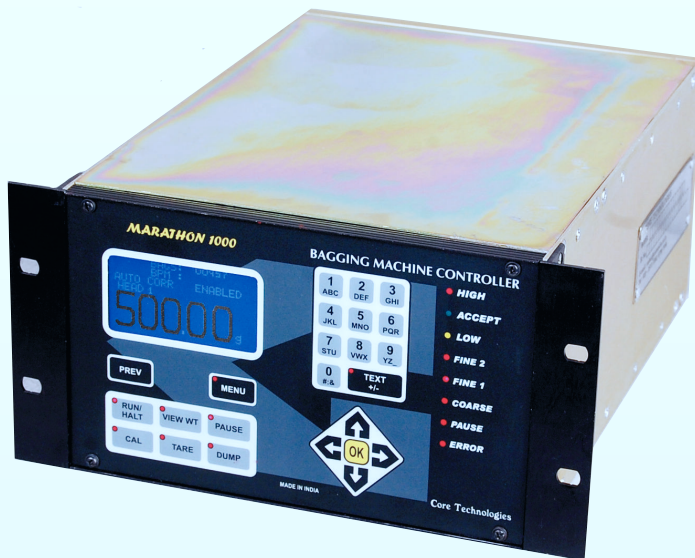


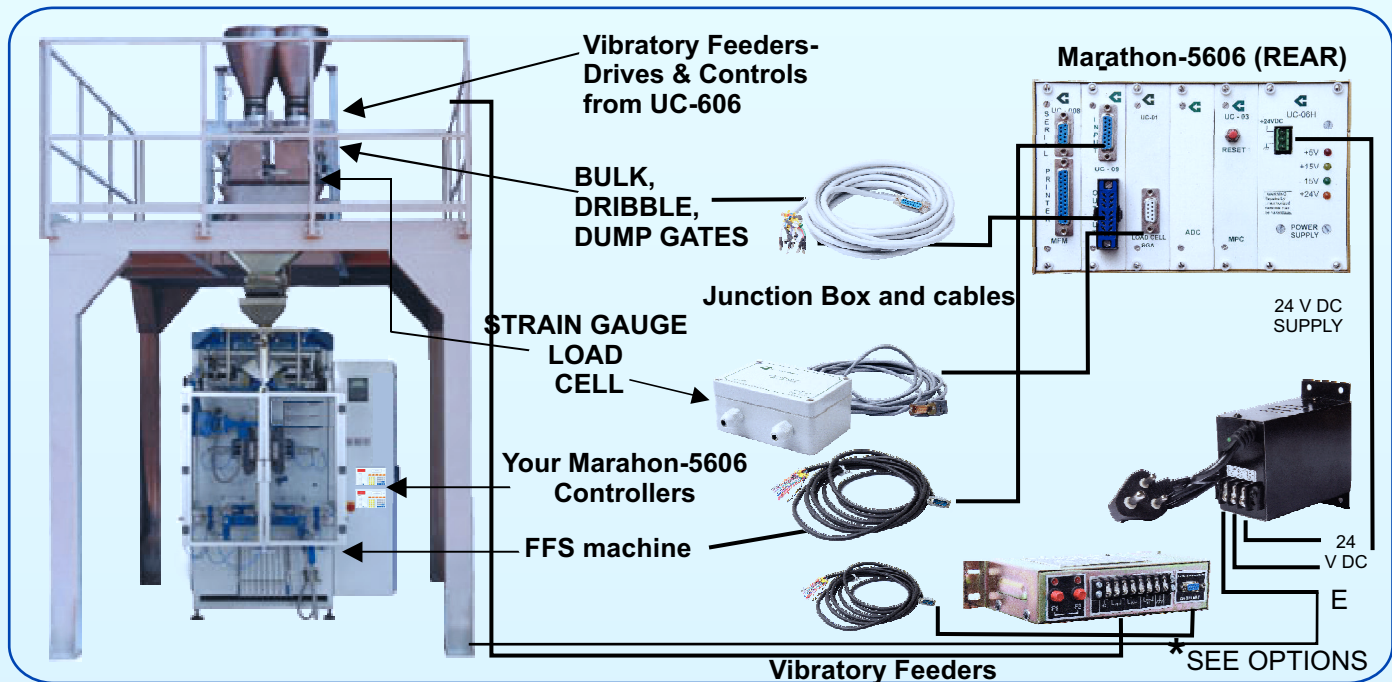
# Modular Controller

## Microprocessor Based Automatic FFS Machine Controller

# Marathon - 5606



The Marathon-5606 is an all inclusive controller system providing not only for Bulk, Dribble and Discharge operations, but also for linear digital control of the vibratory feeders as well as operations of elevator system to ensure material in the hopper. An ultra high precision Strain Gauge Load cell signal conditioning and high performance Analog to digital converter ensure superior accuracy and speed through out the temperature range 0°C to 50°C. The controller Marathon-5606 features full calibration and setup through front panel keys and helps the user in installation and commissioning through the unique DRY and WET run facility. Weight calibration is one shot affair. AUTO Correction and JOG features ensure "No Negative weight". Full modularity of Marathon-5606 allows field servicing in minimum time.



