

HEC2003/2004 Series Servo Valve System

- High response servo valve with spool position feedback signal
- All components are mounted over the drip pan
- Servo Valve operates on 24V DC
- Manifold mounted pressure filter with dual indicator
- Option for a prewired junction box
- SAE or Metric female ports
- Optional counterbalance valve to lock cylinder in place
- Integrated check valve on return line



The HEC2003/2004 Series Servo System features a high response servo valve, a manifold mounted filter, and three different mechanical mounting options. The manifold can feature either SAE or metric straight thread ports and an optional ball valve with a locking handle. The valve offers a spool position feedback signal that can be used for system diagnostics.

The HEC2003/2004 Series Servo System is directly driven by Fives North American's family of electronic controllers, eliminating the need for a separate drive card. There is no control loop to tune. Fives North American offers a servo valve featuring a zero lap spool thereby eliminating dead band. The valve also has an enable command that can place the valve in an all ports blocked position eliminating the need for a blocking valve in most applications. The HEC2003/2004 offers two different spool configurations enabling flows from 30 LPM (8 GPM) to 83 LPM (22 GPM). The HEC2003/2004 Series Servo System also has a pressure filter that comes with a dual mechanical/electrical dirt indicator.

The system utilizes a D05 manifold that incorporates the integral mounting of the following components:

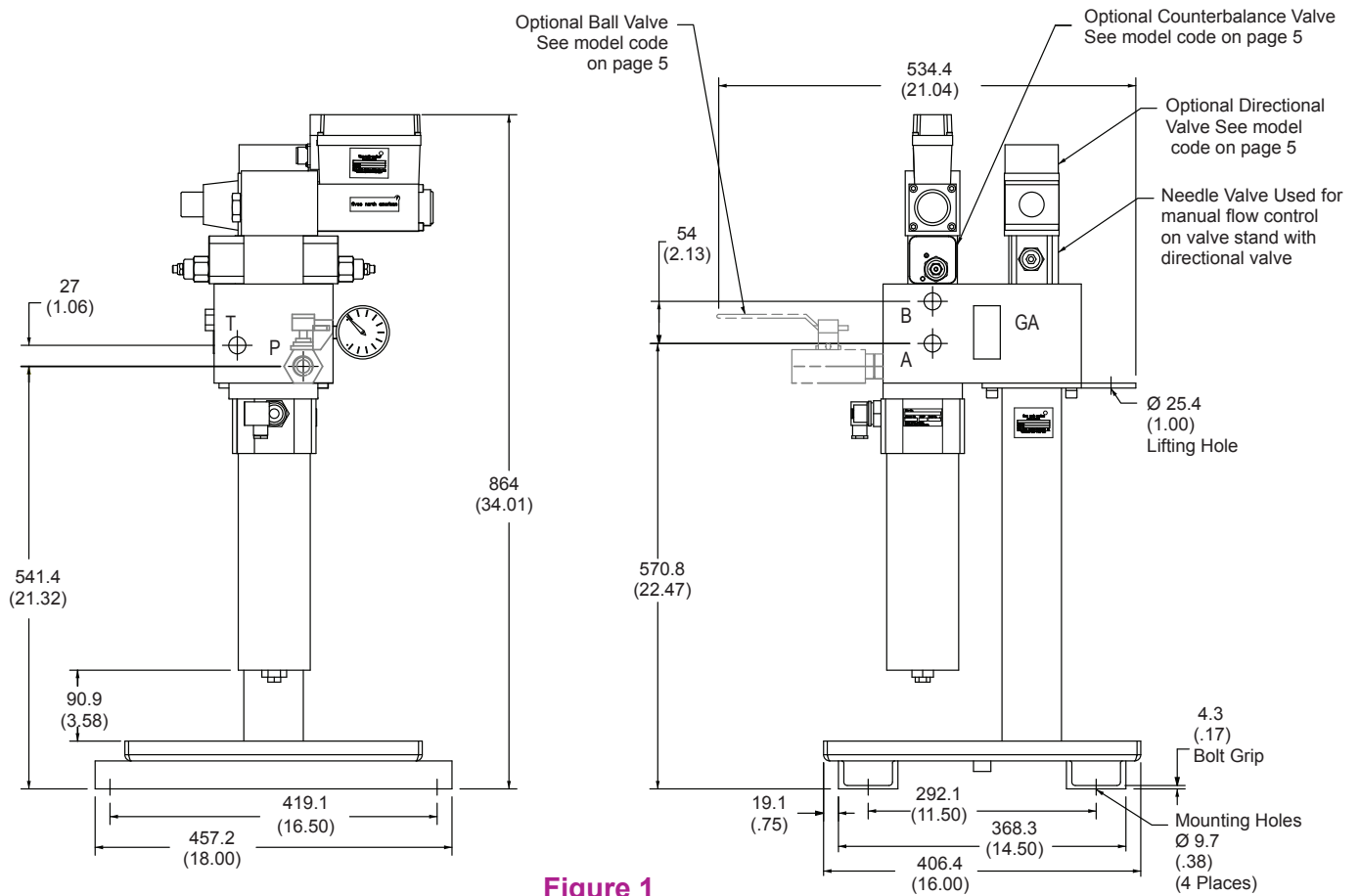
- H0930/H0931 servo valve*
- System pressure gauge
- Quick disconnect electrical components
- Optional counterbalance valve to eliminate cylinder drift in manual mode
- Optional directional valve
- Pressure filter with both a mechanical and electrical indicator
- Integrated check valve on return line
- Optional ball valve with locking handle on supply line

