



## Sigma Galaxy - FLEX<sup>2</sup> software history

SIGMA Galaxy - FLEX <sup>2</sup>			#
Bootloader			2.00
Control box (7,7)	10001321 (obsolete)		3.02 1
Control box (7,9)	10001341		3.31 1
Welding program	10645800 (obsolete)		B4 2
Welding program	10645900		C6 2
Power source	DSPC 10001701 (v1) - 10001702 (v2) - 10001703 (v3)		8.23 3
Mig Manager	Not included on SD card		2.00 4
Robot interface analog	10020104 (not included on SD card)		1.06 5
RoboFeeder	10020111 (v1) - 10020115 (v2,v3)		2.15 6-7
IWF	10020118 Software history		1.02 9

MK2 v3	Wire feed #1 10001801 PCB 71613474-78	DSPC #3 10001703 PCB 71613585
11-10-2018	<b>2.47 (B47)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>8.23 (E23)</b> <ul style="list-style-type: none"> <li>A suddent stop could sometimes occure in IAC welding (error introduced in 8.22), this is corrected.</li> </ul>
10-10-2018	<b>2.47 (B47)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>8.22 (E22)</b> <ul style="list-style-type: none"> <li>IAC transistor and PCB will not short circuit when using long welding cables.</li> </ul>
11-05-2018	<b>2.47 (B47)</b> <ul style="list-style-type: none"> <li>MIG Manager is no longer able to switch sequence when doing fast triggering on torch switch.</li> </ul>	<b>8.21 (E21)</b> <ul style="list-style-type: none"> <li>When setting up for 2 Seqences, welding performance during slope-down was not good.</li> </ul>
14-12-2017	<b>2.46 (B46)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>8.20 (E20)</b> <ul style="list-style-type: none"> <li>Problem in P112 solved. Better welding performance when changing the set-current in DC.</li> <li>E11-23 will no longer appear when welding wire is stuck to the work piece and trigger signal is activated from Robot at the same time.</li> </ul>
21-12-2016	<b>2.45 (B45)</b> <ul style="list-style-type: none"> <li>Production test protocol implemented</li> </ul>	<b>8.19 (E19)</b> <ul style="list-style-type: none"> <li>Problem with arc out and blow holes are solved.</li> </ul>
06-10-2016	<b>2.44 (B44)</b> <ul style="list-style-type: none"> <li>IWF can now be triggered when connected to Sigma Compact.</li> </ul>	<b>8.18 (E18)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

18-07-2016	<b>2.43 (B43)</b> <ul style="list-style-type: none"> <li>Implementation of new CAN protocol for production test use only.</li> </ul>	<b>8.18 (E18)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
06-06-2016	<b>2.41 (B41)</b> <ul style="list-style-type: none"> <li>Support for watch dog circuit is implemented.</li> </ul>	<b>8.18 (E18)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
30-05-2016	<b>2.40 (B40)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>8.18 (E18)</b> <ul style="list-style-type: none"> <li>Software support for watchdog circuit on DSPC PCB 71613585 version F and forward.</li> </ul>
14-04-2016	<b>2.40 (B40)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>8.15 (E15)</b> <ul style="list-style-type: none"> <li>Galaxy could in some rare cases give only wire and gas. No voltage right after power up. The bug is removed.</li> </ul>
30-03-2016	<b>2.40 (B40)</b> <ul style="list-style-type: none"> <li>Stable gas flow at all IGC settings.</li> </ul>	<b>8.14 (E14)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>
23-02-2016	<b>2.39 (B39)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>8.14 (E14)</b> <ul style="list-style-type: none"> <li>RCI<sup>2</sup> could give incorrect analog and bus output on current and voltage, when not welding. This could disturb some robot controllers.</li> <li>Program P003 has got improvements on welding start.</li> </ul>
08-12-2015	<b>2.39 (B39)</b> <ul style="list-style-type: none"> <li>Supports Lexar HC/SD cards.</li> <li>Error code E11-44 is show if DSPC communication can not be established during power up. Previously error E02-04 was shown in this situation.</li> <li>E02-04 is used if communication fails under normal operation.</li> </ul>	<b>8.13 (E13)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
26-10-2015	<b>2.38 (B38)</b> <ul style="list-style-type: none"> <li>Changes in lock level 2 making the voltage locking at the correct voltage, even when you have adjusted TRIM voltage first.</li> <li>Bug fixing for IWF to eliminate E-07-35, E-07-37 and E-07-38 errors.</li> <li>It is no longer possible to activate torch control when MigManager is connected via</li> </ul>	<b>8.13 (E13)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

	IWF.	
12-08-2015	<b>2.37 (B37)</b> <ul style="list-style-type: none"> <li>In lock level 2 it is possible to set maximum allowed adjustment window with function F72 (0 - 25%). Default value is 0%.</li> </ul>	<b>8.13 (E13)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
15-06-2015	<b>2.36 (B36)</b> <ul style="list-style-type: none"> <li>The MigManager in the IWF is activated automatically, and it is possible to choose other torches (dialog, sequence torch, etc.)</li> </ul>	<b>8.13 (E13)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
12-06-2015	<b>2.35 (B35)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>8.13 (E13)</b> <ul style="list-style-type: none"> <li>Bad IAC ignition in version 8.12 is solved.</li> </ul>
1-6-2015	<b>2.35 (B35)</b> <ul style="list-style-type: none"> <li>Cable compensation is implemented and is activated with secondary parameter F52.</li> <li>Water cooling is activated automatically after software update.</li> <li>E-11-299 error is removed.</li> <li>Support for IWF intermediary station is implemented.</li> </ul>	<b>8.12 (E12)</b> <ul style="list-style-type: none"> <li>Program P118 (Ø 1.2 mm Fe SG2 ER70S6 ArCO2 92/8) is OK again in pulse mode.</li> <li>Program P113 (Ø 1.2 mm Fe SG2 ER70S6 ArCO2 82/18) has got improved start to avoid "explosions".</li> </ul>
6-5-2015	<b>2.34 (B34)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>8.11 (E11)</b> <ul style="list-style-type: none"> <li>Fan control in version 8.10 was not correct. Fan runs now after welding has stopped.</li> </ul>
24-4-2015	<b>2.34 (B34)</b> <ul style="list-style-type: none"> <li>Current and voltage setting will no longer be affected by electrically noise induced in to the encoder circuit.</li> </ul>	<b>8.10 (E10)</b> <ul style="list-style-type: none"> <li>E-11-24 error seen on version 8.07 and 8.09 is solved.</li> </ul>
19-3-2015	<b>2.33 (B33)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>8.09 (E9)</b> <ul style="list-style-type: none"> <li>On robots and automats you could see very bad ignition "pig tails". Specially when stick-out is very short.</li> </ul>
19-2-2015	<b>2.33 (B33)</b> <ul style="list-style-type: none"> <li>New function F71 is implemented, used for setting of voltage range which can be</li> </ul>	<b>8.08 (E8)</b> <ul style="list-style-type: none"> <li>No changes.</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

