

DENISON HYDRAULICS

3-Way Vent Valve

Series VV01



Pressure control valve R4
and vent valve VV01 with DC solenoid



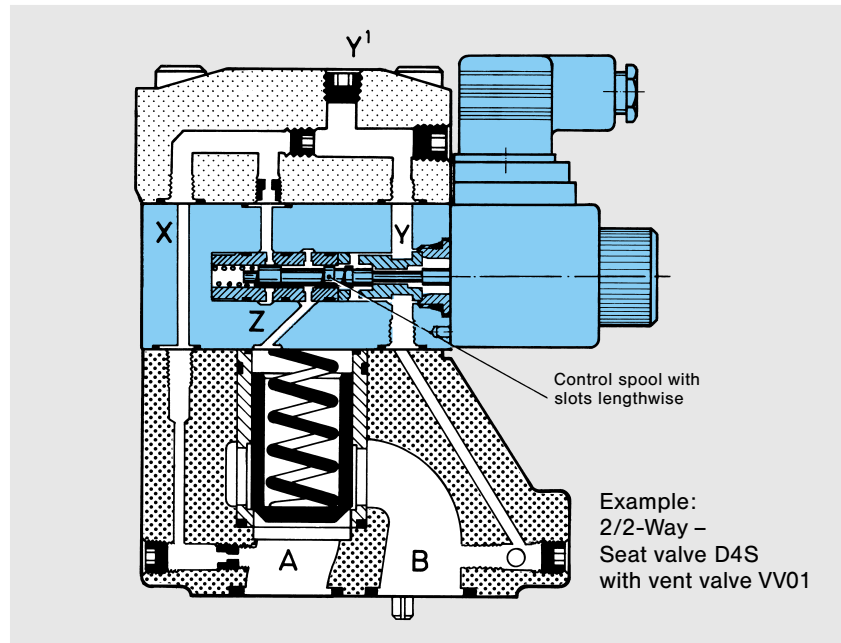
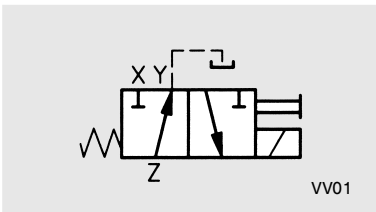
Vent valve VV01 with
AC solenoid

Publ. 3-EN 215-C, replaces 3-EN 215-B

FEATURES

- Compatible with DENISON pilot operated pressure controls and 2-way seat valves.
- Due to sandwich design, this electrically operated vent valve can be installed into existing valves.
- No extra components such as subplates, fittings and piping required.
- Wet pin solenoids for direct or alternating current.
- Leakproof construction up to 140 bars.
- With or without manual over-ride.
- Electrical connection is by a standard plug-in connector according to DIN 43650.
- Each valve tested prior to delivery.
- Worldwide DENISON service.

SYMBOL (Example)



DESCRIPTION

DENISON Vent Valves are electrically operated 3/2 way devices. They are designed specially to unload pilot operated pressure control and seat valves. Vent Valves direct the pilot oil to the power component to allow it's designated function at system pressure, or to the pilot oil return to allow unloading. The DENISON design allows the VV01 to be sandwiched between the power component or main body and the pilot section or cap of the valve that it is controlling. Two different control spools are available for the functions "power component unloaded in normal position" and "power component unloaded in switch position". The leakproof solenoids have only one type of tube cartridge and permit change of coil and current without interfering with the hydraulic circuit. Optimal material quality and stringent manufacturing procedures ensures high reliability under exacting operating conditions. All the valve components are quality controlled based on international standards, thus ensuring worldwide interchangeability of units. Performance details for the vent valve are covered by the information on the following pages. For full details of pilot operated pressure valves and 2-way seat valves compatible with this vent valve, please refer to the corresponding bulletin. A free of charge advisory service is available from your local DENISON office, should you have special operational applications.

TECHNICAL DATA

GENERAL	• Type of unit	3/2-Vent Valve		
	• Port arrangement	Identical with DENISON pilot valve series R4, R5, D4S, D5S and CAR		
	• Weight	1.7 kg		
	• Mounting position	Optional but horizontal recommended		
	• Ambient temperature range	-20... +50 °C		
	• Suitability for special working conditions	Further information required		
HYDRAULIC CHARACTERISTICS	• Operating pressure range			
	– port X	Up to 350 bar		
	– port Y	Up to 140 bar		
	• Fluid temperature range	-18... +80 °C		
	• Viscosity range	10... 650 cSt		
	• Recommended operating viscosity	30 cSt		
	• Nominal flow	3.8 l/min		
TYPE OF ACTUATOR	• Overlap	Positive		
	• Electric	By solenoid		
	• Type of current	Alternating current (AC) Direct current (DC)		
	• Nominal voltage	Refer to ordering code page 4		
	• Permissible voltage difference	+5... -10 %		
	• Max. coil temperature	+180 °C (temperature class H)		
	• Input power	31 W		
	• Holding	78 VA		
	• Inrush	264 VA		
	• Relative operating period	100 %		
	• Type of protection	IP 65		
RESPONSE TIMES		AC	DC	DC-Quick energizing ¹⁾
	• Solenoid energized	20 ms	46 ms	30 ms
	• Solenoid de-energized	18 ms	27 ms	30 ms
	• Cycle	...7200 1/h	...16000 1/h	on request
				¹⁾ double voltage

If the performance characteristics outlined above do not meet your own particular requirements, please consult your local DENISON office.