The system is available in three different mounting packages: Extended, Pedestal, and Drip Pan bracket. The E1 and D1 designs include a junction box containing a prewired 24 volt power supply. While the E2 and D2 versions feature the valves prewired to a junction box without a 24 volt supply.

*See Bulletin 10006/4.00 for more information.

Pedestal Valve Stand Assembly (P Series)

mm (in)



* Maximum weight for P Series valve stands is 54.5 kg (122 lbs).

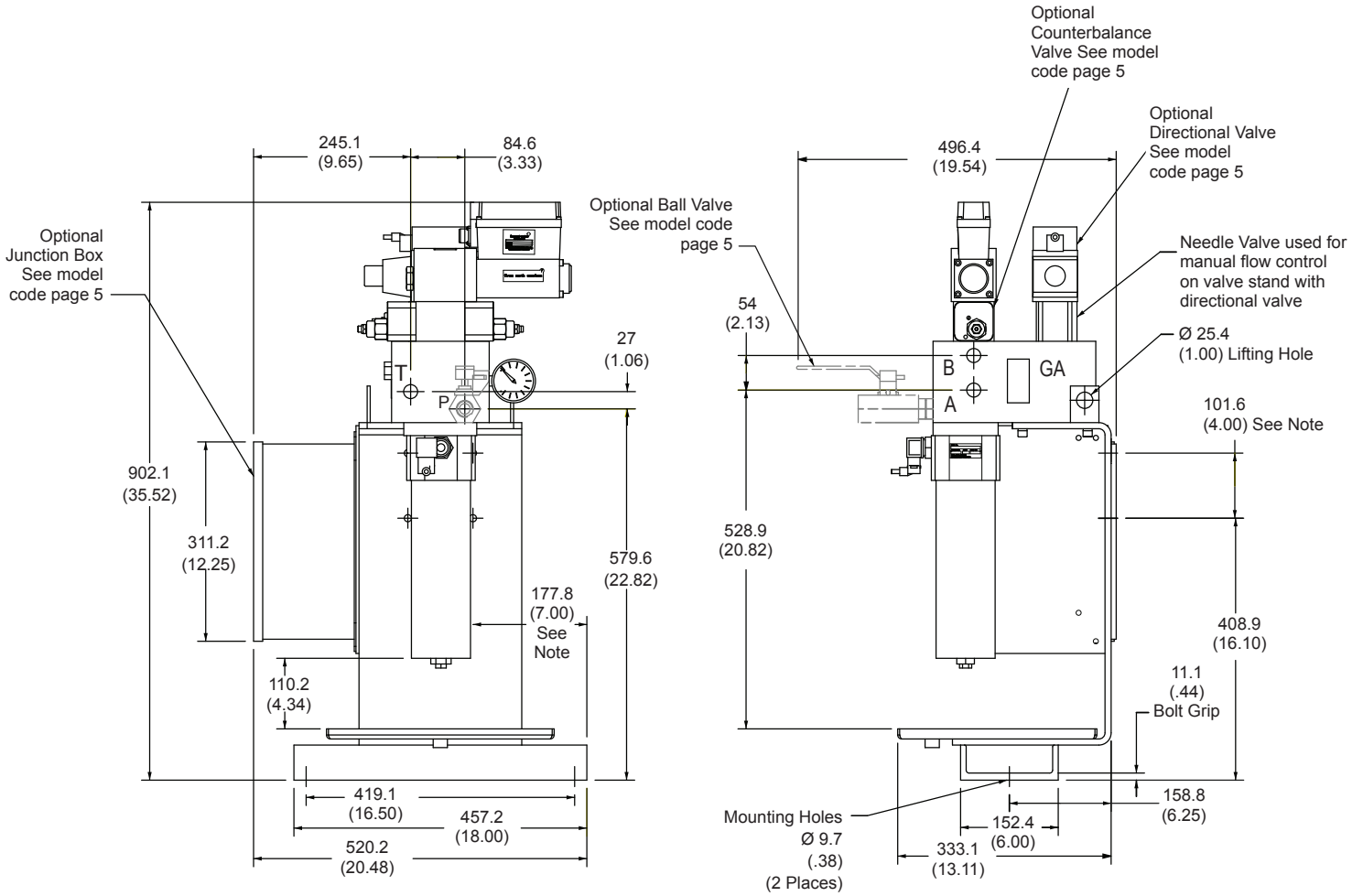
Port Descriptions

- Low profile floor mount design
- Compact
- All components over drip pan

P, A, T, B	Size
SAE	SAE-12
Metric	ISO 6149 #M27

Drip Pan Bracket Valve Stand Assembly (D Series)

mm (in)



Note: 4 x Ø 11.1 (0.44) thru holes available for wall mtg. on 101.6 (4) x 101.6 (4) square pattern

Figure 2

* Maximum weight for D Series valve stands is 65.45 kg (144 lbs).

Port Descriptions

- Floor or beam mounting capabilities
- Compact design
- Junction box available either with or without 24 volt supply. See model code on page 5.
- All components over drip pan

P, A, T, B	Size
SAE	SAE-12
Metric	ISO 6149 #M27

Extended Valve Stand Assembly (E Series)

mm (in)