	adjusted when LOCK level 2 is active.	
26-1-2015	<b>2.32 (B32)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>8.08 (E8)</b> <ul style="list-style-type: none"> <li>Machines with version 8.07 could not be calibrated, the problem is solved.</li> </ul>
16-1-2015	<b>2.32 (B32)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>8.07 (E7)</b> <ul style="list-style-type: none"> <li>Improved arc start in MIG. Spatter or "long arc" in arc start is removed.</li> </ul>
13-11-2014	<b>2.32 (B32)</b> <ul style="list-style-type: none"> <li>New "black" locking SD cards can now be used without the control box starting blinking.</li> <li>Gas calibration is no longer sensitive to when regulations are done on the torch potmeter or current setting changes coming from robot interface.</li> </ul>	<b>8.06 (E6)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
29-10-2014	<b>2.31 (B31)</b> <ul style="list-style-type: none"> <li>Version 2.30 did not contain the modifications made in version 2.29. It does now.</li> </ul>	<b>8.06 (E6)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
28-10-2014	<b>2.30 (B30)</b> <ul style="list-style-type: none"> <li>IGC calibration function is added. Push and hold buttons, gas test and 2/4 stroke, at the same time for 4 seconds, to open the calibration menu.</li> </ul>	<b>8.06 (E6)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
	<b>2.29 (B29)</b> <ul style="list-style-type: none"> <li>Version B28 did not work when used together with DSPC software 10001702 (5.xx)</li> </ul>	<b>8.06 (E6)</b> <ul style="list-style-type: none"> <li>Water cooler state is distributed to Robot interface.</li> <li>Init of states in IAC is improved - (removes some strange behaviour in start performance)</li> <li>Touch sensing functionality improved.</li> </ul>
11-09-2014	<b>2.28 (B28)</b> <ul style="list-style-type: none"> <li>When pulse and quadro is selected and then when tack welding is selected right after, now quatro LED is turning off. This is ok. But, when you turn off tack welding again, now the quatro LED stays off and the machine is welding without quatro pulse. This is solved now.</li> </ul>	<b>8.05 (E5)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

	<ul style="list-style-type: none"> <li>Gas pre-flow is working again.</li> </ul>	
29-04-2014	<b>2.26 (B26)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>8.05 (E5)</b> <ul style="list-style-type: none"> <li>Software update via SD card is more robust now.</li> </ul>
01-04-2014	<b>2.26 (B26)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>8.04 (E4)</b> <ul style="list-style-type: none"> <li>Added support for RCI2, this includes touch sensing, wire stick sensing and fast filtering of measurements for seam tracking.</li> </ul>
10-12-2013	<b>2.26 (B26)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>8.03 (E3)</b> <ul style="list-style-type: none"> <li>Heat input is calculated correct now.</li> <li>Support for big capacitor battery, when supplied from soft mains supplies and autotransformers.</li> </ul>
13-09-2013	<b>2.26 (B26)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>8.01 (E1)</b> <ul style="list-style-type: none"> <li>Pulse welding and manual welding was not 100% ok on version 8.0.</li> </ul>
09-09-2013	<b>2.26 (B26)</b> <ul style="list-style-type: none"> <li>Support for DSCP version 8.0. This version MUST run together with DSPC software 8.0, otherwise error E 11-38 is shown.</li> </ul>	<b>8.00 (D0)</b> <ul style="list-style-type: none"> <li>Support for new control box.</li> <li>Added possibility for activating touch sensing.</li> </ul>
25-04-2013	<b>2.25 (B25)</b> <ul style="list-style-type: none"> <li>When enabling Quatro right after welding without Quatro on a high current setting, then Quatro function did not work.</li> </ul>	<b>7.03.1 (D3)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
05-03-2013	<b>2.24 (B24)</b> <ul style="list-style-type: none"> <li>It is possible to change these functions from the front panel, pulse, tack and duopulse when a robot interface is connected, until the same function has been activated from the robot interface. When changes have been made from the interface, changes are no longer possible from the control box.</li> </ul>	<b>7.03.1 (D3)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
01-03-2013	<b>2.23 (B23)</b> <ul style="list-style-type: none"> <li>Memory space for welding programs are</li> </ul>	<b>7.03.1 (D3)</b> <ul style="list-style-type: none"> <li>Problemes with start and stability of welding arc, in the upper range of the current scale, is</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

	increased from 150 to 200 programs.	solved. <ul style="list-style-type: none"> <li>All pulse programmes are improved.</li> </ul>
21-02-2013	<b>2.22 (B22)</b> <ul style="list-style-type: none"> <li>Error E-11-103 will no longer appear during machine startup when sequence torch was enabled.</li> </ul>	<b>7.02.1 (D2)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
13-02-2013	<b>2.21 (B21)</b> <ul style="list-style-type: none"> <li>Better and more accurate regulation on IGC system.</li> </ul>	<b>7.02.1 (D2)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
01-11-2012	<b>2.19.1 (B19)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>7.02.1 (D2)</b> <ul style="list-style-type: none"> <li>The connection between the DSPC and current sensor is now Nu er der kontrol på om der er forbindelse til strømsensoren. Hvis der ikke er forbindelse meldes fejl E-11-20. Dårlig forbindelse til strømsensor kunne tidligere fejlagtigt give fejl E-11-39.</li> </ul>
08-08-2012	<b>2.19.1 (B19)</b> <ul style="list-style-type: none"> <li>The water pump will run for 5 seconds when the machine is switched on and also when selecting a welding program. This will eliminate the "H2O" error when using long air filled water hoses.</li> </ul>	<b>7.01.1 (D1)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
06-07-2012	<b>2.18.1 (B18)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>7.01.1 (D1)</b> <ul style="list-style-type: none"> <li>In MMA the user did not get 500A if 500A is the reference - previously it only gave 499A due to imprecise calculations. In general the MMA algorithm gave one ampere less than the reference - now it gives the correct value.</li> <li>If no PLD is attached on startup the DSP software gives an error (E11-43)</li> </ul>
30-05-2012	<b>2.18.1 (B18)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>7.00.1 (D0)</b> <ul style="list-style-type: none"> <li>Improved welding performance when using PULS and IAC programs. More stable arc in IAC programs and slightly higher pulse frequency in some pulse programs.</li> </ul>
24-04-2012	<b>2.18.1 (B18)</b>	<b>6.28.1 (C8)</b> <ul style="list-style-type: none"> <li>In manual MIG programs P002 and P003 the</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

	<ul style="list-style-type: none"> <li>No change.</li> </ul>	arc can give a howl sound during arc striking.
18-04-2012	<b>2.18.1 (B18)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>6.27.1 (C7)</b> <ul style="list-style-type: none"> <li>E-05-03 does not show anymore when the welding voltage has been adjusted lower than 14V.</li> </ul>
28-03-2012	<b>2.18.1 (B18)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>6.26.1 (C6)</b> <ul style="list-style-type: none"> <li>E-05-03 does not show anymore when the welding voltage has been adjusted to a high value.</li> <li>Galaxy program P186 Ø 1.0 mm Fe SG2 ER70S6 IAC has now reduces spatter.</li> </ul>
16-02-2012	<b>2.18.1 (B18)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>6.25.1 (C5)</b> <ul style="list-style-type: none"> <li>The IAC programs are not welding as good as they are supposed to in version 6.24. Earlier versions than 6.24 are ok.</li> </ul>
27-01-2012	<b>2.18.1 (B18)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>6.24.1 (C4)</b> <ul style="list-style-type: none"> <li>Problem with E-26-00 in Program MMA-P001 and Arc Gauging 004 is solved.</li> <li>Support for statistics software module is implemented for useage in the future.</li> </ul>
02-12-2011	<b>2.18.1 (B18)</b> <ul style="list-style-type: none"> <li>The water pump could stop when changing from one robo-feeder to another. This fails has been rectified so the pump now runs continuously even when changing from one feeder to another.</li> </ul>	<b>6.22.1 (C2)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
24-11-2011	<b>2.17.1 (B17)</b> <ul style="list-style-type: none"> <li>New lock level 2 has been implemented.</li> </ul>	<b>6.22.1 (C2)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
15-11-2011	<b>2.16.1 (B16)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>6.22.1 (C2)</b> <ul style="list-style-type: none"> <li>Error E-02-04 could come exactly 16 seconds after the machine is switched on, this occur on 1 of 1000 machines only. The bug is fixed.</li> </ul>
24-10-2011	<b>2.16.1 (B16)</b>	<b>6.21.1 (C1)</b>