ORDERING CODE – VENT VALVE VV01

Model Number: VV01 - 3 . . . - . - 1

Series _____

Spool position _____

1 = normal position: free flow from Z to Y
switch position: X to Z

2 = normal position: X to Z
switch position: free flow from Z to Y

Control _____

1 = solenoid with manual override
2 = solenoid without manual override
D = pneumatic } on request
Q = hydraulic }

Solenoid voltage and current _____

W01 = 115 V / 60 Hz W02 = 230 V / 60 Hz W06 = 115 V / 50 Hz W07 = 230 V / 50 Hz	} AC	G0R = 12 V G0Q = 24 V G0H = 48 V	} DC
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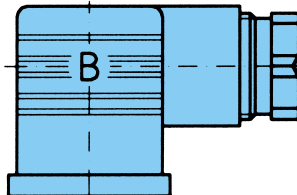
Design letter _____

D = for AC solenoid
E = for DC solenoid

Seal class _____

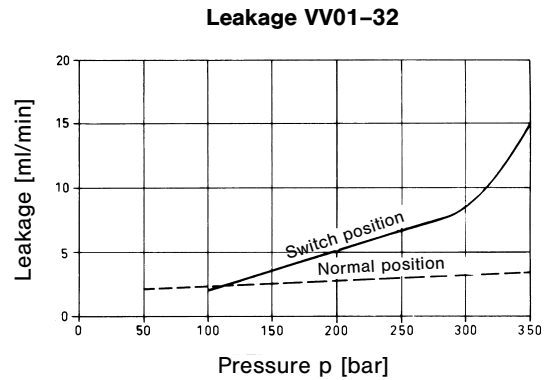
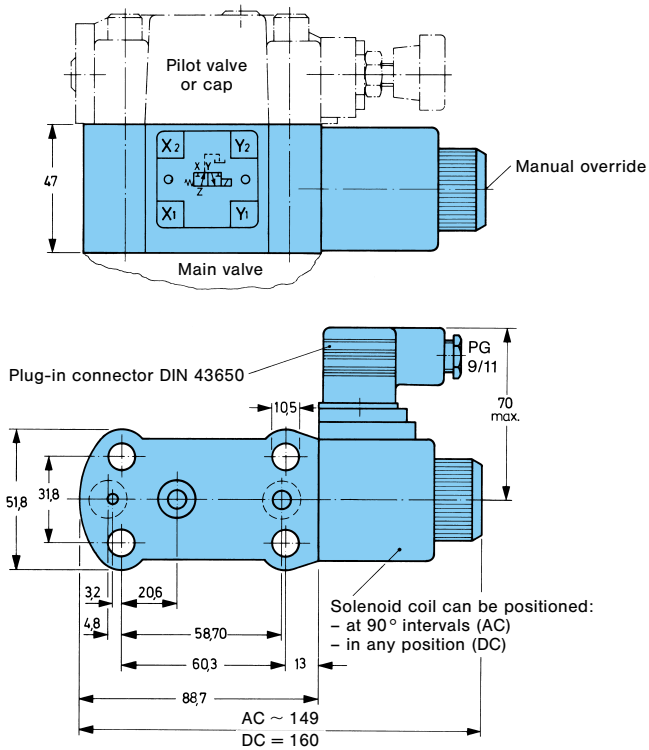
1 = Standard (for special fluids consult DENISON)

Note:
For VV01 with DC solenoid,
plug-in connectors must be
ordered separately.



Versions		
Standard < 250 V	PG 11	167-01008-8
with LED (red) 15...30 V		167-01101-8
with bridge rectifier 12...250 V		167-01014-8

DIMENSIONS, CURVE



Note:

For full details of valves compatible with this vent valve refer to following bulletins:

- 3-EN 240: Pressure relief valves R4V
- 3-EN 250: Unloading valves R4U
- 3-EN 260: Sequence valves R4S
- 3-EN 270: Pressure reducer valves R4R
- 3-EN 285: Pressure valves R5 (2-port-flanged type)
- 3-EN 290: Pressure valves R5 (3-port-flanged type)
- 7-EN 510: 2/2-way seat valves D4S
- 7-EN 515: 2/2-way seat valves CAR
- 7-EN 520: 2/2-way seat valves D5S (2-port-flanged type)
- 7-EN 530: 2/2-way seat valves D5S (3-port-flanged type)

The product described is subject to continual development and the manufacturer reserves the right to change the specifications without notice.