TOSHIBA
Leading Innovation »»»

GX9

Adjustable Speed Drive

Built to Last

Overview

- Wide Horsepower range
- IGBT Inverter
- NEMA 1 Standard
- 6 Pulse Diode Standard
- Fused Inputs
- VLP Technology

Built to Last

- **110% Continuous Output**
    - **150% for 60 sec for 5~125HP**
    - **130% for 120 sec for 150~1200HP**
- **65kAIC Rating**
- **Proven Toshiba ASD Technology**
- **Components are oversized for cooler operation and longer lifespan**
- **690V (1700V PIV rated) Transistors**
- **Conformal coating on most PCBs**

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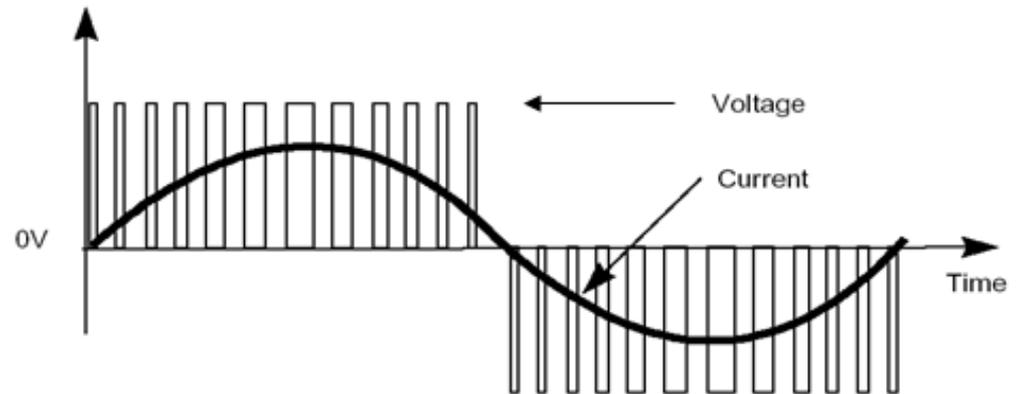
Specification Highlights

- 525 ~ 690V Input Voltage
- 5 – 1200 Horsepower Ratings
- NEMA 1 Enclosure Standard, Fan Cooled
- Temperature Rating: -10 to 40° C
- 1000m Maximum Altitude without Derate
- 9-Series LCD Full English Keypad
- Includes VLP Software
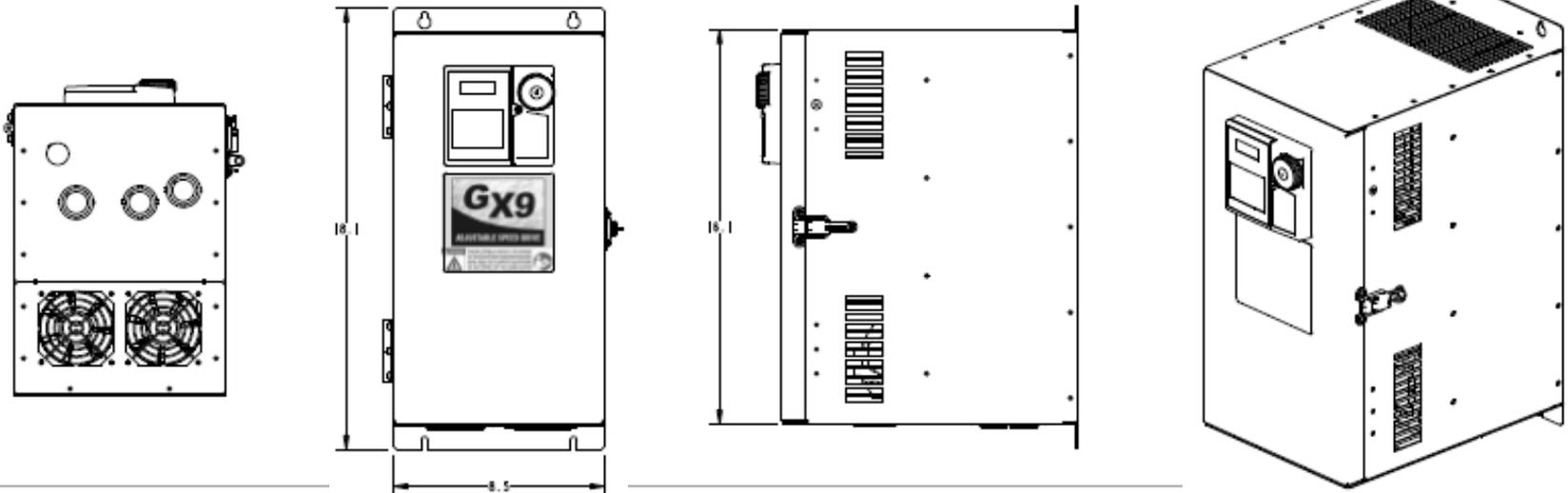
Specification Highlights