## Sigma Galaxy - FLEX<sup>2</sup> software history

	<ul style="list-style-type: none"> <li>The display readout will change back to the set values as soon as the torch potmeter is turned.</li> <li>Sequence setting has been changed, see the newest users manual.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
29-08-2011	<b>2.15.1 (B15)</b> <ul style="list-style-type: none"> <li>When loading software via SD card the error E-21-00 could come. The software is modified so it has better memory control now.</li> </ul>	<b>6.21.1 (C1)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
31-05-2011	<b>2.14.1 (B14)</b> <ul style="list-style-type: none"> <li>The maximum current could be set to a higher value than the synergic program allowed. This is a fault that is seen in software version 2.12 and 2.13 only.</li> </ul>	<b>6.21.1 (C1)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
30-05-2011	<b>2.13.1 (B13)</b> <ul style="list-style-type: none"> <li>The software now supports the new bootloader version 2,02. When the control box has the new bootloader it can read the high capacity SD HC and SD XC card. Control boxes produced after 1/6 2011 contains the new bootloader 2.02 and therefore they can read the highcapacity cards. Older control boxes can not read high capacity SD cards even when software version 2.13 is installed.</li> </ul>	<b>6.21.1 (C1)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>
17-05-2011	<b>2.12.1 (B12)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>6.21.1 (C1)</b> <ul style="list-style-type: none"> <li>Software is trimmed due to the new service test menu in Galaxy.</li> </ul>
11-05-2011	<b>2.12.1 (B12)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>6.20.1 (C0)</b> <ul style="list-style-type: none"> <li>The DSPC PCB is now prepared for usage with the service functions in Galaxy.</li> </ul>
15-04-2011	<b>2.12.1 (B12)</b> <ul style="list-style-type: none"> <li>Robotinterface. When the sequence- and program choice inputs are left unused (passive), it is possible to change sequence and program settings on Sigma MK2 front panel.</li> <li>When Sigma MK2 is displaying the welding</li> </ul>	<b>6.18.1 (B8)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>



## Sigma Galaxy - FLEX<sup>2</sup> software history

	<p>program number, and you at the same time change the program number from the robotinterface, the new program number is now displayed.</p> <ul style="list-style-type: none"> <li>• Maximum current incl. hotstart, can not exceed the power source maximum current level.</li> <li>• It was possible to change sequence in MMA mode when not welding by pressing the MIG torch trigger. This possibility has been removed.</li> </ul>	
29-03-2011	<p><b>2.11.1 (B11)</b></p> <ul style="list-style-type: none"> <li>• Error E-16-01 could come during long time continuously welding with Dou Plus.</li> </ul>	<p><b>6.18.1 (B8)</b></p> <ul style="list-style-type: none"> <li>• Spatter in the IAC programs P185 and P186 are reduced.</li> </ul>
10-03-2011	<p><b>2.10.1 (B10)</b></p> <ul style="list-style-type: none"> <li>• When error E-16-xx is appearing, then the wire feed motor and welding current will stop at the same time.</li> <li>• Previously the welding continued when this error came.</li> </ul>	<p><b>6.17.1 (B7)</b></p> <ul style="list-style-type: none"> <li>• E-11-24 is reduced even more.</li> <li>• When welding with more than 200A the arc could become instable. This problem is solved now.</li> </ul>
18-02-2011	<p><b>2.09.1 (B9)</b></p> <ul style="list-style-type: none"> <li>• No change.</li> </ul>	<p><b>6.15.1 (B5)</b></p> <ul style="list-style-type: none"> <li>• Error E11-24 will not come during the start of welding.</li> <li>• The software is prepared for touch sensing in combination with future changes to the robot interface.</li> </ul>
18-01-2011	<p><b>2.09.1 (B9)</b></p> <ul style="list-style-type: none"> <li>• No change.</li> </ul>	<p><b>6.14.1 (B4)</b></p> <ul style="list-style-type: none"> <li>• After welding with a non IAC program and the changing to a IAC program, the welder will again weld with the correct welding voltage.</li> <li>• The regulation procedure in the software will now control the short circuit frequency correct.</li> </ul>
21-12-2010	<p><b>2.09.1 (B9)</b></p> <ul style="list-style-type: none"> <li>• No change.</li> </ul>	<p><b>6.13.1 (B3)</b></p> <ul style="list-style-type: none"> <li>• The Galaxy control panel could freeze and lock with error code E11-41 if the control panel set to an IAC program and then moved to a machine without IAC.</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

		<ul style="list-style-type: none"> <li>The inverter module will stop and not give voltage and current, if the control box has stopped working</li> </ul>
02-12-2010	<b>2.09.1 (B9)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>6.12.1 (B2)</b> <ul style="list-style-type: none"> <li>On IAC programs the stop current, in some cases, could be so strong that the arc burned up into the tip.</li> </ul>
06-10-2010	<b>2.09.1 (B9)</b> <ul style="list-style-type: none"> <li>The Problem where the machine forgets the sequence settings in MMA, when at the same time the sequence torch is chosen in MIG, has been solved.</li> <li>Error E02-01 does not show up when sequence torch are chosen and when at the same time the torch regulation is used.</li> <li>The external error input is now only detected when the MWF is active.</li> <li>The external error input is changed so now the error message disappears after 5 seconds but it will show up again when the torch trigger is activated when the fault is still there. Gas test and inching now works when there is an external error.</li> <li>DuoPlus is now activated again after the stitching function has been used.</li> </ul>	<b>6.11.1 (B1)</b> <ul style="list-style-type: none"> <li>Implementation of support for new weld monitor system.</li> </ul>
01-10-2010	<b>2.08.1 (B8)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>6.10.1 (B0)</b> <ul style="list-style-type: none"> <li>The problem with a bit of spatter during the first seconds of the weld, when welding with long intermediary and IAC programs, is solved.</li> </ul>
16-06-2010	<b>2.08.1 (B8)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>6.09.1 (A9)</b> <ul style="list-style-type: none"> <li>IAC control has been improved.</li> <li>The problem with a bit of welding spatter during the first seconds of the welding with IAC and long intermediary cables, is solved.</li> </ul>
12-06-2010	<b>2.08.1 (B8)</b>	<b>6.08.1 (A8)</b>

## Sigma Galaxy - FLEX<sup>2</sup> software history

	<ul style="list-style-type: none"><li>• No change.</li></ul>	<ul style="list-style-type: none"><li>• First release for field test.</li></ul>
--	--	---

