

CARLO GAVAZZI
Automation Components

VariFlex2 RVEF Series

Variable Frequency AC Drives

- 0.20 to 2.2kW
- 0.25 to 3.0Hp

Switch





VariFlex² - RVEF Series

The VariFlex² is a simple, smart and compact AC variable speed drive for use with 3-phase AC induction motors. The drives have small dimensions and can be installed side by side for saving space. The range of product can be supplied with all the voltage input from the single phase / 110VAC up to the three phase / 480VAC. The VariFlex² employs state of the art microprocessor technology which controls all drive functions. All printed circuit boards are manufactured using surface mount technology ensuring high quality and reliability.



Space
Optimization



Simplified
Set-Up



Diagnostic
Warning



Communication
Capabilities



Main Features

- AC variable speed drive for use with AC induction motors
- Sensorless vector control with high starting torque or V/F control
- Input voltage range:
1-Phase up to 230VAC,
3-Phase up to 480VAC
- Only 2 physical frame sizes
- Speed setting by buttons and knob
- 8-step speeds setting
- PID function
- Built-in 24VDC (60mA) for external application
- Full motor terminals protection
- I/O expansion (2input / 1 output insulated)
- DIN rail or panel mounting and remote Keypad available

Communication

- All parameters accessible both via Keypad and PC
- RS232 or RS485 MODBus RTU/ASCII serial communications available on all models through an option card
- Copy card option for fast and easy setup of identical drives

Conformity

All VariFlex² are approved according to the related European and North American safety standard. Conforms to EMI radio standard and EMS immunity standard EN 61800-3 for the second environment (Industrial sites).



VariFlex²

3 Digit Display
and LED

Keypad

Panel Mounting
Clip

Input Terminals
(Main Supply)

Knob (VR)

Communication and
Expansion Port

Configuration
Switches

Multifunction I/O

Output Terminals
(Motor)

Terminals
for Braking Unit
230VAC or 440VAC

Remote keypad



Program copy unit



I/O Expansion card



RS485 Communication device



RS232 Communication device





Every Detail is Aimed to Speed up Your Start

- Easy to set up – a simple and comprehensive basic menu allows quick commissioning
- Easy installation – choose between simple panel mounting and DIN- rail mounting (up to 1.5kW/2Hp)
- Simple connections – easy and safe terminals access with clear marking
- Simple start up – simple push button set up – no need for complex programming
- Gets your machine running quickly and reliably with minimum effort



Space Reduction

The RVEF models can be installed side by side (if the temperature inside the cabinet is below than 50°C / 122°F)

Easy to Install

Easy installation on any kind of DIN rail and panel mounting



RVEF Drivesoft

Software for your PC or Laptop which allows you to commission and store parameter settings. Use with RS232/RS485 communication devices.

Conveyors

Ease of setting makes VariFlex² versatile for a long list of conveyor applications.

Locations: Luggage handling in airports,
Transportation of bottles in bottling plants
Letter or package sorting in postal services
Cement powder conveyors in construction



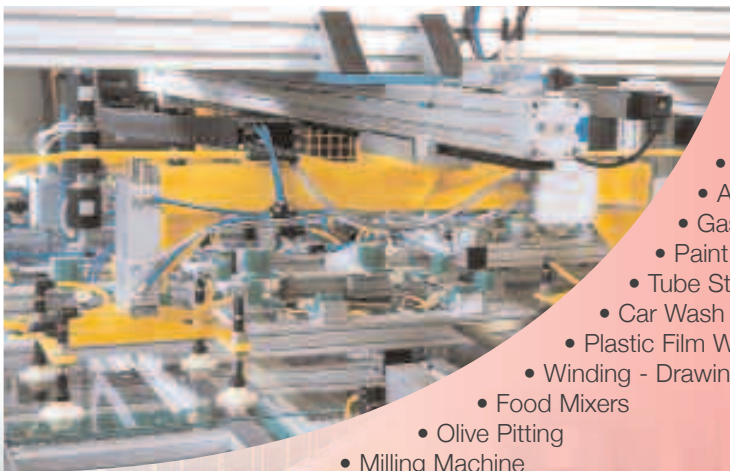
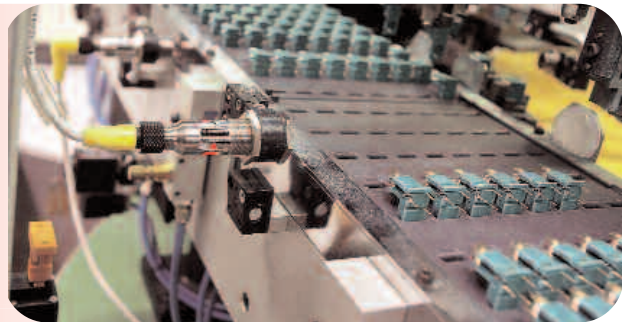
Booster Pumps