- MOVs

- Input Fuses

- Control Power Fuses

- DC Bus Fuse

- Control Power Transformer

- NEMA 1 Cabinet

  Enclosure above 75HP

Specification Highlights

- 8 digital inputs, 3 analog inputs (0-20mA, 4-20mA, 0-10V, -10 to +10V)

- 3 dry contact programmable relays (1 form C and 2 form A)

- 2 programmable analog outputs (0-20mA, 0-10V)

- Monitoring functions

- Bi-directional speed search

- My Function for customizable PLC style programing
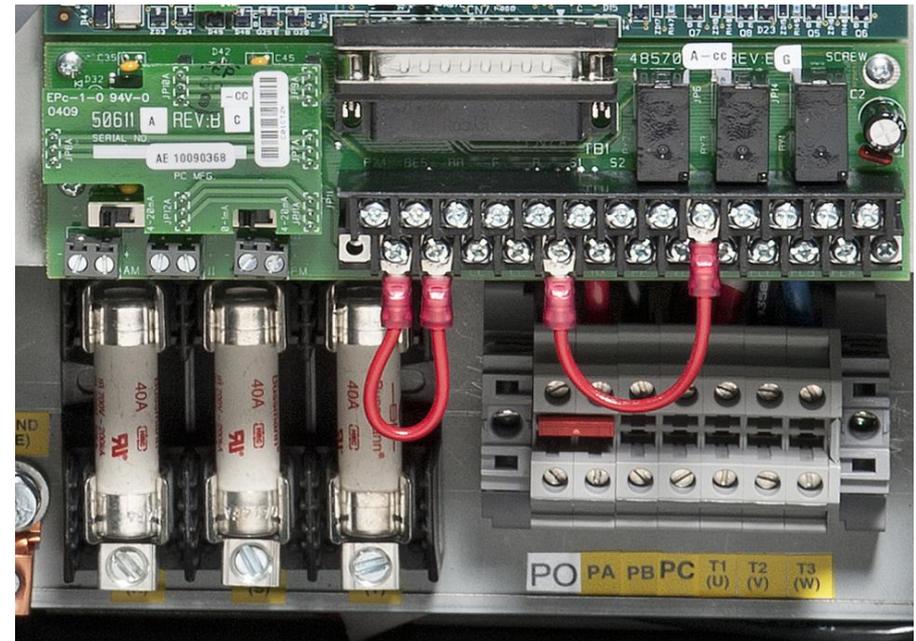
VLP Overview

- Linearizes traditional non-linear pump curve

- 5 simple steps to setup the drive

- Additional VLP features:
    - Start & Stop Points
    - Sleep Timer
    - Run External Devices
    - No-Flow/Low NPSH Cut Off
    - Time Based Alternation