## Sigma Galaxy - FLEX<sup>2</sup> software history

Galaxy	Welding program package #2 10645800 - 10645900
23-10-2018	<p><b>C6 10645900</b></p> <ul style="list-style-type: none"> <li>- P353 Improved in pulse welding, where the arc had some jumps.</li> <li>- P353 improved in lowest synergic point in pulse.</li> <li>- P113 +2.5V in DC at 202A.</li> <li>- P112 Changed wire speed in 220A-350A DC to get set current and mean welding current equal.</li> <li>- P115 Inserted stop pulse.</li> <li>- 465 Warning is removed.</li> </ul>
	<b>C5 – Not released</b>
05-04-2017	<p><b>C4 10645900</b></p> <ul style="list-style-type: none"> <li>• P111 (Ø 0.8 mm Fe SG2 ER70S6 ArCO<sub>2</sub>) modified in 30-100A range</li> <li>• P353 (Ø 1.2 mm AISi5 ER4043 AR) Improved in pulse welding.</li> </ul>
10-01-2017	<p><b>C3 10645900</b></p> <ul style="list-style-type: none"> <li>• Service menu in Omega Yard was not happy with program package C2.</li> </ul>
30-11-2016	<p><b>C2 10645900</b></p> <ul style="list-style-type: none"> <li>- P111 corrected in DC in 40A-90A.</li> <li>- P112 improved in both DC and pulse.</li> <li>- P115 updated in 6-12m/min.</li> <li>- P312 improved performance in DC in 110A-270A.</li> <li>- P429 added volt trim through out the whole DC program.</li> <li>- Hotstart is full adjustable again in all programs.</li> </ul>
14-04-2016	<p><b>C1 10645900</b></p> <ul style="list-style-type: none"> <li>- P595 Ø1.2 mm UTP A 8051 Ti - ArCO<sub>2</sub> - 98/2 is pulse only now.</li> </ul>
2-12-2015	<p><b>C0 10645900</b></p> <p>Programs added</p> <ul style="list-style-type: none"> <li>-P193 Ø 1.2 mm Innershield</li> <li>-P194 Ø 1.6 mm Innershield</li> <li>-P199 Ø 0.9 mm Innershield</li> </ul>
14-07-2015	<p><b>B8 10645900</b></p> <p>Programs added</p> <ul style="list-style-type: none"> <li>-P131 Ø 1.0 mm Fe SG2 ER70S6 ArCO<sub>2</sub> 98/2</li> <li>-P220 Ø 0.9 mm Fe SG2 ER70S6 ArCO<sub>2</sub> 92/8</li> <li>-P232 Ø 1.0 mm ER 309 LSi ArO<sub>2</sub> 98/2</li> <li>-P429 Ø 1.2 mm FCW FeM MX 100T ArCO<sub>2</sub> 82/18</li> <li>-P451 Ø 1.2 mm FCW FeRutil DWA 55E ArCO<sub>2</sub> 82/18</li> <li>-P452 Ø 1.2 mm FCW FeRutil Tubrod 15.14 ArCO<sub>2</sub> 82/18</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

	-P595 Ø 1.2 mm UTP A 8051 Ti ArCO <sub>2</sub> 98/2
16-01-2015	<p><b>B7 10645900</b></p> <ul style="list-style-type: none"> <li>- P117 puls is adjusted to fit 400A power module.</li> <li>- P257 and P588 improved.</li> <li>- P493 not for CrNi316L any more (this wire now has it's own program P494)</li> <li>- P231, P369, P446, P494 and P495 added.</li> <li>- In all Stanless stell programs (P200 to P299) default value of hot start is changed from 25% to 0 % and a stop puls is added, to give better start performance.</li> </ul>
26-09-2014	<p><b>B6 10645900</b></p> <p>P116 adjusted in DC below 50A for more accurate current adjustment.  P254 adjusted in pulse to improve performance.  P255 adjusted in pulse to improve performance.  P264 adjusted in pulse to improve performance.  P265 adjusted in pulse to improve performance.  P313 expanded in pulse from 290A to 370A.  P484 adjusted in dc to improve performance.  P485 adjusted in dc to improve performance.  P596 adjusted in pulse to improve performance.  P597 adjusted in pulse to improve performance.</p> <p><b>Programs added</b></p> <p>P274 new program for 1.0 mm 2507 wire (Super Duplex) and 68/30/2 gas.  P275 new program for 1.2 mm 2507 wire (Super Duplex) and 68/30/2 gas.  P321 new program for 1.2 mm ER4087 wire and Ar gas.  P359 new program for 0.9 mm ER5356 wire  P444 new program for 1.6 mm FCW 215 FeRutil wire CO<sub>2</sub> gas.  P445 new program for 1.6 mm FCW 115 FeMetal wire CO<sub>2</sub> gas.</p>
02-06-2014	<p><b>B5 10645900</b></p> <ul style="list-style-type: none"> <li>• <b>Programs added</b></li> <li>• P130: Ø 0.8 mm, Fe SG2 ER70S6, ArCO<sub>2</sub>, 92/8, DC/P</li> <li>• P256: Ø 1.2 mm, Super duplex, ArHeCO<sub>2</sub>, 83/15/2, P</li> <li>• P402: Ø 1.0 mm, FCW FeRutil 215, ArCO<sub>2</sub>, 82/18, DC+</li> <li>• P420: Ø 1.2 mm, FCW FeM 235M, ArCO<sub>2</sub>, 82/18, DC/P</li> <li>• P422: Ø 1.2 mm, FCW115 FeM PowerArc, ArCO<sub>2</sub>, 82/18, DC</li> <li>• P486: Ø 1.2 mm, FCW CrNi 15.31, ArO<sub>2</sub>, 98/2, DC/P</li> <li>• P593: Ø 1.2 mm, Inconel 625, ArCO<sub>2</sub>, 82/18, DC</li> </ul>
11-02-2014	<p><b>B4 10645900</b></p> <ul style="list-style-type: none"> <li>• P202, P493 updated in DC</li> <li>• P254, P255, P264, P265, P562, P596 and P597 updated in pulse</li> <li>• P323 new program added for AlMg4.5 ArHe(20/80)</li> <li>• P484 new program added for FCW 2205</li> <li>• P485 new program added for FCW 2507</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

	<ul style="list-style-type: none"> <li>P704 new program added for Titanium Grade 2</li> </ul>
30-10-2013	<p><b>B3 10645900</b></p> <ul style="list-style-type: none"> <li>P112 has better performance above 200A now and maximum current is increased to 440A (30 meter/minute)</li> </ul>
12-08-2013	<p><b>B2 10645900</b></p> <ul style="list-style-type: none"> <li>P221 is added for ER308LSI-0.8mm</li> <li>P222 is added for ER308LSI-1.0mm</li> <li>P223 is added for ER308LSI-1.2mm</li> <li>P224 is added for ER309LSI-0.8mm</li> <li>P225 is added for ER309LSI-1.0mm</li> <li>P228 is added for ER308LSI-1.2mm</li> <li>P229 is added for ER309LSI-1.0mm</li> <li>P230 is added for ER309LSI-0.8mm</li> <li>P319 added for 0.9mm AlMg5 wire.</li> <li>P407 and P743 added for PZ6138 1.2mm wire (743 is a Seam track program)</li> <li>P418 added for MC-RS 1.2mm wire (flux-core)</li> <li>P509 added for 0.9 mm CuAl8 wire.</li> </ul>
01-03-2013	<p><b>B1 10645900</b></p> <ul style="list-style-type: none"> <li>P115, P156, P254, P255, P264, P265, P409, P596, P597 are added to the package.</li> <li>P119 has pulse welding added.</li> <li>P113 improved start performance in pulse at large welding currents.</li> <li>P101, P102, P106, P112, P116 - Easier to keep arc alive in lowest synergic points.</li> </ul>
11-12-2012	<p><b>B0 10645900</b></p> <ul style="list-style-type: none"> <li>P257 optimized to avoid micro spatter.</li> </ul>
06-11-2012	<p><b>A9 10645900</b></p> <ul style="list-style-type: none"> <li>P562 can pulse weld again.</li> </ul>
01-11-2012	<p><b>A8 10645900</b></p> <ul style="list-style-type: none"> <li>P124 (DC), P155 (PWA) added for 1.4 mm Fe wire - 82/18 gas.</li> <li>P129 (DC), P159 (PWA) added for 1.4 mm Fe wire - 92/8 gas.</li> <li>P154 (PWA) added for 1.6 mm Fe wire - 82/18 gas.</li> <li>P218 (PWA) added for 1.6 mm ER316Lsi wire - 98/2 gas.</li> <li>P257 (P) added for 1.2 mm Sandvik 25.10.4L wire - 83/15/2 gas.</li> <li>P204 is now able to weld pulse.</li> <li>P312 adjusted in material dimensions.</li> <li>P353 adjusted below 30A to avoid loss of arc.</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

