	**Material**	**Shielding gas**	**Backing gas**
701	0.8	Fe	Ar+18%-25%CO_2	
702	0.9	Fe	Ar+18%-25%CO_2	
703	1.0	Fe	Ar+18%-25%CO_2	
704	1.2	Fe	Ar+18%-25%CO_2	
711	0.8	Fe	CO_2	
712	0.9	Fe	CO_2	
713	1.0	Fe	CO_2	
714	1.2	Fe	CO_2	
Ss group	**Wire (mm)**	**Material**	**Shielding gas**	**Backing gas**
721	0.8	CrNiMo 19 12	Ar+2%CO_2	Ar
722	0.9	CrNiMo 19 12	Ar+2%CO_2	Ar
723	1.0	CrNiMo 19 12	Ar+2%CO_2	Ar
724	1.2	CrNiMo 19 12	Ar+2%CO_2	Ar
Cu group	**Wire (mm)**	**Material**	**Shielding gas**	**Backing gas**
743	1.0	CuSi3	Ar	
753	1.0	CuAl8	Ar	

NOTE! *More welding programs are available in Kemppi DataStore.*

2.6 Panel SF 52W and SF 53W setup parameters

Normal MIG welding Setup -parameters

Name of parameter	Name on display	Parameter values	Factory setting	Description
Pre Gas Time	PrG	0.0 – 9.9 s	0,0 s	Pre gas time in seconds
Post Gas Time	PoG	0.0 – 9.9 s	Aut	Post gas time in seconds or automatically according to welding current (Aut)
Creep Start	Cr	OFF, on	OFF	Switch creep start on or off.
Creep Start Level	CrE	10 – 170%	50%	Percentage of wire feed speed: 10% slowed start 100% = no creep start function 170% accelerated start
Start Power	StA	-9 ... +9	0	Strength of start pulse
Post Current Time	PoC	-9 ... +9	0	Post current
Arc Voltage	Ard	OFF, on	OFF	on: Display shows arc voltage OFF: Display shows pole voltage
Cable Length	CAb	std, 5 – 80m	std	Cable loss is calculated for optimal arc control and for the Arc Voltage display

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Synergic MIG -welding SETUP -parameters

Name of parameter	Name on display	Parameter values	Factory setting	Description
Pre Gas Time	PrG	0.0 – 9.9 s	Syn	Pre gas time in seconds or automatically according to synergic welding program (Syn)
Post Gas Time	PoG	0.0 – 9.9 s	Syn	Post gas time in seconds or automatically according to synergic welding program (Syn)
Creep Start	Cr	OFF, on	OFF	Switch creep start on or off.
Creep Start Level	CrE	10 – 170%	50%	Percentage of wire feed speed: 10% slowed start 100% = no creep start function 170% accelerated start
Hot Start Level	Hot	-50 ... 75%	30%	Percentage of welding power: -50% cold and +75% hot
Hot Start 2T Time	H2t	0.0 – 9.9 s	1.2 s	The duration of the hot start in seconds in 2T mode
Crater Fill End Level	CrL	10 – 250%	30%	The welding power at the end of the crater fill stage as a percentage of the welding power preset value
Crater Fill Start Level	CrS	10 – 250%	30%	The welding power at the beginning of the crater fill stage as a percentage of the welding power preset value
Crater Fill Time	CrT	0.0 – 9.9 s	2.0 s	The duration of the crater fill stage in seconds (only in 2T mode)
Wise Fusion On	FUS	OFF, on	OFF	Switch Wise Fusion on/off (only in 1-MIG)
Wise Fusion Percent	FUP	10...60%	25%	Percentage of Wise Fusion (only in 1-MIG)
Penetration Level	PEn	-30 ... +30%	0%	Set the arc length where penetration control begins (only in 1-MIG)
MiniLog On	ML	on, OFF	OFF	Switch on/off MiniLog
MiniLog Level	MLo	-99 ... +200%	50%	Set the minilog power level as a percentage of the welding power

