



Pilot Operated • High Flow  
**Direct Mount RedHat II Spool Valves**  
 Anodized Aluminum, Brass and Stainless Steel Bodies  
 1/4" and 1/2" NPT

**3/2•5/2•5/3  
 SERIES  
 8551, 8553  
 Direct  
 Mount**

**Features**

- Compact Spool Valve convertible from 3/2 to 5/2 with flow plates
- Mount directly to actuators with NAMUR interface per VDI/VDE 3845
- Single and dual solenoid constructions available
- Integral Breather Block vents to spring side of actuator to exhaust, preventing corrosion of the actuator
- Unique design combines hard T-seals and flexible o-rings, provides bubble-tight shutoff, resistance to dirt and multimillion cycle life controlling air or inert gas
- Low Power and Intrinsically Safe construction available  
 See *Special Service Pilot Valve Section* for details

**Construction**

Valve Parts in Contact with Fluids			
<b>Body</b>	Aluminum, Black Anodized	Brass	316L Stainless Steel
<b>End Cover (Spring end)</b>	Glass-filled Polyamide	Brass	316L Stainless Steel
<b>Spool Valve Internals</b>	Zamak, Stainless Steel, Acetal (POM), Aluminum	Brass, Acetal (POM), Delrin	
<b>Pilot End Covers</b>	Aluminum, Black Anodized	Brass	316L Stainless Steel
<b>Core Tube</b>	Stainless Steel		
<b>Core and Plugnut</b>	Stainless Steel		
<b>Springs</b>	Stainless Steel		
<b>Seals and Discs</b>	NBR		
<b>Top Disc</b>	Nylon (PA)		
<b>Core Guide</b>	Acetal		
<b>Seat and Seat Insert</b>	Brass, Acetal		
<b>Shading Coil</b>	Copper		
<b>Rider Ring (low power)</b>	PTFE		

**Electrical**

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
	DC Watts	AC			General Purpose		Explosionproof	
		Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	10.1	25	50	238610	238710	238614	238714

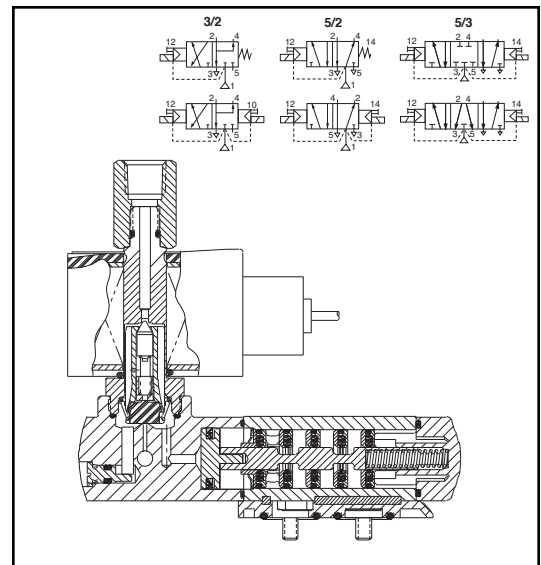
Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (110, 220 volts AC, 50 Hz).  
 6, 12, 24, 120, 240 volts DC. Must be specified when ordering.  
 Other voltages are available when required.

**Solenoid Enclosures**

**Standard:** Watertight, Types 1, 2, 3, 3S, 4, and 4X.

**Optional:** Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.  
 (To order, add prefix "EF" or "EV" for stainless steel) to catalog number.)

See *Optional Features Section* for other available options.



VALVE AUTOMATION

**Nominal Ambient Temp. Ranges**

Body Material	Description
<b>Aluminum</b>	AC: 5°F to 125°F (-15°C to 52°C) DC: 5°F to 104°F (-15°C to 40°C)
<b>Brass</b>	AC: -40°F to 125°F (-40°C to 52°C)
<b>Stainless Steel</b>	DC: -40°F to 104°F (-40°C to 40°C)

**Approvals**

UL/CSA approvals for aluminum constructions pending. EF and EV are UL listed solenoids. CSA certified. Meet applicable CE directives.  
 SIL 3 capable per IEC 61508 on normally closed single solenoid. Third party certification provided by EXIDA.  
 Refer to *Engineering Section* for details.

ATEX/IECEx certified with prefix "EV" as listed. Refer to *Optional Features Electrical Section* for details.

### Specifications (English units)

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid – PFD <sub>AVG</sub> = 3.3 x 10 <sup>-3</sup>						Dual Solenoid											
				Operating Pressure Differential (psi)			Max. Fluid Temp. °F			Catalog Number	Const. Ref.	Operating Pressure Differential (psi)			Max. Fluid Temp. °F			Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation	
				Air-Inert Gas			Air-Inert Gas					Air-Inert Gas			Air-Inert Gas					AC	DC
				Min.	Max. AC	Max. DC	AC	DC	DC	Min.	Max. AC	Max. DC	AC	DC	DC	AC	DC				
Aluminum 3/2, 5/2	1/4 ①	1/4	.86	30	150	120	140	120	8551G401	1	30	150	120	140	120	8551G402	1	10.1/F	11.6/F		
Aluminum 5/3 Center Closed									-	2						8551G465	2				
Aluminum 5/3 Center Open									-	2						8551G466	2				
Brass 3/2, 5/2									EF8551G403 ②	1						EF8551G404 ②	1				
316L Stainless Steel 3/2, 5/2									EV8551G409 ③④	2						EV8551G410 ③④	2				
Aluminum 3/2, 5/2	1/2	1/2	3.7						8553G401	2					8553G402	2					

① 1/8 inch NPT exhaust for aluminum and brass. ② Brass construction supplied standard with EF solenoid. ③ Stainless steel construction supplied standard with EV solenoid.  
 ④ ATEX/IECEx certified with prefix "EV".