15-06-2012	<p><b>A7 10645900</b></p> <ul style="list-style-type: none"> <li>• P112 is able to pulse weld correctly at highest synergy point.</li> <li>• P114 is able to pulse weld.</li> <li>• P134, P135, P136, P137, P138, P139 (DC/P) and P142, P143, P145, P146, P148, P149 (PowerArc) programs for Ferromax gases are added.</li> <li>• P202 corrected to ensure stability.</li> </ul>
29-05-2012	<p><b>A6 10645900</b></p> <ul style="list-style-type: none"> <li>• Program 1.0(P227) had problems in DC welding.</li> </ul>
25-05-2012	<p><b>A5 10645900</b></p> <ul style="list-style-type: none"> <li>• Programs for 0.8 and 1.0 mm CrNi 308 (96/3/1) is added to program package as P226 and P227</li> </ul>
15-05-2012	<p><b>A4 10645900</b></p> <ul style="list-style-type: none"> <li>• P153 - is updated to new version, which welds better.</li> <li>• P186 - is returned to standard IAC control and is now welding as it used to do.</li> <li>• P405 - is added for PZ6111 wire.</li> <li>• P426, P427 and P428 - is added for welding 710M and 742M wires.</li> <li>• P454 - is added for 713R wire.</li> <li>• P561 and P562 - is updated to ensure even better control of the arc.</li> </ul>
28-03-2012	<p><b>A3 10645900</b></p> <ul style="list-style-type: none"> <li>• 1.6mm wire can now be used on 300A machines.</li> <li>• Program P185 has reduced spatter.</li> <li>• P456 and P457 are inserted in the program list.</li> </ul>
16-03-2012	<p><b>A2 - 10645900</b></p> <ul style="list-style-type: none"> <li>• Improved welding performance in the following programs. P561 and P562 below 60 Amp. P313 has now shorter arc length.</li> </ul>
27-01-2012	<p><b>A1 10645900</b></p> <ul style="list-style-type: none"> <li>• Improved welding performance in the mentioned programs, it is verified that you get 400A if you request 400A (in programs 113 and 404) may depend on stick-out.</li> <li>• P383 - Gas name changed. P202 - minor changes in pulse. P113 - changed in dc and pulse per request from Germany. P111, P121, P125, P413, P501, P571 - changed staticP34 parameter. P404 - changed in dc per request from Norway.</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

29-09-2011	<p><b>A0 10645900</b></p> <ul style="list-style-type: none"> <li>The program package 10645800 is obsolete and 10645900 is introduced.</li> </ul>
29-09-2011	<p><b>B4</b></p> <ul style="list-style-type: none"> <li>In order to support the program wizard in Sigma Galaxy, a new program package 10645900 has been made. The new package 10645900 substitutes 10645800. - Program P595 is now removed from the program list.</li> </ul>
23-05-2011	<p><b>B3</b></p> <ul style="list-style-type: none"> <li>P152 and P153 (FE SG2 ARCPower) is now starting much better.</li> <li>P112 (FE SG2 1.0mm) has been trimmed so that the set current and the real welding current are equal.</li> </ul>
15-04-2011	<p><b>B2</b></p> <ul style="list-style-type: none"> <li>Puls function is added in program 423 (FCW 115 Fe Metal).</li> <li>Base current in program 353 AISi5 ER4043 is increased in order to improve the welding result.</li> </ul>
29-03-2011	<p><b>B1</b></p> <ul style="list-style-type: none"> <li>Spatter in the IAC programs P185 and P186 are reduced.</li> </ul>
10-03-2011	<p><b>B0</b></p> <ul style="list-style-type: none"> <li>When welding with more than 200A the arc could become instable and perhaps a whistling sound came from the arc. This problem is solved now.</li> </ul>
19-01-2011	<p><b>A9</b></p> <ul style="list-style-type: none"> <li>The IAC programs are now more stable also when the welding voltage is high</li> </ul>
07-01-2011	<p><b>A8</b></p> <ul style="list-style-type: none"> <li>Stainless IAC welding program P282(1.0mm) CRNI 316-ArCo2(98/2) has been improved.</li> </ul>
21-12-2010	<p><b>A7</b></p> <ul style="list-style-type: none"> <li>Stainless IAC welding programs are implemented. CrNi 316-ArCo2(98/2) P281(0.8), P282(1.0) and P283(1.2). This software demands DSPC 71613585 version 6.13 or later.</li> </ul>



## Sigma Galaxy - FLEX<sup>2</sup> software history

Galaxy	Control box Galaxy #1 10001321 box MK1	Control box Galaxy #1 10001341 box MK2
10-10-2018	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>3.31 (E31)</b> <ul style="list-style-type: none"> <li>Gas test button is added to main screen when machine is locked.</li> <li>Better encode reading on encoders.</li> </ul>
11-04-2018	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>3.30 (E30)</b> <ul style="list-style-type: none"> <li>Gas error now interrupts the welding.</li> <li>The sequence repeat is now updated correctly as well.</li> </ul>
21-12-2016	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>3.29 (E29)</b> <ul style="list-style-type: none"> <li>Hotstart works in 4 stroke mode.</li> <li>Correct gas flow with robot, even if gas purge is pushed during welding.</li> <li>JOB change from robot interface is working now.</li> <li>The robot can be turned off and on again, without causing E16-01 on the welding machine.</li> <li>Support for automatic production test.</li> </ul>
18-07-2016	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>3.26 (E26)</b> <ul style="list-style-type: none"> <li>New protocol for production test is implemented.</li> <li>Norwegian language text is corrected for error code E-07-14.</li> </ul>
30-05-2016	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>3.25 (E25)</b> <ul style="list-style-type: none"> <li>New error message E-11-45, is stored in system log only, if watchdog circuit on DSCP PCB 71613585 version F was activated.</li> <li>Improvements on MWF error detection.</li> <li>RCI JOB handling changed so RCI settings are updated and read on JOB changes.</li> </ul>
14-04-2016	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>3.23 (E23)</b> <ul style="list-style-type: none"> <li>Gas calibration screen is more robust against gas errors. Screen will not crash if gas error</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