Synergic Start Time	FSt	-9 ... +9	0	Start time in WiseRoot/WiseThin welding
Synergic Start Voltage	FuL	-30 ... +30	0	Voltage level in the beginning of WiseRoot/WiseThin welding
Start Power	StA	-9 ... +9	0	Strength of start pulse (not in WiseRoot/WiseThin)
Post Current Time	PoC	-9 ... +9	0	Post current
Synergic MIG Unit	Unl	m/min, mm, A	m/min	In 1-MIG and WiseRoot welding, the parameter shown in left-hand display: wire feed speed (m/min), sheet thickness (mm) or average current (A)
Arc Voltage	Ard	OFF, on	OFF	on: Display shows arc voltage OFF: Display shows pole voltage (not in WiseRoot/WiseThin)
Cable Length	CAb	std, 5 – 80m	std	Cable loss is calculated for optimal arc control and for the Arc Voltage display (not in WiseRoot/WiseThin)

Common Setup -parameters for MIG processes

Name of parameter	Name on display	Parameter values	Factory setting	Description
Device Address	Add	3 or 6	3	Wire feeder bus address
Using features of PMT Gun	Gun	OFF, on	on	on = PMT gun OFF = other gun
Gas Guard Connected	GG	no, YES	no	Implementation of gas guard
LongSystem Mode	LSY	OFF, on	OFF	on: Gives optimum welding characteristics with long welding cables. Recommended to be used when the cable length exceeds 40 m.
Code Entry	Cod	---, Ent	---	Entering license codes manually: 1. Adjust right potentiometer to ('Ent'). 2. Press REMOTE. 3. Set code with right potentiometer. 4. Choose next with left potentiometer. 5. Go back to point 3, until all codes have been set. 6. Approve by pressing REMOTE. ('Suc cEs')
PIN Code Entry	PIn	---, PIn	---	Enters pin code for Panel Locking
Panel Locking	LoC	OFF, on	OFF	Enables panel locking
Water Cooler	Coo	OFF, on	on	Enables water cooler
Wire Inch Stop	Inc	OFF, on	on	OFF = Stops wire inch in case arc does not ignite on = Feeds wire as long as the welding gun start switch is pressed.
Auto Wire Inch	AIn	OFF, on	on	SuperSnake Automatic Wire Inch function. Wire Inch button runs the filler wire from the wire feeder up to the SuperSnake.
Demo Licence Time	dEt	3-h, 2-h, **', **", OFF		The remaining time for the WiseDemo licence (readable value only). 3-h = max. 3 hours left 2-h = max. 2 hours left **' = ** minutes left **" = ** seconds left OFF = Demo period has expired.

Restore Factory Settings	FAC	OFF, PAn, ALL	OFF	Control panel reset function. OFF = No reset PAn = Settings will be restored, but memory channels remain unchanged ALL = All settings will be restored to factory values.

Setup-parameters for MMA welding

Name of parameter	Name on display	Parameter values	Factory setting	Description
Start Power	StA	-9 ... +9	0	Strength of start pulse
Device Address	Add	3 or 6	3	Wire feeder bus address
Code Entry	Cod	---, Ent	---	Entering license codes manually: 1. Adjust right potentiometer to ('Ent'). 2. Press REMOTE. 3. Set code with right potentiometer. 4. Choose next with left potentiometer. 5. Go back to point 3, until all codes have been set. 6. Approve by pressing REMOTE. ('Suc cEs')
Restore Factory Settings	FAC	OFF, PAn, ALL	OFF	Control panel reset function. OFF = No reset PAn = Settings will be restored, but memory channels remain unchanged ALL = All settings will be restored to factory values

NOTE! *In these setup lists following functions needs activation (Err 171):*

- *Arc Voltage Display*
- *Minilog*
- *Panel Locking*
- *WisePenetration*
- *WiseFusion*

3. FASTMIG ERROR CODES

The existence of possible faults in the equipment is investigated in connection with each wire feed unit start-up. If a fault is detected, the fault in question will be indicated as an 'Err' message on the panel display.

Error code examples:

Err 2: Undervoltage

The device has stopped because it has detected a mains undervoltage that disturbs welding. Check the quality of the supply network.