VLP-to-Pressure Correlation

BEP

100
75
50
25
0

Real-World Pressure Setpoint

Dynamic Non-Linear Pump/System Curve

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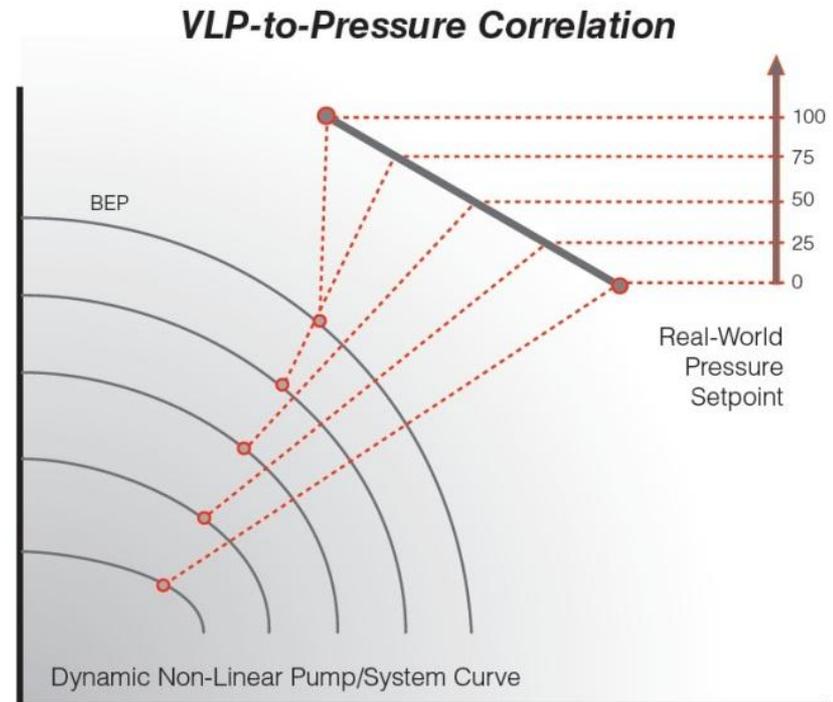
Obsolete PID Tuning

- VLP takes minutes to calibrate
- Ready to maintain application defined setpoint with no overshoot or oscillation

Adaptability

- Monitors multiple systems for system variables and self-calibrates (impeller losses, friction losses)
- Adjust system (ensure only necessary pumps/fans are operating to maintain BEP)
- Balance flow rates
- Maintain same load across all operating devices

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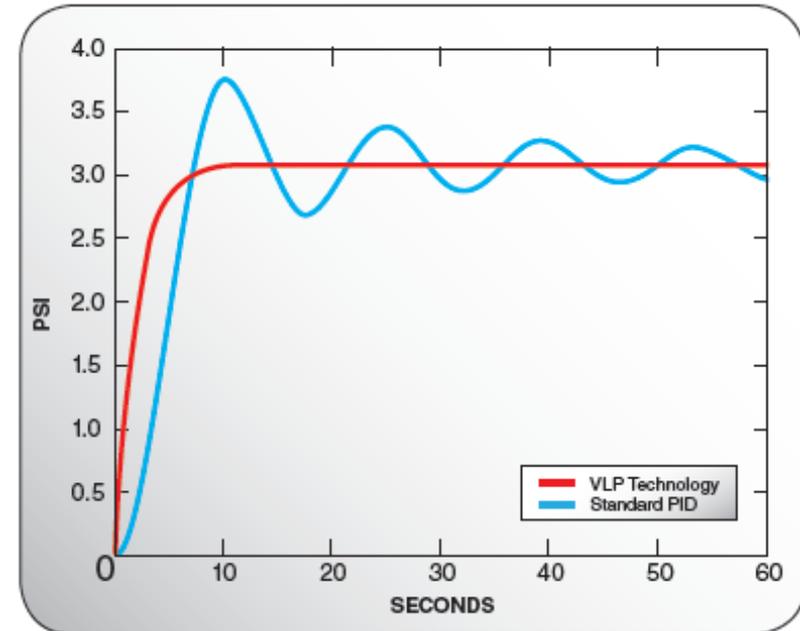
5-Step Approach