		<p>occur during gas calibration.</p> <ul style="list-style-type: none"> <li>• Errors on external SD can be separated from internal SD error codes, with new error codes E-24-22 and E-24-23.</li> <li>• Precision in Robofeeders IGC calibration values improved.</li> </ul>
14-12-2015	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>• No change</li> </ul>	<b>3.22 (E22)</b> <ul style="list-style-type: none"> <li>• Bugfix in V3.21: If loading a job at the same time as sequence repeat is active, the message "Modify job settings" sometimes can be shown.</li> </ul>
01-12-2015	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>• No change</li> </ul>	<b>3.21 (E21)</b> <ul style="list-style-type: none"> <li>• Problem solved: If an error was repetitive (came to often), the error screen could halt the software.</li> <li>• Problem with reading data from Lexar SD cards is fixed.</li> <li>• Possible to dump the data file from Galaxy Remote (for debug use).</li> <li>• If CAN communication, between Galaxy and DSP, can not be established, then error E11-44 is shown. E11-44 therefore replaces E02-04 regarding start up communication failure. E02-04 is still shown if the established connection is lost.</li> </ul>
03-11-2015	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>• No change</li> </ul>	<b>3.20 (E20)</b> <ul style="list-style-type: none"> <li>• Error E 23-09 can appear when uploading licenses from SD card that at the same time contains the program package.</li> </ul>
27-10-2015	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>• No change</li> </ul>	<b>3.19 (E19)</b> <ul style="list-style-type: none"> <li>• System LOG is added with space for 1024 error events.</li> <li>• Support for IWF0, IWF1 and IWF2 are added.</li> </ul>
23-09-2015	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>• Error E 14-10 does not show up because software now supports 300 welding programs.</li> </ul>	<b>3.18 (E18)</b> <ul style="list-style-type: none"> <li>• No change</li> </ul>
14-07-2015	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>• No change</li> </ul>	<b>3.18 (E18)</b> <ul style="list-style-type: none"> <li>• Water pump would not start if you had entered the service menu first. This problem is fixed.</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

11-06-2015	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>No change</li> </ul>	<b>3.17 (E17)</b> <ul style="list-style-type: none"> <li>Cable compensation is implemented.</li> <li>MigManager display is active in JOB mode but control of JOB is not possible still.</li> <li>Support for IWF</li> </ul>
24-04-2015	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>3.15 (E15)</b> <ul style="list-style-type: none"> <li>E-13-02 could appear when used with robot interface.</li> </ul>
19-03-2015	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>3.14 (E14)</b> <ul style="list-style-type: none"> <li>Error E-07-18 could come after 10 minutes when RCI2 is connected.</li> </ul>
16-01-2015	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>3.13 (E13)</b> <ul style="list-style-type: none"> <li>In language selection list all language names are in local, thus not translated.</li> <li>Software upload more robust.</li> <li>Solved problem with water cooler could be turned of during update.</li> <li>Improved start of welding (wire motor is starting more soft, less spatter in start up).</li> <li>E11-06 sometimes seen in end-test removed.</li> </ul>
20-11-2014	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>3.12 (E12)</b> <ul style="list-style-type: none"> <li>Possibility for disabling trigger sequence shift.</li> <li>During gas calibration (and gas test) the RCI and dialog torch is no longer able to adjust current reference.</li> <li>Wire speed and gas flow message, for external data logger now includes measured values and not only the references.</li> <li>When using touchsensing through RCI, the time out is extended from 1 min to 10 min.</li> </ul>
01-10-2014	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>3.11 (E11)</b> <ul style="list-style-type: none"> <li>JOB choise from torch is working.</li> </ul>
29-09-2014	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>No change.</li> </ul>	<b>3.10(E10)</b> <ul style="list-style-type: none"> <li>A gas calibration menu added, so with a correct calibration, the gas flow is correct. Remember that all wire feeders in the welding system must be calibrated.</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

		<ul style="list-style-type: none"> <li>• Error E26-01 is minimized.</li> <li>• Job sequence is added. If torch is configured correct, jobs can be chosen with the torch potentiometer. Remember to assign a job index to the job that should be selected.</li> </ul>
09-05-2014	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>• No change.</li> </ul>	<b>3.09(E9)</b> <ul style="list-style-type: none"> <li>• MMA function is working again.</li> </ul>
29-04-2014	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>• No change.</li> </ul>	<b>3.08(E8)</b> <ul style="list-style-type: none"> <li>• Update via SD card is improved. DSPC is updated everytime now.</li> <li>• Update through Remote<sup>2</sup> is possible now.</li> </ul>
01-04-2014	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>• No change.</li> </ul>	<b>3.06(E6)</b> <ol style="list-style-type: none"> <li>1. JobNumber/copy function is working</li> <li>2. RCI2 support is implemented</li> <li>3. Gas/wire consumption is in logfile</li> <li>4. Home button in keylock screen is working</li> <li>5. Dutch language</li> <li>6. It is possible to use dialog torch and analog remote together with job</li> <li>7. An icon in the top of main screen reflects if the machine is locked</li> </ol>
10-12-2013	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>• No change.</li> </ul>	<b>3.05(E5)</b> <ul style="list-style-type: none"> <li>• Job list is now sorted correctly.</li> <li>• Heat input is now calculated correctly.</li> <li>• Sequence torch choice is ignored when sequence repeat is chosen.</li> <li>• The service menu has now reverse inching and air clean functions.</li> </ul>
22-10-2013	<b>3.00 (E0)</b> <ul style="list-style-type: none"> <li>• When the locking SD card is inserted an information window will popup.</li> <li>• Swedish and French language is added.</li> <li>• Support for DSPC version 8.0 is added. This version may only be used together with DSPC software 8.0 otherwise error E 11-38 will show up.</li> </ul>	<b>3.02 (E2)</b> <ul style="list-style-type: none"> <li>• Language settings was not loaded correct in version 3.01.</li> <li>• Job load from SD card was not loaded correct in version 3.01.</li> </ul>
09-09-2013	<b>2.16 (D16)</b> <ul style="list-style-type: none"> <li>• No change</li> </ul>	<b>3.01 (E1)</b> <ul style="list-style-type: none"> <li>• Norwegian, Finnish and Turkish language is added.</li> <li>• Support for new robot interface with field bus interface is added.</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

		<ul style="list-style-type: none"> <li>• Support for Galaxy remote.</li> <li>• Manuel MIG is added.</li> <li>• The control box could freeze when the "camel" was open at the same time as you started to weld.</li> </ul>
	<b>Control box Galaxy #1 10001321 box MK1- 10001341 box MK2</b>	
2-08-201	<b>2.16</b> <ul style="list-style-type: none"> <li>• Gas control improved. At low input pressure, there was a minor delay before gas flow was started. This error was introduced in 2.15.</li> </ul>	
29-05-2013	<b>2.15</b> <ul style="list-style-type: none"> <li>• Swedish and French language has been implemented.</li> </ul>	
30-04-2013	<b>2.14</b> <ul style="list-style-type: none"> <li>• An information is shown in the display, telling that the controlbox has been locked, when the locking SD card is inserted.</li> </ul>	
12-02-2013	<b>2.13</b> <ul style="list-style-type: none"> <li>• Language menu added for German, Polish Czech, Italian and Danish.</li> <li>• Better and more correct regulation of gas with IGC system.</li> <li>• Improved auto restoring of corrupted licences.</li> </ul>	
15-11-2012	<b>2.10 (D10)</b> <ul style="list-style-type: none"> <li>• MigaLog can be used with a "Gold card" license.</li> <li>• Heatinput is calculated correct now.</li> </ul>	
01-11-2012	<b>2.08 (D8)</b> <ul style="list-style-type: none"> <li>• Bugfix: Sequence Torch: Missing initialization of torch after powerup and therefore it was not possible to use the Sequence torch.</li> <li>• Sequence repeat is disabled if Sequence torch has been selected. Sequence repeat is not possible if Sequence torch is ON. For elimination of jumping to sequence 1 after welding(Sequence repeat mode).</li> <li>• It is now possible to use Dialog torch in job mode.</li> <li>• It is now possible to use Sequence torch on</li> </ul>	