### Specifications (Metric units)

Body Material	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Single Solenoid – PFD <sub>AVG</sub> = 3.3 x 10 <sup>-3</sup>						Dual Solenoid											
				Operating Pressure Differential (bar)			Max. Fluid Temp. °C			Catalog Number	Const. Ref.	Operating Pressure Differential (bar)			Max. Fluid Temp. °C			Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation	
				Air-Inert Gas			Air-Inert Gas					Air-Inert Gas			Air-Inert Gas					AC	DC
				Min.	Max. AC	Max. DC	AC	DC	DC	Min.	Max. AC	Max. DC	AC	DC	DC	AC	DC				
Aluminum 3/2, 5/2	1/4 ①	6.4	.7	2	10	8.2	60	48	8551G401	1	2	10	8.2	60	48	8551G402	1	10.1/F	11.6/F		
Aluminum 5/3 Center Closed									-	2						8551G465	2				
Aluminum 5/3 Center Open									-	2						8551G466	2				
Brass 3/2, 5/2									EF8551G403 ②	1						EF8551G404 ②	1				
316L Stainless Steel 3/2, 5/2									EV8551G409 ③④	2						EV8551G410 ③④	2				
Aluminum 3/2, 5/2	1/2	13	3.2						8553G401	2					8553G402	2					

① 1/8 inch NPT exhaust for aluminum and brass. ② Brass construction supplied standard with EF solenoid. ③ Stainless steel construction supplied standard with EV solenoid.  
 ④ ATEX/IECEx certified with prefix "EV".

## Dimensions inches (mm)

Series	8551
NPT	1/4
L1 ①	4.96 (126)
L2 ①	6.50 (165)
H2	4.38 (111)
H1	1.57 (40)
W	1.77 (45)

① Manual override option MH adds .250" (6.4),  
MS option adds .468" (11.9) to each solenoid endcap.

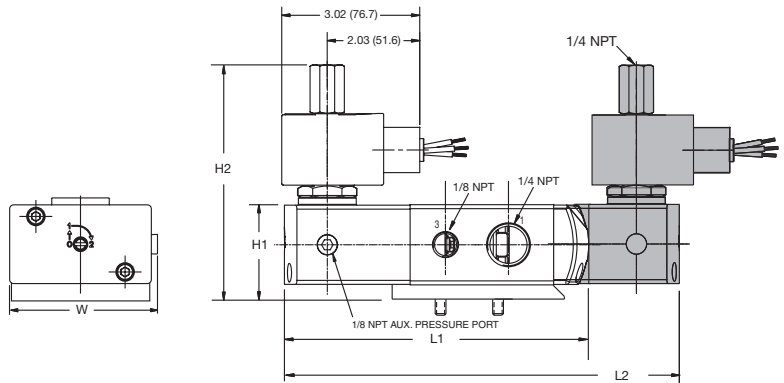
Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Series	8551 (5/3)	8553
NPT	1/4	1/2
L1 ①	-	7.09 (180)
L2 ①	7.44 (189)	8.85 (225)
H2	4.38 (111)	4.77 (121)
H1	1.57 (40)	2.08 (53)
W	1.77 (45)	2.87 (73)

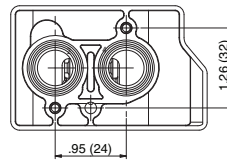
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Optional Manual Operators		
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MO		Push and turn to lock with flat head screwdriver slot
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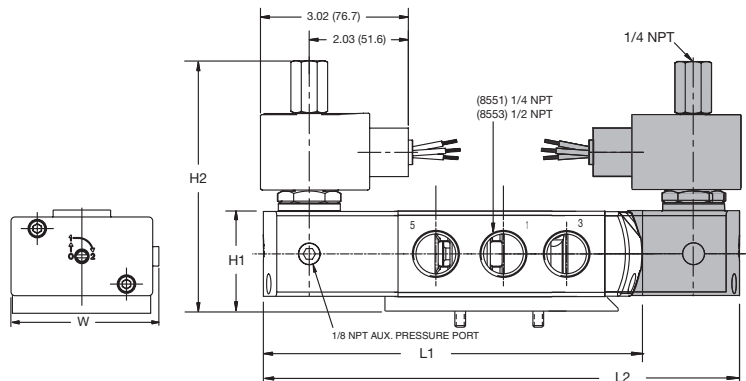
**Const. Ref. 1**



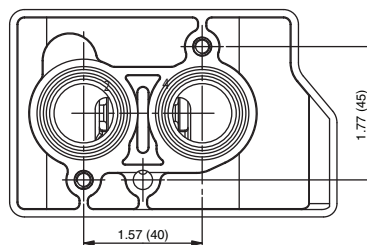
**8551 NAMUR Footprint**



**Const. Ref. 2**



**8553 NAMUR Footprint**



**8551 NAMUR Footprint**