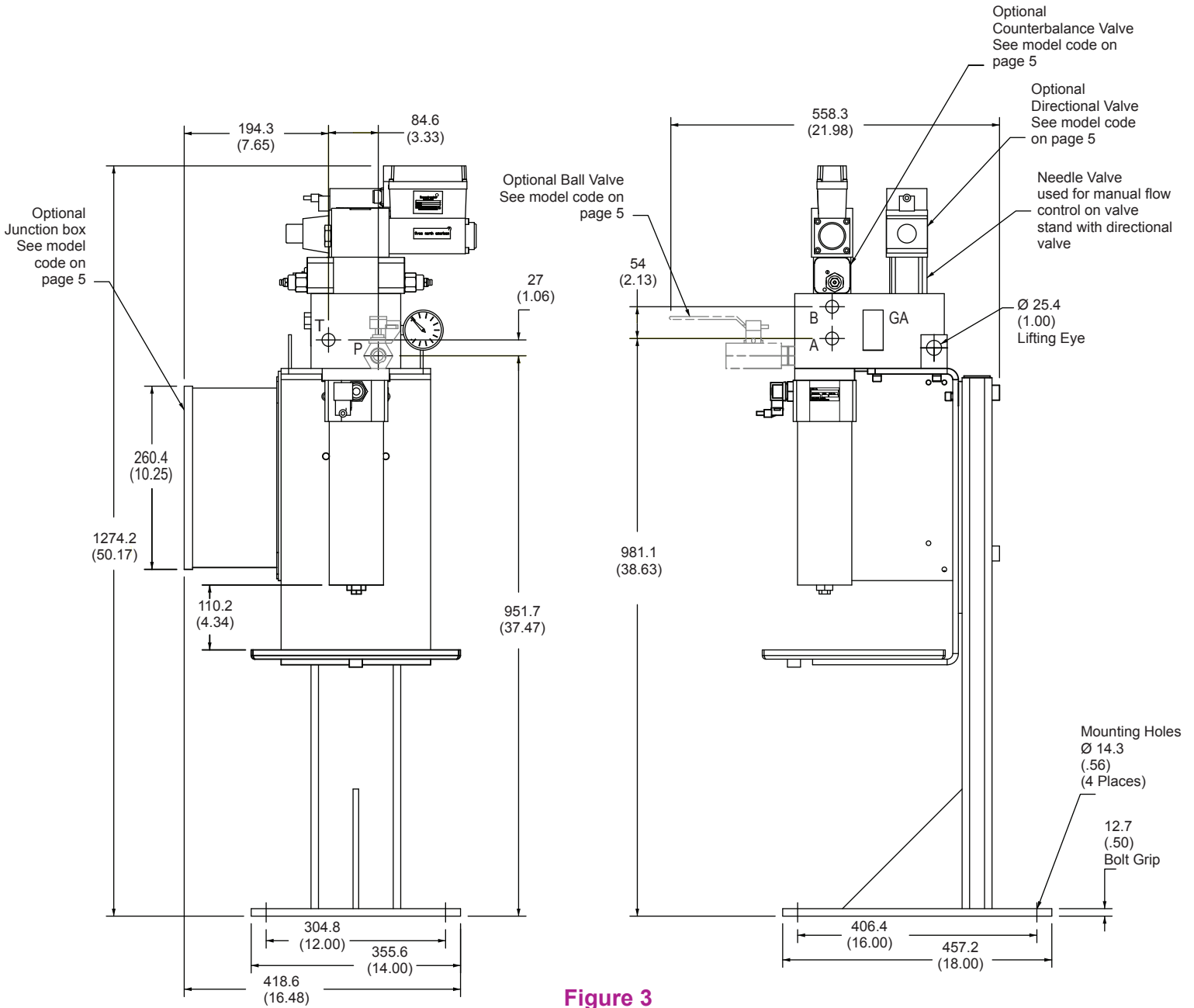


Figure 3

* Maximum weight for E Series valve stands is 95 kg (209 lbs).

Port Descriptions

- All components over drip pan
- Junction box available either with or without 24 volt supply.
- See model code on page 5.

P, A, T, B	Size
SAE	SAE-12
Metric	ISO 6149 #M27

Specifications

Interface: NFPA D05, CETOP 5, NG 10

Flow Rating at 35 bar Δ P(500 PSI) per metering edge:
 83 LPM (22 GPM) - HEC2004 models
 30 LPM (8 GPM) - HEC2003 models

Frequency Response: > 45 Hz (-3 dB at 5% signal)

Step Response: < 25 ms at 100% signal

Power Consumption: 60 VA Max

Maximum Operating Pressure:
 Port P, A, B 207 Bar (3000 psi)
 Port T 35 Bar (500 psi)

Minimum Tank Line Pressure: 1.4 Bar (20 psi)

Typical Spool Overlap: Zero Overlap

Internal Leakage: .5 cu in/min per land at 1000 psi

Hysteresis: < 0.5%

Repeatability: < 0.5%

Viscosity Range: 17 to 65 cSt (75 to 300 SSU)

Fluids: Mineral Base Hydraulic Fluid

Operating Temp. Range (Ambient): 0 to 60°C (32 to 140°F)

Fluid Cleanliness Level:
 ISO Class 15/12/10 (for longer life)
 ISO Class 16/14/11 (for normal operation)

Voltage Supply:
 24 VDC (21 VDC Min., 30 VDC Max.) Peak Current 4 amps

Command Signals:
 ± 10 VDC at 100 K Ohm Input Impedance
 ± 20 mA at 499 Ohm Input Impedance

Protection Class: IP 65, NEMA 4 (Factory Sealed)