## Sigma Galaxy - FLEX<sup>2</sup> software history

	<p>open sequences in job mode.</p> <ul style="list-style-type: none"> <li>• It is now possible to change Pulsemode, Duoplusmode and Tagmode via analog RobotIF in job mode.</li> <li>• Better explanation is added to the error text "gasoffset too high" (01-03). The added text is informing about "gas pressure too high".</li> <li>• Bugfix: MMA current could go below 0 A in some situations.</li> <li>• Bugfix: On a RWF when using wireinching function and changing the active RWF through a analog robotinterface, at the same time, some illegal behaviour could happen. The police will not arrest you.</li> <li>• Bugfix: Job selecting menu: The (v-tag) was displayed in the middle line of the screen only. Now the (v-tag) is moving correct.</li> <li>• Bugfix: When adjusting the Final current, the Final current time was allso adjusted at the same time.</li> <li>• Bugfix: Voltage trim was not updated when selecting or deselecting the tag function.</li> <li>• It is now possible to step backwards in the program wizard.</li> <li>• When a licence error is comming due to wrong selections from the robotinterface, the error is cleared automatically after 5 sec without confirmation by user.</li> <li>• Bugfix: The overload error that will come when wireinching with 30 m/min, is removed.</li> <li>• Seam length unit is changed from [cm] to [mm].</li> <li>• Bugfix: Seam mean voltage was not shown correct. The voltage is now a mean value over the last 10 sec of welding. Previouly it was only the last measurement of voltage.</li> <li>• It is possible to restore the individual welding process parameters to factory setting, in the screen "welding camel".</li> <li>• The uploadscreens is showing more information about the loaded licences from external SD card.</li> <li>• The MigaLog is collecting data from the entire welding seam and not only after arc delay time until welding stop.</li> <li>• The gas test button is allways visible, also when no IGC kit is installed.</li> <li>• Vertical slider is added to the licence screen.</li> <li>• The menu "Software version" is changed so part number is added.</li> </ul>	
25-09-2012	<p><b>2.06 (D6)</b></p> <ul style="list-style-type: none"> <li>• Startup screen will now show CAR-O-LINER for this privat lable customer.</li> <li>• Debug code is added so now we can perform a DSP data dump to the external SD card for fault</li> </ul>	

## Sigma Galaxy - FLEX<sup>2</sup> software history

	finding purpose.	
07-08-2012	<p><b>2.04 (D4)</b></p> <ul style="list-style-type: none"> <li>Job names that are renamed on a PC to have more than 16 characters could not be deleted again from the Galaxy panel. Now only job names with less than 16 characters are shown in the Galaxy display.</li> </ul>	
06-07-2012	<p><b>2.02 (D2)</b></p> <ul style="list-style-type: none"> <li>Only show those licences in licence screen, for which there exist a welding program.</li> <li>Allways exists a licence for P001(MMA) and P111.</li> <li>When using the service test menu, then errors from missing gas and water circulation is not stored into the error log.</li> <li>If a new welding package is loaded into the machine, and the stock number is different from the stock number for the welding package, which is allready loaded into the machine, then a dialog appears for confirming overwrite.</li> <li>File timestamp is updated when copying a job.</li> <li>Factory reset text is changed, so it should be easier to see, if resetting machine or welding program.</li> <li>Pop up messagebox added when clearing the error log, for confirmation of action.</li> <li>Licence check added the seam length box. This means, if there is no licence for statistics, then a message is shown when activating the button.</li> <li>By wireinch from robotinterface, then the inching speed is given by the setting on the robotinterface. In earlier version, the inching speed was 8 m/min until the analog input on robotinterface was changed.</li> <li>Minimum wireinch speed, that can be set from robotinterface is 0.5 m/min.</li> <li>Machine powerup time is written into the error log. Then it is possible to see running time by an error. REMARK: this means that the error log log is cleared, when upgrading to this software. Only done at the first powerup after upgrading.</li> <li>The sequences in a job is increased to 99. When creating a new job it is possible to select more than 9 sequences and up to 99. Job created in earlier software versions are not modified, so they have still a maximum on 9 sequences.</li> </ul>	

## Sigma Galaxy - FLEX<sup>2</sup> software history

07-06-2012	<b>2.01 (D1)</b> <ul style="list-style-type: none"> <li>Arc time was not measured correct.</li> </ul>	
30-05-2012	<b>2.00 (D0)</b> <ul style="list-style-type: none"> <li>New functionality: <ul style="list-style-type: none"> <li>- Statistic, gives the opportunity to log welding data to SD card.</li> <li>- Trip odometers for arctime, consumed gas and wire. (Under statistic)</li> <li>- Total odometer for arctime, consumed gas and wire. (Service menu)</li> <li>- New menu for selecting Robofeeder.</li> <li>- Service calibration menu.</li> </ul> </li> </ul>	
11-04-2012	<b>1.26 (C6)</b> <ul style="list-style-type: none"> <li>Via robot interface it could be a problem to get PULSE welding, even though the PULS symbol is on.</li> <li>Via robot interface the MMA program could be selected. This possibility has now been removed.</li> </ul>	
21-03-2012	<b>1.23 (C3)</b> <ul style="list-style-type: none"> <li>Error E-11-103 could appear after switching on the machine when sequence torch are selected.</li> </ul>	
06-02-2012	<b>1.22 (C2)</b> <ul style="list-style-type: none"> <li>Error E-22-12 should not come any more.</li> </ul>	
31-01-2012	<b>1.21 (C1)</b> <ul style="list-style-type: none"> <li>Removes the problem that the box locks the control panel until it is switched off and on again.</li> <li>At the same time error code 11-16 and 11-33 will not show up.</li> </ul>	
23-11-2011	<b>1.19 (B9)</b> <ul style="list-style-type: none"> <li>Pulse mode settings did not work correct when a robot interface was connected. They do now.</li> </ul>	
18-11-2011	<b>1.18 (B8)</b> <ul style="list-style-type: none"> <li>Pulse mode, Tag mode, Duo plus and Trigger mode, were during welding, changeble. Now</li> </ul>	



## Sigma Galaxy - FLEX<sup>2</sup> software history

	<p>they can not be activated or deactivated during arc on period.</p> <ul style="list-style-type: none"> <li>• If a unit like ex. the DSP PCB or the wire feeder, suddenly resets by it self, this will now give there message, E-22-12.</li> </ul>	
08-11-2011	<p><b>1.17 (B7)</b></p> <ul style="list-style-type: none"> <li>• When sequence is open ex. 2 steps, then the current from sequence 1 is inherited to sequence 2.</li> <li>• Bug in job namegiving menu is removed.</li> </ul>	
31-10-2011	<p><b>1.16 (B6)</b></p> <ul style="list-style-type: none"> <li>• The sequence torch setup is extended and so now it contains 4 settings. All older types of sequence torches can now be used on Galaxy.</li> <li>• Error E-16-01 could come if there was a error on the gas flow sensor. Now only error E-01-03 will come as it supposed to.</li> <li>• The error messages to the end user now reminds him to tell the error code when he calls nu Migatronic Service Centre.</li> <li>• Update of the current bar, below in the display, is now shown correct.</li> </ul>	
05-10-2011	<p><b>1.15 (B5)</b></p> <ul style="list-style-type: none"> <li>• If the waterpump is running when you select an other welding program, then the pump will continue to run infinite. Problem solved.</li> </ul>	
01-10-2011	<p><b>1.14 (B4)</b></p> <ul style="list-style-type: none"> <li>• Program WIZARD is added.</li> <li>• More wire feeders on the machine, can contain individual JOBS.</li> <li>• Various icon and layout-changes.</li> </ul>	
31-05-2011	<p><b>1.13 (B3)</b></p> <ul style="list-style-type: none"> <li>• The software now supports the new bootloader version 1,3. When the control box has hte new bootloader it can read the high capacity SD HC and SD XC card.</li> </ul>	
11-05-2011	<p><b>1.12 (B2)</b></p> <ul style="list-style-type: none"> <li>• MMA welding is now possible.</li> <li>• Error E-05-03 is redused.</li> </ul>	

