Rectifiers Flex Kraft, Single Output, 250–6000 A

A new and modern range of KRAFT rectifiers with a switch mode design for harsh plating shop environments. The compact and modular design offers many benefits to the plater.

Flexibility
Power control allows the use of a wide range of voltages and currents.

Upgradeable
Modular design allows upgrading of power output.

Serviceable
Easy access for module repair or replacement.

Space-saving
Small footprint allows easy installation. Modular design allows flexibility in layout.

High Power Factor
Low reactive power consumption compared to thyristor rectifiers.

Ripple
Low ripple at ALL output currents.

Extended scope
By combination of modules and stacks, Flex Kraft for up to 60 V DC or 24 000A can be delivered. Flex Kraft is also available for dual output up to 15 VDC 2 x 3000A (See S 107.035).

CE ISO 9001

KRAFT

The **FlexKraft** rectifier is designed to give the best electrical performance as well as withstanding harsh industrial environments. The design is based on primary switching technology.

The rectifiers consist of 1–10 power modules, which together with a control module form a complete unit.

PLANT CONTROL SYSTEM

Standard control interface:
Digital Display and Keypad integrated into unit
Modbus RTU/RS-485
Profibus DP/RS-485

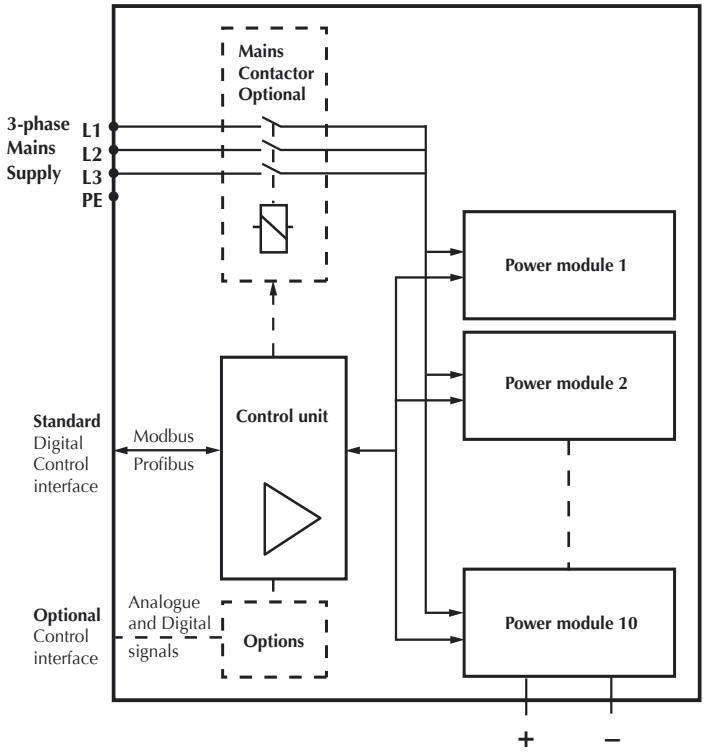
Process control parameters:

Input to unit:	**Output from unit:**
Set current	Actual current
Set voltage	Actual voltage
On / Off	On signal
Start / Stop	Run signal
Stand by / Run	Actual Amp hours
Amp hours	Actual run time
Run time	Alarm (general alarm)
Clear counters	Alarm status (cause of alarm)
	End of process

TECHNICAL DATA

Supply voltage:	3 x 380–480 V ± 10%, 50–60 Hz 3 x 200–240 V ± 10%, 50–60 Hz for a maximum output of 14 VDC
EMC conformity:	According to EN 61000-6-4, Emissions, and EN 61000-6-2, Immunity
LVD conformity:	According to EN 50178
Protection class:	IP 32 (except for fan)
Power factor:	≥ 0.93 @ rated load
Efficiency:	Typical 0.9 @ rated output
Ambient temp.:	Max. 40˚C, derated operation up to 50˚C
Cooling:	Forced air cooling
Humidity:	Max. 85% relative, non-condensing
Weight:	Approx. 25 kg per module
Control precision:	Voltage/current < ± 1%
DC ripple:	< 1% of rated output current at constant current mode in the entire range of regulation
Regulation range:	Stepless at constant voltage or current 0–100%
Duty ratio:	Designed for continuous operation at rated load up to 1000 m altitude
Protection:	Over-current Over-voltage Overtemperature Short circuit Open circuit Module failure

BLOCK SCHEMATIC DIAGRAM S 107.034 GB



OPTIONS

- Remote control box with digital Display and Keypad.
- Remote control box "basic version" with analogue or digital instruments, potentiometers etc.
- RS-232C interface for control of one rectifier.
- Analogue/Digital I/O interface. Two control and two status signals 0-10 VDC and two control and two status signals 24 VDC. Standard configuration: Iset, Uset, Iact and Uact: 0-10 VDC. On/Off, Block/Run, Power On and Alarm as digital signals: 24 VDC.
- Analogue I/O interface with four inputs and four outputs galvanically isolated. Control and status signals either 0-10 VDC or 0/4-20 mA. Standard configuration: Iset, Uset, Iact and Uact: 0-10 VDC
- Digital I/O interface with four inputs and four outputs. Control signals 24 VDC. Status signals via voltage free relay contacts; contact data 24 VDC or 24 VAC. Standard configuration: On/Off, Block/Run, Power On and Alarm.
- Raise / Lower function.
- Software for pulse plating and process sequence control.
- Mains Contactor
- External reference shunt, 60 mV.
- Pole reversing units.
- Custom-designed rectifiers.

OUTPUT SPECIFICATION / STANDARD RANGE

Number of power modules →

V/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
0–12 V	600	1200	1800	2400	3000	3600	4200	4800	5400	6000
0–15 V	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
0–24 V	300	600	900	1200	1500	1800	2100	2400	2700	3000
0–30 V	250	500	750	1000	1250	1500	1750	2000	2250	2500
Height (mm)	450	590	730	870	1010	1290	1430	1570	1710	1850

Footprint of cabinet: Width = 500 mm, Depth = 610 mm inclusive busbars on the rear side.

Kraftelektronik AB
P.O. Box 2102
SE-445 02 Surte
SWEDEN

Tel: +46 31 97 97 00
Fax: +46 31 97 97 97
www.kraftelektronik.se
info@kraftelektronik.se