### Notes:

- 1 AUTO CORRECTION** takes care of feed rate variations and ensures weight within tolerance by trimming the fine cut point.
- 2 AUTO JOG**, initiates Dribble cycle again if the weight filled is below target weight, with pre-programmed feed rate and time to top up the filling operation and ensure that no bag is under weight.
- 3 DRY- RUN Feature**(in test Mode)helps Installation and Commissioning engineers, to checkout operation of all output devices and tests the status of inputs without the need for material in the hopper. Single Step & Single Cycle tells
- 4 LEARN Mode** of Marathon-5606 computes optimum coarse and Fine cut values in the initial few weighing cycles, resulting in "Best Accuracy-Bagging speed" performance.

# Marathon - 5606

## Specifications

### Absolute Limits

**Ambient Temperature** :  $-10^{\circ}$  to  $+50^{\circ}$  Celsius ( $50^{\circ}$  to  $122^{\circ}$  Fahrenheit)

**Relative Humidity** : 10% to 95% (Non-Condensing)

**Power** : 160 to 265 VAC, 50-60 Hz.

<b>Load cell Sensitivity Capacity</b>	Strain gauge type, (not in our scope of supply) 350 Ohms nominal. Up to 4 load cells with matched sensitivity may be used in parallel. 1.0mV/V to 3.0 mV/V. Different load cell capacities can be selected depending upon pan weight (dead weight) and weighing range (consult factory).
<b>Resolution</b>	1 part in 10,000 e.g. 0.1g in 1000g
<b>Accuracy*</b>	$\pm 0.01\%$ in the range of 10 to 125% of span *e.g. $\pm 0.1$ g in 1000 g over full temperature.
<b>Speed*</b>	Filling rates of 25 to 30 BPM for 1.0Kg with 99.9% bags within $\pm 5.0$ g are achievable.
<b>Vibratory Feeder</b>	Digital PWM signal from the controller sets feed rates in 1 % steps with unique LINEAR power control algorithm. Up to three feeders can be controlled. Marathon-5606 complete system includes Thyristor drives working on 230 V or 50V AC 50 Hz.
<b>Recipe</b>	Twenty recipes can be stored and recalled from non-volatile memory with storage life in excess of 7 years.
<b>Logic Inputs</b>	NPN OC Type sensor inputs and Dry contacts of relays/ switches, total 3 inputs.
<b>Logic Outputs</b>	5 NO/NC relay changeover dry contacts with 24 VDC or 230 VAC capacity.
<b>Timers (16)</b>	Built in programmable timers for Impact, Change over, Calming, Dump, Load cell settling Time which can be programmed from 50 mS to 10 Sec in step of 0.01 Sec.
<b>Physical</b>	Panel / Rack Mount Version 133 (H), 273(W), 320 (D), Std. 3-U 42T rack mount size. Panel cut required 133 X 223 approx. Weight 5.0 Kg Approx.
<b>Accessories</b>	Junction box for intermediate termination of LC signal cables Din Rail SMPS for 230 V AC input and 24 V DC out put, Complete cable sets with ferrules and documentation. User manual and Quick Reference manual,

**Notes :** Speed and Accuracy specifications are subject to several factors like machine design, site conditions and correct selection of Load Cell, Load Cell Mounting with or without flexures, material properties etc. Consult Core Technologies on these aspects. Due to continuous R & D, at Core Technologies, the Specifications given above may undergo changes or improvements, without prior notice.



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## Other Products

### Isolation Modules

- \* Analog Modules (mV to 600 V I/P & Single / Dual Current / Voltage O/P)
- \* Strain Gauge / Load Cell Signal Conditioning
- \* RTD Pt-100 Temperature Transmitters
- \* Thermocouple Signals Transmitters

### Data Loggers

- \* Event Sequence Recorders
- \* Digital & Analog History Loggers
- \* Plant Performance Monitoring Systems