## Sigma Galaxy - FLEX<sup>2</sup> software history

13-04-2011	<p><b>1.11 (B1)</b></p> <ul style="list-style-type: none"> <li>In Time setting the weekday could show 37 and after that it was not possible to change the time settings. This problem is solved.</li> </ul>	
01-04-2011	<p><b>1.10 (B0)</b></p> <ul style="list-style-type: none"> <li>The JOB function has been implemented.</li> <li>Error E-16-01 does not show up any longer.</li> <li>Error E-05-03 does not come when the torch trigger switch is activated for more than 3-4 seconds without welding.</li> <li>When changing sequences with the sequence torch, the control box will not "go down".</li> <li>Wire inching speed can be adjusted also on the RWF now.</li> <li>If the CAN connection is interrupted while welding, the wire feeder will now stop.</li> <li>When pushing the GAS TEST button the gas will flow for at least 5 seconds now.</li> <li>Licence ERROR during start of the machine is removed.</li> <li>Error input and arc detect are now active again on the motor control PCBs 71613574-71613578 plug M2.</li> </ul>	
03-03-2011	<p><b>1.09 (A9)</b></p> <ul style="list-style-type: none"> <li>Galaxy can now be used in sequence repeat mode when connected to a robotinterface. It is at must that robotinterface jumper 4 is set to position 2-3 (program choice). All sequence repeat settings must be made on the Galaxy control box and can not be adjusted through the interface. If jumper 4 is set to position 1-2 (sequence choice) will not work.</li> </ul>	
15-12-2010	<p><b>1.07 (A7)</b></p> <ul style="list-style-type: none"> <li>E-23-01. The license coden could disapear. This problem has been solved.</li> </ul>	
15-11-2010	<p><b>1.05 (A5)</b></p> <ul style="list-style-type: none"> <li>Locking card funktion is now active on Galaxy control box.</li> </ul>	

## Sigma Galaxy - FLEX<sup>2</sup> software history

Release date	Robot Interface MK1 and MK2 #5 10020104 the software is loaded onto all versions of the PCB 71613491 via the flash tool MFT1
Implemented 10-11-2009	<b>1.06</b> <ul style="list-style-type: none"> <li>Better support for robot interface on Sigma MK2. This version is a must when using Sigma MK2 version 2.</li> <li>The Interface input number 1 has to be connected now. Or else error E-07-01 will come.</li> </ul>
Implemented 05-03-2009	<b>1.05</b> <ul style="list-style-type: none"> <li>The Robot interface is now active everytime the system is powered on.</li> </ul>
Implemented 26-02-2008	<b>1.04</b> <ul style="list-style-type: none"> <li>Trigger signal now "over rules" gas and inches signals.</li> </ul>
Implemented 11-01-2008	<b>1.03</b> <ul style="list-style-type: none"> <li>Error code E-07-02 and E-02-04 no longer appears unintentionally. Sequence change function works as intended.</li> </ul>
Implemented 12-12-2007	<b>1.02</b> <ul style="list-style-type: none"> <li>Inaccuracies on analogue inlets have been removed.</li> <li>The feeder in the compact machine is now activated with binary code 0 or 3.</li> <li>When the robot reports error and thereby activates MACHINE STATUS = ON, the machine cannot be triggered via the interface.</li> </ul>

## Sigma Galaxy - FLEX<sup>2</sup> software history

MK2 v2	Robo Feeder MK2 #6 / #7 10020115 (Software is loaded from SD card via the control box)
26-09-2014	<b>2.14</b> <ul style="list-style-type: none"> <li>Support for IGC calibration is added.</li> </ul>
29-04-2014	<b>2.14</b> <ul style="list-style-type: none"> <li>SW-update is more robust.</li> </ul>
01-04-2014	<b>2.13</b> <ul style="list-style-type: none"> <li>SW-update is faster.</li> </ul>
09-09-2013	<b>2.12</b> <ul style="list-style-type: none"> <li>Measured gas flow and wire speed are now send to the control box log file, instead of set values.</li> <li>Reversing is possible when inching.</li> </ul>
Implemented 12-02-2013	<b>2.11</b> <ul style="list-style-type: none"> <li>Better and more accurate regulation on IGC system.</li> </ul>
Implemented 31-10-2012	<b>2.10</b> <ul style="list-style-type: none"> <li>When 2 RoboFeeders are connected to one power source the errors E-07-04 and E-22-12 might come. This problem is solved.</li> </ul>
Implemented 24-05-2012	<b>2.09</b> <ul style="list-style-type: none"> <li>Functionality added for measuring the used gas and wire consumption. Active only in Sigma Galaxy.</li> </ul>
Implemented 27-12-2011	<b>2.08</b> <ul style="list-style-type: none"> <li>Error E-07-02 can come when Galaxy, with control panel 76113597, is software updated at the same time as the machine is connected to 2 robo feeders.</li> </ul>
Implemented 31-03-2011	<b>2.07</b> <ul style="list-style-type: none"> <li>Error E-26-00 could come on Sigma Galaxy. The problem is solved.</li> </ul>
Implemented 20-12-2010	<b>2.06</b> <ul style="list-style-type: none"> <li>The wire could continue to run when the RWF lost connection to the power source.</li> </ul>
Implemented	<b>2.05</b>

## Sigma Galaxy - FLEX<sup>2</sup> software history

07-10-2010	<ul style="list-style-type: none"> <li>The external error input is changed so now the error message disappears after 5 seconds but it will show up again when the torch trigger is activated when the fault is still there. Gas test and inching now works when there is an external error.</li> </ul>
Implemented 08-09-2010	<b>2.04</b> <ul style="list-style-type: none"> <li>The Arc detector output and External Error input are both active now on the RoboFeeder (RWF) and there functions are like on MWF 41.</li> </ul>
Implemented 16-10-2009	<b>2.03</b> <ul style="list-style-type: none"> <li>Various bug fixes.</li> </ul>
Implemented 12-10-2009	<b>2.02</b> <ul style="list-style-type: none"> <li>Support for the new COOPTIM wire feeder is implemented.</li> </ul>
Implemented 28-09-2009	<b>2.01</b> <ul style="list-style-type: none"> <li>New software which is loaded via the control box bootloader.</li> </ul>
<b>MK2 v1</b>	<b>10020111 (Software is loaded from SD card reader directly on the PCB 71613578)</b>
Implemented 19-3-2009	<b>1.01</b> <ul style="list-style-type: none"> <li>The torch control stays active even after the trigger wires have been disconnected shortly. Like after a bad connection in the ZA connector</li> </ul>