Residential and Commercial mains water pressure regulation and boosting.

Single Pump and Dual Pump using VariFlex² for basic duty assist.

Packaging

Development of turnkey automation packaging and moulding machinery systems.



General Purpose

Provides a powerful solution for most motor applications:

- Automated Bottling Plants
- Lab Coagulation Line
- Air Bag Sealer
- Gas - Fire Boiler
- Paint Mixer
- Tube Straightner
- Car Wash
- Plastic Film Winder
- Winding - Drawing
- Food Mixers
- Olive Pitting
- Milling Machine
- Edge bending Woodworking Machine
- String - Synthetic for Tennis Racquets
- Top Rollers for Glass Float Rollers

General Characteristics

- Mounting type: DIN rail and panel mounting clip
- Integrated cooling fan: Yes
- Display: 3 digit / 7 segment
- Keypad / LED: 5 function keys / 1 status LED
- Control mode: Sensorless vector control (starting torque: 100%/3Hz)
- Frequency range: 0~200Hz
- Frequency setting mode: Set directly with keys or the VR on the keypad or the up/down setter or AIN signal
- Output frequency limit function: Respectively setting upper/lower frequency limits and two-stage prohibited frequencies
- Carrier frequency: 4~16Hz (factory setting 10KHz, 10KHz or more derating)
- Other protection function: Over current, over voltage, low voltage, overload, momentary power loss and restart, stall prevention for acceleration/deceleration/operation, short-circuit protection for output/grounding fault, reverse restriction, restriction for direct start after power up and error recovery

Environmental Data

- Operating temperature: -10°C to +50°C (+14°F to +122°F)
- Storage temperature: -20°C to +60°C (-4°F to +140°F) for max. 12 months
- Max. Relative Humidity: 95% (non-condensing)
- Degree of Protection: IP20

Protection Functions

- Over current: Inverter rated current 150%/1min
- Over voltage: 230V class: DC voltage > 400V
460V class: DC voltage > 800V
- Under voltage: 230V class: DC voltage < 190V
460V class: DC voltage < 380V
- Instantaneous power loss restart: Set to enable or disable
- Stall prevention: ACC/DEC/Operation stall prevention and stall prevention level
- Output terminal short circuit: Electronic circuit protection
- Other function: Grounding error, Fault reset limit, directly start at power-on
- EMC: Built-in class B filter according to EN61800-3 first non/limit environment

RVFVF-2202	RVFFS21019-8.9-07	RVFFS21015-22-07	RVFFS21016-15-07	RVFFS20858-7-07
RVEFA110020	RVEFA320020	RVEFB120150	RVEFB320150	VEFB340075
RVEFA110040	RVEFA320040	RVEFB120220	RVEFB320220	RVEFB340150
RVEFA110075	RVEFA320075	RVEFB120150F*		RVEFB340220
RVEFA120020		RVEFB120220F*		RVEFB340075F*
RVEFA120040				RVEFB340150F*
RVEFA120075				RVEFB340220F*
RVEFA110020F*				
RVEFA110040F*				
RVEFA110075F*				

Additional EMC Filters

These additional external class A filters are designed to operate together with the drive's own integral EMC filter in areas of sensitive equipment.

