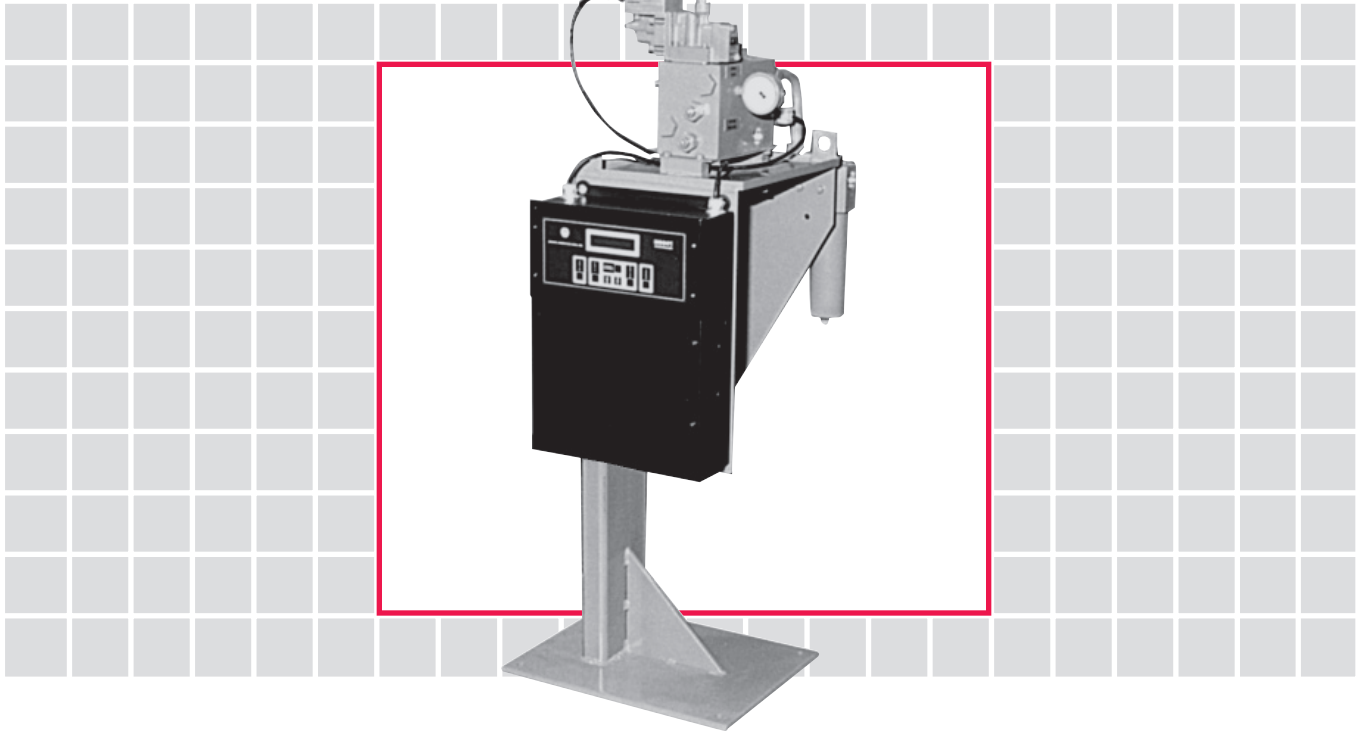


## HEC80 Series Servo Valve System



- Manifold mounted servo valve
- 3000 psi maximum operating pressure
- Separate blocking valve isolates cylinder from servo valve
- Non-bypassing pressure filter with indicator
- Integral mounting and wiring of electronic controller
- SAE female straight thread O-ring ports

Five North American offers a complete line of HEC80 electro-hydraulic servo valve systems for strip guiding applications in the metals industry. These process line applications include entry-end guiding, intermediate guiding and exit-end guiding.

The HEC80 Servo Valve is directly driven by North American's family of electronic controllers eliminating the need for a separate drive card and control loop to tune. Since the valve that Five North American offers is a servo valve, it does not have a large dead band, therefore it does not require additional electronics to compensate for the dead band. The HEC80 Servo Valve also offers a filtration level equivalent to the majority of competitive proportional valves and contains a field serviceable pilot filter. The HEC80 system can operate up to 3000 psi allowing for the use of reduced cylinder bore diameters.

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

- Electro-hydraulic servo valve with D05 mounting pattern and manual overrides
- System pressure gauge
- Throttling needle valves for servo and directional valve oil supply
- Quick disconnect electrical connectors
- Optional four way valve for remote manual operation
- Oil supply filter (packaged with the system)

The system is available with a floor standing pedestal which includes the H6600 electronic controller.