Filter: H0735-35-2028

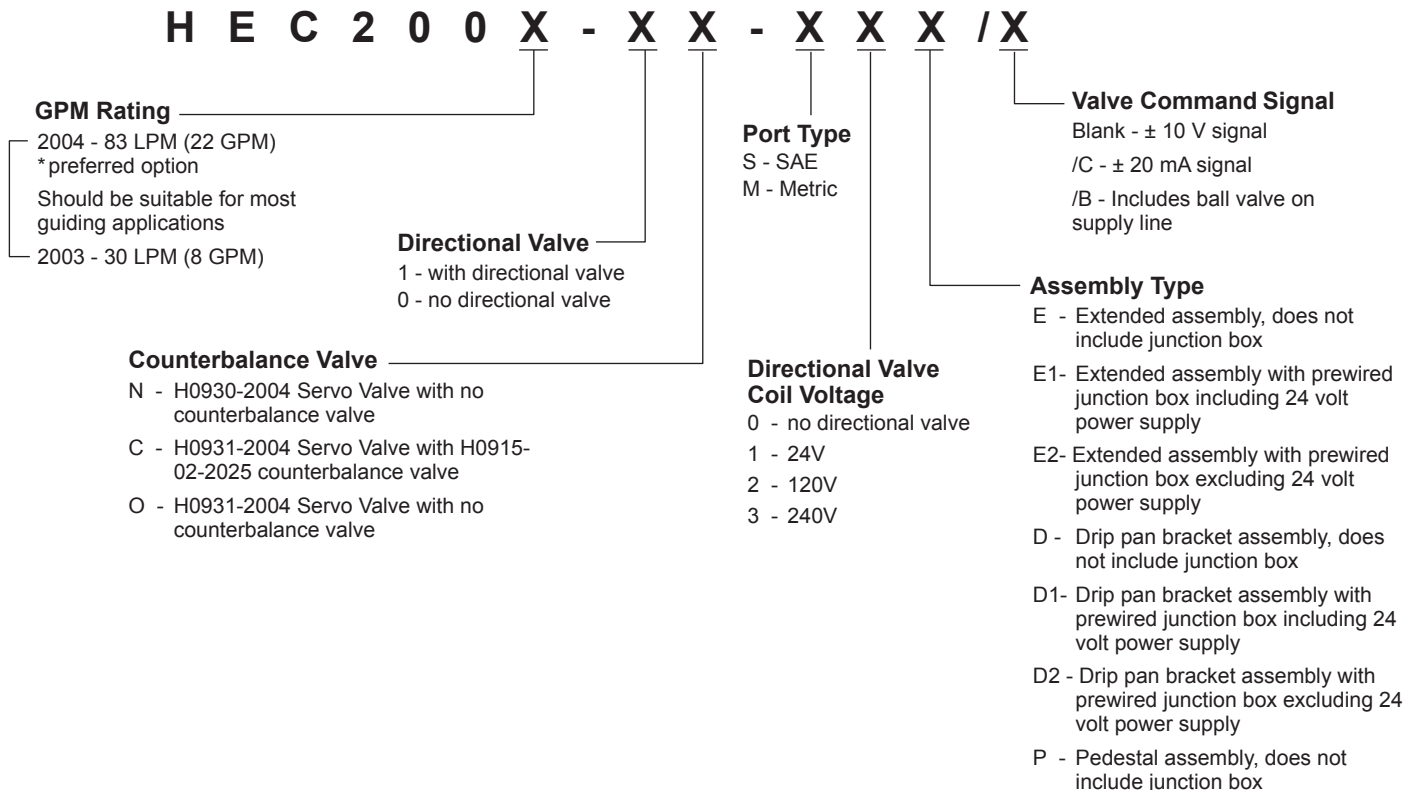
Manufacturer: Fives North American

Type: Bypassing filter

Element: 10 micron, 207 bar (3000 psid) collapse rating

Filter Dirt Indicator type of contact electrical rating connector:
 Electrical/Visual 5A @ 240 VAC, 3A @ 28 VDC

Part Ordering Information



Valve Stand Accessories

Part Number	Description
H4523-2080	Cable assembly with connector for H0930/31-2003/4 servo valve, 4.5 meters (15ft) long
H0915-02-2025	Counterbalance valve (comes as a standard on certain valve stand configurations, see model code on previous page)
H0735-35-2028	Pressure filter with mechanical and electrical indicator
H2028A	Element for H0735-35-2028 pressure filter
H0270-20-321	Pressure gauge

Fives North American Combustion, Inc.
Guiding Systems

4455 East 71st Street - Cleveland, OH 44105 USA - Tel: 216.271.6000 - Fax: 216.641.7852
email: fna.guiding@fivesgroup.com - www.fivesgroup.com/fivesna