

# NEW



## NuStart - Single Phase Series

### What Does it Do?

Ramps in Start-Up Current for the Compressor with Added Protection Features:

- **Lowers Energy Consumption**
  - Reduces Start-Up Current by 60-70%
- **Aids in System Service Life**
  - Reduces Start-Up Torque by 30-40%
  - Reduces Compressor and Piping Stress
  - Protection Features:
    - ☐ EXCLUSIVE Reverse Scroll Protection
    - ☐ Low Voltage Protection
    - ☐ Protects Compressor from Rapid Cycling
    - ☐ Overcurrent Limit Shutdown
- **Added Benefits:**
  - Reduces Start-Up Noise and Vibration
  - Eliminates Light Flickering at Start-Up
  - Prevents Motor Stalls During Utility Brownouts
  - Efficient Start-Up on Back-Up Power Sources
  - Reduces Contactor Arcing Damage



### Additional Features

- Smallest Soft Starter Available!! Fits Inside the Condensing Unit for Easy Installation.
- Device LED Provides Easy Fault Diagnosis
- Automatically Optimizes Motor Start-up Current
- Compatible with all Modern Scroll Technologies
- Compatible with Utility and Local Regulations
- Most Trusted, Time-Proven Technology on the Market

Attributes	Nu-Calgon Single Phase Models		
	5010-10	5010-20	5010-21
Nominal Voltage Rating	110-115 VAC	208-230 VAC	208-230 VAC
Rated Phase	Single	Single	Single
Rated Frequency, Hz	60	50/60	50/60
Motor Current, Max. RLA/FLA Range	12-20A	8-16A	16-32A
LRA, Max.	85A	85A	180A
Start Current Reduction	60-70% of LRA	60-70% of LRA	60-70% of LRA
Startup Torque Reduction	30-40%	30-40%	30-40%
Degree of Protection – Housing	IP20	IP20	IP20
Operating Temperature	-4° to 140°F	-4° to 140°F	-4° to 140°F
Storage Temperature	-40°F to 185°F	-40°F to 185°F	-40°F to 185°F
Maximum Number of Starts per Hour	15	15	15
Minimum Startup Voltage	103V	180V	180V
Maximum Permissible High Voltage	130V	253V	253V
Shutdown on Low Voltage	90V	175V	175V
Dimensions	5.30"x 1.96"x 2.94"	5.30"x 1.96"x 2.94"	5.30"x 1.96"x 2.94"
Weight	1.1 lb.	1.1 lb.	1.1 lb.
Life Expectancy	Minimum 100,000 Cycles	Minimum 100,000 Cycles	Minimum 100,000 Cycles
Limited Warranty	One Year from Install	One Year from Install	One Year from Install

Note: NuStart not for use for inverter type compressors.  
Contact Nu-Calgon with questions on other types of compressors.

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## NuStart - Three Phase Series

### What Does it Do?

Ramps in Start-Up Current for the Compressor with Added Protection Features:

- **Lowers Energy Consumption**
  - Reduces Start-Up Current by 30-50%
- **Aids in System Service Life**
  - Reduces Start-Up Torque by 50-70%
  - Reduces Compressor and Piping Stress
  - Protection Features:
    - ☐ EXCLUSIVE Reverse Scroll Protection
    - ☐ Low and Over Voltage Protection
    - ☐ Integrated Reverse Phase Protection
    - ☐ Protects Compressor from Rapid Cycling
- **Added Benefits:**
  - Reduces Start-Up Noise and Vibration
  - Eliminates Light Flickering at Start-Up
  - Prevents Motor Stalls During Utility Brownouts
  - Efficient Start-Up on Back-Up Power Sources
  - Reduces Contactor Arcing Damage

### Additional Features

- Smallest Soft Starter Available!! Fits Inside the Condensing Unit for Easy Installation.
- Device LED Provides Easy Fault Diagnosis
- Automatically Optimizes Motor Start-up Current
- Compatible with all Modern Scroll Technologies
- Compatible with Utility and Local Regulations
- Most Trusted, Time-Proven Technology on the Market



Attributes	Nu-Calgon Three Phase Models	
	5010-30	5010-31
Nominal Voltage Rating	208-230 VAC	460 VAC
Rated Phase	Three	Three
Rated Frequency, Hz	50/60	60
Motor Current, Max. RLA/FLA Range	4-28A	4-27A
LRA, Max.	210A	210A
Start Current Reduction*	30-50% of LRA	30-50% of LRA
Startup Torque Reduction	50-70%	50-70%
Degree of Protection – Housing	IP20	IP20
Operating Temperature	-4° to 140°F	-4° to 140°F
Storage Temperature	-40°F to 185°F	-40°F to 185°F
Maximum I2t for Fusing, A2s	1060	1060
Maximum Number of Starts per Hour	15	15
Minimum Startup Voltage	176V	414V
Maximum Permissible High Voltage	253V	510V
Shutdown on Low Voltage	176V	391V
Dimensions	5.30"x 1.96"x 2.94"	5.30"x 1.96"x 2.94"
Weight	1.1 lb.	1.1 lb.
Life Expectancy	Minimum 100,000 Cycles	Minimum 100,000 Cycles
Limited Warranty	One Year from Install	One Year from Install

Note: NuStart not for use for inverter type compressors.  
Contact Nu-Calgon with questions on other types of compressors.