**H E C 8 0 - P E - 1 5 0 M / 2**

**Gpm Rating** at 1000 psid (70 bar)

80	2.5 gpm (9.5 lpm)
81	5.0 gpm (19 lpm)
82	10 gpm (38 lpm)
83	15 gpm (56 lpm)
84	20 gpm (76 lpm)

**Blank:** 120 V ac control voltage  
2: 240 V ac control voltage

**Filter Indicator**

M Mechanical indicator  
E Electrical indicator

**Directional Valve for Manual Operation**

0 No directional valve  
1 With directional valve

**Supply Operating Pressure**

15 200 - 1500 psi (14 - 103 bar)  
30 1550 - 3000 psi (107 - 207 bar)

**SPECIFICATIONS**

**Servo Valve<sup>③</sup>**

<b>Operating Fluid</b>	Petroleum based hydraulic fluid <sup>①</sup>
<b>Supply Filtration</b> (non-bypassing)	25 micron absolute (ISO code 4406 cleanliness level 16/13)
<b>Operating Pressure</b>	
Pressure port	3000 psi max., 200 psi min.
Load ports	3000 psi max. (207 bar)
Return port	200 psi max. (14 bar)
<b>Internal Leakage</b>	.4 gpm (1.5 lpm) at 3000 psi (207 bar)
<b>Hysteresis</b>	5% max.
<b>Symmetry</b>	10% max.
<b>Linearity</b>	7% max.
<b>Pressure Gain</b>	30% supply min. at 2% signal
<b>Null Shift</b>	
Temperature change	50-150°F(10-65°C) 5% max.
Supply pressure change	500 psi (35 bar) 3% max.
Return pressure change	200 psi (14 bar) 2% max.
<b>Frequency Response</b>	25 Hz at 90° phase lag (typ)
<b>Rated Current</b>	±125 mA (other coil options available upon request) <sup>①</sup>
<b>Electrical Connection</b>	MS3102E-14S-2P H4523-88-1 (10' cable assembly)
<b>Valve mounting pattern</b>	NFPA T3.5.1 R2 D05 (2.5 to 20 gpm models)
<b>O-Ring Compound</b>	Viton
<b>Filter</b>	
<b>Manufacturer</b>	Schroeder
<b>Type</b>	Non-bypassing
<b>Element</b>	10 micron nominal rating 3000 psi (207 bar) crush
<b>Indicator</b>	Mechanical - standard Electrical - optional
Type of contact	Solid state (NC or NO)
Electrical rating	6 A at 120 V ac 3 A at 240 V ac
Connector	Hirschmann (DIN 43650) H0960-11-006 (9' cable assembly)

**Blocking Valve<sup>③</sup>**

<b>Pressure Rating</b>	5000 psi (345 bar) max.
<b>Rated Flow</b>	20 gpm (116 lpm) at 150 psid (7 bar)
<b>Leakage</b>	1 drop per minute (.004 in. <sup>3</sup> /min) 100 SUS Viscosity
<b>O-Ring Compound</b>	Buna-N
<b>Power Consumption</b>	12 watts per coil (2 coils required)
<b>Operating Voltage</b>	
Coil P/N H0915-31-001	120 V ac ±20%, 50-60 Hz
Coil P/N H0915-31-002	240 V ac ±20%, 50-60 Hz
	AC coils incorporate integral rectifiers with surge protection.
<b>Temperature Rise above Ambient</b>	
At rated power	93 F (34 C)
At 2x rated power	170 F (77 C)
<b>Coil Insulation</b>	Class H
<b>Connector</b>	Hirschmann (DIN 43650) H0960-11-002 (9' cable assembly)
<b>Directional Valve</b>	
<b>Manufacturer</b>	Vickers
<b>Type</b>	Double solenoid, spring centered, all ports blocked in center position
<b>Pressure Rating</b>	Ports P, A, and B: 3600 psi Port T: 1000 psi
<b>Connector</b>	Hirschmann (DIN 43650) H0960-11-002 (9' cable assembly)

**Electrical rating**

Solenoid voltage rating	Inrush amps	Holding amps	Holding watts
120 V ac/60 Hz	3.80	.69	35
110 V ac/50 Hz	4.10	.85	33
240 V ac/60 Hz	2.10	.34	36
220 V ac/50 Hz	2.30	.45	34

**Notes:**

- ① Contact North American for special fluids.
- ② Contact North American for coil options.
- ③ Test performed with petroleum based hydraulic fluid, viscosity grade 32 at 100 F.

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