*Drives with built-in filter

Technical Specifications

Voltage Rating	AC Supply Phase	Frame Size		Nominal Motor Power		Rated Output Current A	Rated Capacity kVA	Output Voltage and Frequency	Input Current A	Max. momentary Power Loss Time	Weight Kg/lb
		Size 1	Size 2	HP	kW						
100 - 120VAC (-15% - +10%)	1-Phase	RVEFA110020	-	0.25	0.20	1.7	0.53	3-phase 0 - 240V, 0 - 200Hz	7.1	1.0s	0.62/1.7
		RVEFA110040	-	0.50	0.40	3.1	0.88		12.2		0.68/1.5
		RVEFA110075	-	1.00	0.75	4.2	1.60		17.9		0.72/1.59
200 - 240VAC (-15% - +10%)	1-Phase	RVEFA120020	-	0.25	0.20	1.7	0.53		4.3	2.0s	0.65/1.43
		RVEFA120040	-	0.50	0.40	3.1	0.88		5.4		0.67/1.48
		RVEFA120075	-	1.00	0.75	4.2	1.60		10.4		0.67/1.48
		-	RVEFB120150	2.00	1.50	7.5	2.90		15.5		1.0/2.2
		-	RVEFB120220	3.00	2.20	10.5	4.00		21.0		1.05/2.31
		-	-	-	-	-	-		-		-
200 - 240VAC (-15% - +10%)	3-Phase	RVEFA320020	-	0.25	0.20	1.7	0.53		3.0	1.0s	0.61/1.34
		RVEFA320040	-	0.50	0.40	3.1	0.88		4.0		0.61/1.34
		RVEFA320075	-	1.00	0.75	4.2	1.60		6.4		0.66/1.46
		-	RVEFB320150	2.00	1.50	7.5	2.90		9.4	2.0s	0.95/2.09
		-	RVEFB320220	3.00	2.20	10.5	4.00		12.2		1.0/2.2
		-	-	-	-	-	-		-		-
380 - 480VAC (-15% - +10%)	3-Phase	-	RVEFB340075	1.00	0.75	2.3	1.70	3-phase 0 - 480V, 0 - 200Hz	3.0	1.0s	1.5/3.30
		-	RVEFB340150	2.00	1.50	3.8	2.90		4.8	2.0s	1.52/3.35
		-	RVEFB340220	3.00	2.20	5.2	4.00		6.6		1.55/3.42

Front View



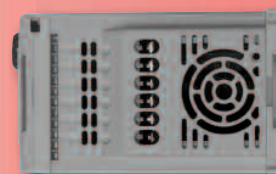
77/3.03"

Side View



132/5.20"

Bottom View



131/5.16"

Front View



118/4.65"

Side View



132/5.20"

Bottom View



148/5.83"

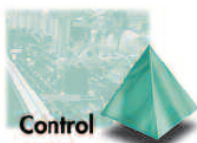
The Complete Product Package



Sense
Inductive Proximity Sensors
Tripleshield™ Capacitive Sensors
Photoelectric Sensors
Inductive Loop Detectors
Ultrasonic Sensors
Radar Sensors
Level Sensors
Limit Switches
Magnetic Switches



Switch
Solid State Relays
Contactors and Overloads
Manual Motor Starters
Motor Controllers
Variable Frequency Drives
Electromechanical Relays
Pilot Devices
Cam Switches
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PID Controllers
Switching Power Supplies
Time Delay Relays
Current Monitoring Relays
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Three Phase Monitoring Relays
Current Transformers



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Magnetic Sensors
Light Curtains
Stack Lights
Mat Systems



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CARLO GAVAZZI has a multitude of sales offices spanning North America (*not to mention our hundreds of distributors*). Therefore, we can be viewed as "your local automation resource" - assisting you every step of the way in finding the proper solution for your various application requirements. Naturally, our job is greatly simplified as we have such a vast range of solutions to offer you via our comprehensive *product package*.

Our worldwide sales offices make us an ideal business partner, *especially for manufacturers of exported machinery*, as our products are available locally and they are CE marked.

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VariFlex2 Brochure 11/08

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