✦ **5 simple steps to setup the drive out-of-the-box**
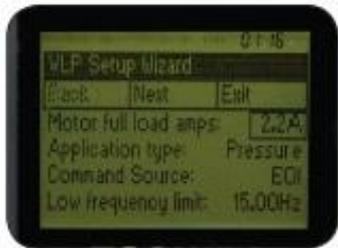
STEP 1:
Input
Motor's Electrical
Specifications

STEP 2:
Input
Transducer
Specifications

STEP 3:
Input
VLP Maximum

STEP 4:
Input
VLP Minimum

STEP 5:
Complete
VLP Setup

Options

- Supports standard 7-Series options
- Dynamic braking IGBT (on some ratings)
- 18 pulse option (above 100 HP or consult Factory)
- DC choke and line reactor available
- Extended terminal strips
- Many communications options
- Remote keypad

ASD-MULTICOM-X

Communications

ETH - 200

RS232 / RS485 (standard)

Modbus RTU Modbus TCP/IP   Modbus Plus
DeviceNet   Ethernet IP   Profibus DP
Metasys N2   Siemens FLN

ASD – NANOCOM

ASD Pro Software

- Programming/setting
- Free Windows®-based software
- Monitoring/tracing
  - Save traced data in MS Excel format
- USB interface cable
- Wireless communication via NetPac
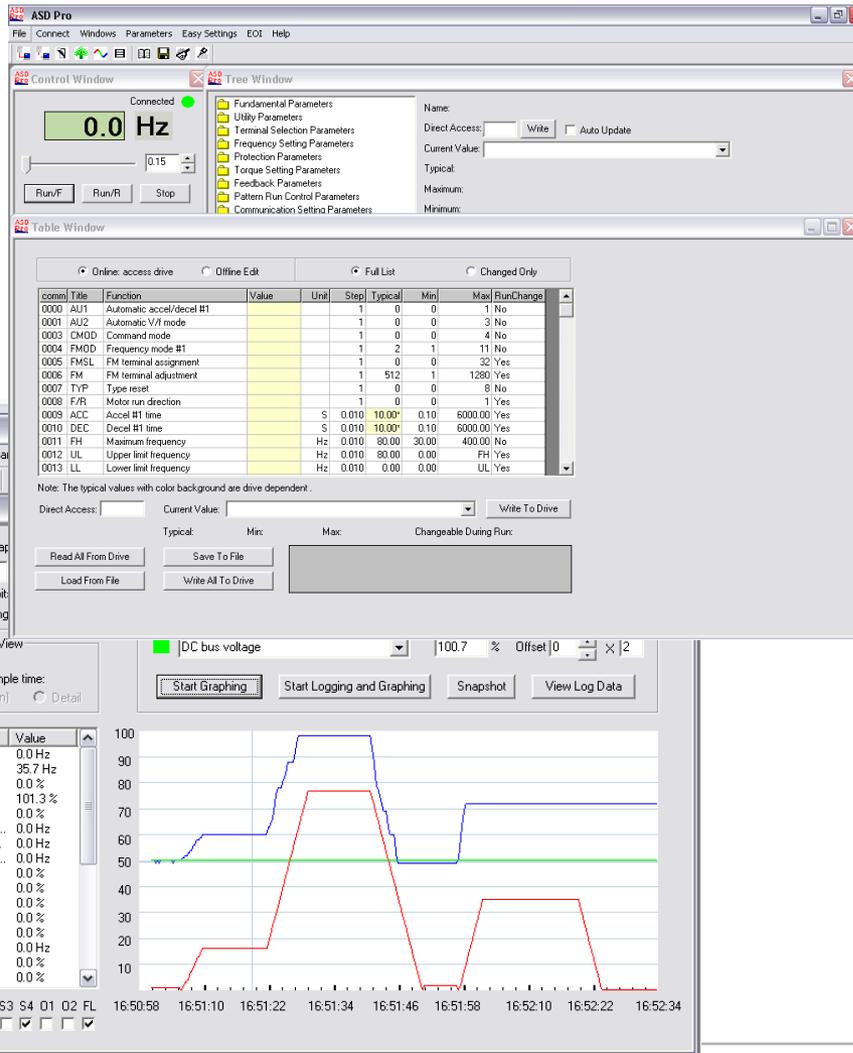
Electronic Operator Interface