Err 3: Overvoltage

The device has stopped because dangerously high temporary voltage surges or a continuous over-voltage has been detected in the electric network. Check the quality of the supply network.

Err 4: Power source is overheated

The power source has overheated. The cause may be one of the following:

- The power source has been used for a long time at maximum power.
- The circulation of cooling air to the power source is blocked.
- The cooling system has experienced a failure.

Remove any obstacle to air circulation, and wait until the power source fan has cooled down the machine.

Err 5: Water unit alarm

The water circulation is blocked. The cause may be one of the following:

- Congestion or disconnection in the cooling pipeline
- Insufficient cooling liquid
- Excessive cooling liquid temperature

Check the circulation of the cooling liquid and the air circulation of the water unit.

Err 54: No data communication from power source

The data transmission between the power source and the wire feed unit has been cut off or is defective. Check the extension lead and connections.

Err 55: Power source is busy

The communication channel is busy. The power source is being used by another wire feed unit or the programming for some other device in the channel (e.g. control panel) is in progress.

Err 61: The water unit is not found

Water unit is not connected to the equipment or there is a connection fault.

Connect up the water unit or change the setting of the unit to air-cooled, if you are using an air-cooled welding gun.

Err 153: Overheating of liquid-cooled PMT gun

When starting to weld or during welding, the overheat protection on the liquid-cooled MIG welding gun has activated. Check that there is sufficient liquid in the cooling unit and that air is circulating freely through it. Ensure that liquid is circulating freely through the cooling hoses.

Err 154: Overloading of the wire feed motor

The welding has been interrupted because the loading of the wire feed motor has risen to a high level. The cause of this could be a blockage of the wire line. Check the wire conduit, contact tip and feed rolls.

Err 155: Warning of the wire feed unit overloading

The wire feed motor load level has risen. The cause could be dirty wire conduits or a gun cable twisted into sharp curves. Check the state of the gun and clean the wire line if necessary.

Err 165: Gas guard alarm

Gas guard function has worked, because the pressure of gas has decreased. Possible reasons: Gas is unconnected to the wire feeder. Gas has been ran out, gas hose is leaking or there is no pressure enough in the gas web. Connect the gas to the wire feeder, check gas hose and the pressure of the gas web.

Err 171: Configuration not found for the device

The optional features cannot be used. There is no licence code for that or the equipment's internal data transmission has been cut off. Turn off the machine, detach the welding gun and re-start the machine. If an error code does not appear in the display, the fault lies in the welding gun. If this error code pertains, contact maintenance.

Err 172: A wrong configuration code has been supplied

License activation with DataGun has failed. Turn off the machine, detach DataGun and restart the machine. Reconnect DataGun. If this error code recurs, contact maintenance.

Err 201: Use of PMT gun is prevented

You try to use the PMT welding gun, but the necessary settings have not been entered into the machine's control panel. Select 'PMT gun' from the control panel SETUP menu, if you wish to use it. This fault can also occur with other guns, if the trigger contacts are bad or dirty.

Err 221: Two wire feeders connected with the same device address.

Two wire feed units have the same device address. Define different addresses for the devices as follows:

1. Press any button on either control panel (except the ESC button). "Add" (Device Address) is displayed.
2. Change the device address using the right-hand control knob.
3. Return to normal status by pressing again any button on the control panel.

The machines will return to normal status within 15 seconds.

Other error codes:

The machine can show codes not listed here. In the event of an unlisted code appearing, contact an authorised Kemppi service agent and report the error code shown.

4. DISPOSAL

Do not dispose of electrical equipment with normal waste!

In observance of European Directive 2002/96/EC on waste electrical and electronic equipment, and its implementation in accordance with national law, electrical equipment that has reached the end of its life must be collected separately and taken to an appropriate environmentally responsible recycling facility.

The owner of the equipment is obliged to deliver a decommissioned unit to a regional collection centre, per the instructions of local authorities or a Kemppi representative. By applying this European Directive you will improve the environment and human health.

5. ORDERING NUMBERS

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SF 53W	MSF 55, MSF 57, MXF 65, MXF 67	6085300W

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