- Remote mount capability
- Real-Time-Clock
- LCD full English display
- Flash upgradeable EOI software

LCD Display

Rotary Encoder
(Press for Enter Key)

Local/Remote
Key (LED)

Escape Key

Run Key
(LED)

Mode
Key

Stop|Reset Key
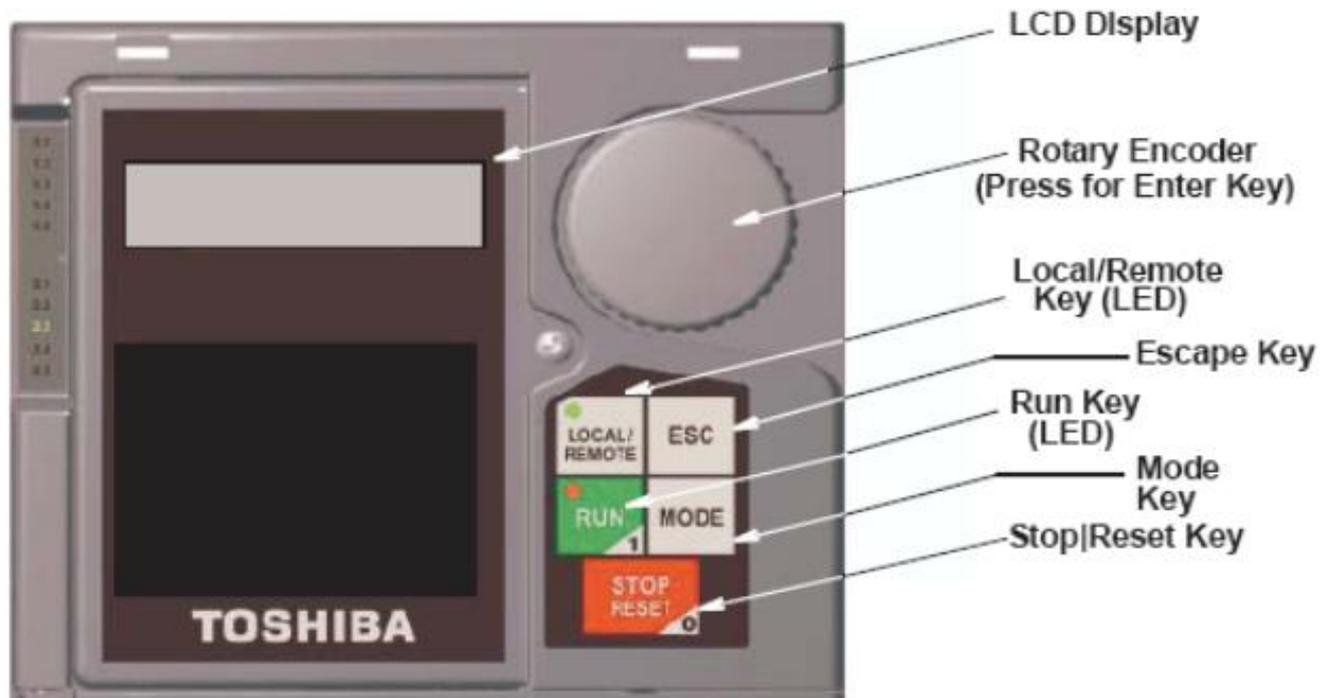
Overview

GX9 Standard Features above AS1

- 100 HP and higher in NEMA 1 Enclosure
- 75 HP and below NEMA 1 Power Unit
- 65kAIC Rating
- 110% Continuous Output
- **VLP Software**
- Fused Inputs
- Wider Horsepower Range
- Real-Time-Clock
- 9-Series LCD full English Display
- Conformal Coating on most PCBs
- Isolated Analog Input