

VSW Series Sandwich Valves

Also refer to "Directional Valve Features, Selection and Operating Recommendations" ([dynexdcvoperating.pdf](#))

CONTACT INFORMATION

USA Headquarters

Dynex/Rivett Inc.
770 Capitol Drive
Pewaukee, WI 53072 U.S.A.
Tel: 262-691-2222
FAX: 262-691-0312
E-mail: sales@dynexhydraulics.com

Power Units & Systems

Dynex/Rivett Inc.
54 Nickerson Road
Ashland, MA 01721 U.S.A.
Tel: 508-881-5110
FAX: 508-881-6849
E-mail: ashland@dynexhydraulics.com

European Sales

Dynex/Rivett Inc.
Unit C5 Steel Close, Little End Road, Eaton Socon,
Huntingdon, Cambs. PE19 8TT United Kingdom
Tel: +44 (0) 1480 213980
FAX: +44 (0) 1480 405662
E-mail: sales@dynexhydraulics.co.uk

**For more information
visit our web site:
www.dynexhydraulics.com**

BROCHURE NOTES:

Consult the Dynex sales department for a review of any application which requires operating above the rated flows or pressures, or higher than normal operating temperatures.

Specifications shown were in effect when published. Since errors or omissions are possible, contact your sales representative for the most current specifications before ordering. Dynex reserves the right to discontinue or change designs at any time without incurring any obligation.



VSW SERIES SANDWICH VALVES

VALVE DESCRIPTION

VSW Series valves are installed under Dynex high pressure control valves which mount on the special HP03 and HP05 pattern.

These sandwich accessory valves can simplify circuits and reduce installation costs in high pressure systems.

HP03 models are rated to 10 000 psi (700 bar). HP05 models are rated to 8000 psi (560 bar).

Valve Functions

Refer to "Typical Model Code" on page 5 for function flow symbols.

P→T Relief:

Models, VSWRLPT-HP03-10
VSWRLPT-HP05-10;

A,B→T Dual Relief:

Models, VSWRLABT-HP03-10
VSWRLABT-HP05-10;

P→T Decompression:

Model VSWDPT-HP05-10;

A,B→T Dual Decompression:

Model VSWDABT-HP05-10;

Dual Pilot Operated Check:

Model VSWCHAB-HP03-20;

Ratio to open the valve is approximately 7:1 at 10 000 psi (700 bar).

The valve will unseat when internal pilot pressure reaches about 14% (1/7) of the load pressure.

Model VSWDABT-HP05-10;

Ratio to open the valve is approximately 4:1 at 8000 psi (560 bar).

The valve will unseat when internal pilot pressure reaches about 25% (1/4) of the load pressure.

Seals

Standard o-rings are fluorocarbon (Viton® or equivalent) providing greater fluid compatibility and operation over a wider temperature range.

Optional seals include Buna-N or EPR for use with some phosphate ester fluids. Contact the Dynex sales department for complete ordering information.

Mounting

Port o-rings are included with valves. Mounting bolts must be ordered separately. Refer to Bolt Kits on page 3 for HP03 pattern and page 4 for HP05 pattern.

VSW-HP03 SPECIFICATIONS

Mounting

Special HP03 mounting interface.

Rated Pressure

10 000 psi (700 bar).

Flow

Model VSWRL1PT and Model VSWRLABT:

5 U.S. gpm (19 L/min) nominal;

10 U.S. gpm (38 L/min) maximum;

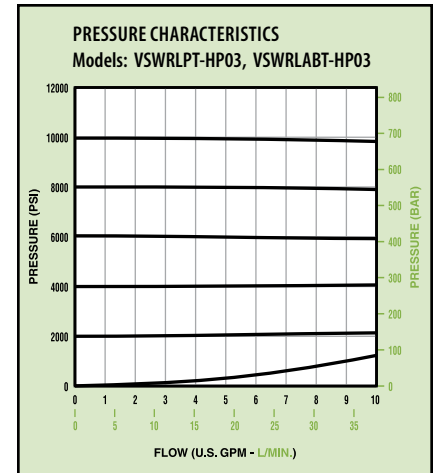
0.5 U.S. gpm (1,9 L/min) minimum.

Model VSWCHAB:

5 U.S. gpm (19 L/min) nominal;

8 U.S. gpm (30 L/min) maximum;

No minimum flow requirements.



VSW-HP05 SPECIFICATIONS

Mounting

Special HP05 mounting interface.

Rated Pressure

8000 psi (560 bar).

Maximum Drain Port Pressure (Optional Electric Vent Valve)

Standard:

1500 psi (70 bar);

"D" option, high pressure tank port:

AC models, 2000 psi (140 bar);

DC models, 2500 psi (170 bar).

Flow

All models: 15 U.S. gpm (57 L/min).

Venting Options

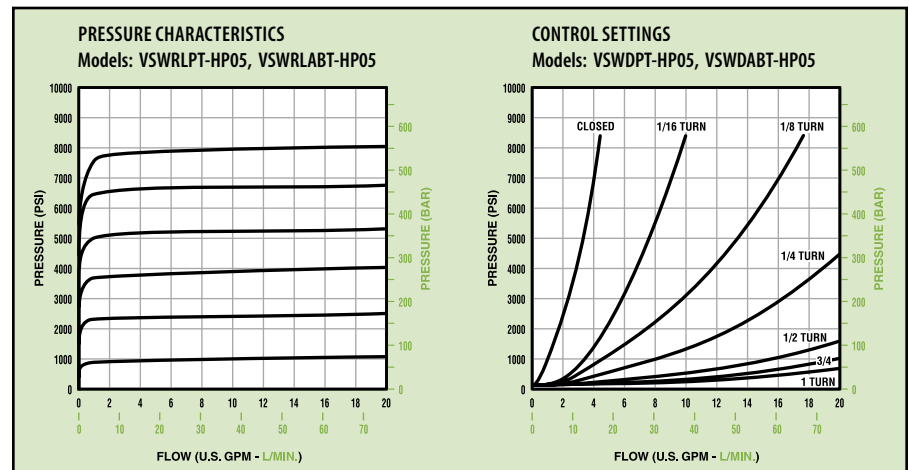
The standard relief valve has a blocked vent port. Decompression models must be vented and this option must be specified in model code.

Options for both valves include a remote vent port adapter or an integral vent valve (electric, air or hydraulic actuator).

External Drain

External drain is available on relief and decompression valves by specifying the "XD" option. The internal configuration for this function includes plug, part number 10590270, which is factory installed.

For in-the-field conversions, contact the Dynex sales department.



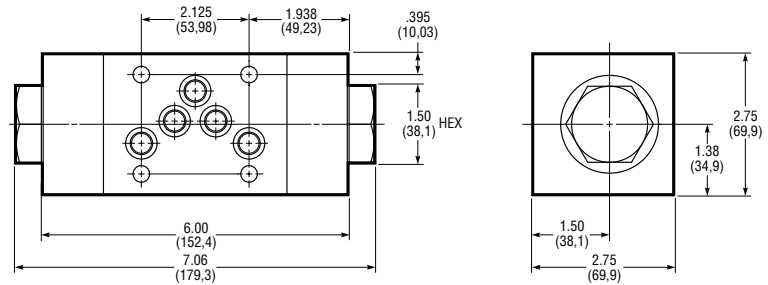
VSW SERIES SANDWICH VALVES

HP05 Pattern

These models mount on the HP05 special mounting pattern. See [dynexvesh05specs.pdf](#) for minimum mounting surface requirements.

Configurations for dual relief and decompression valves, with two pressure adjustments, are shown printed in gray.

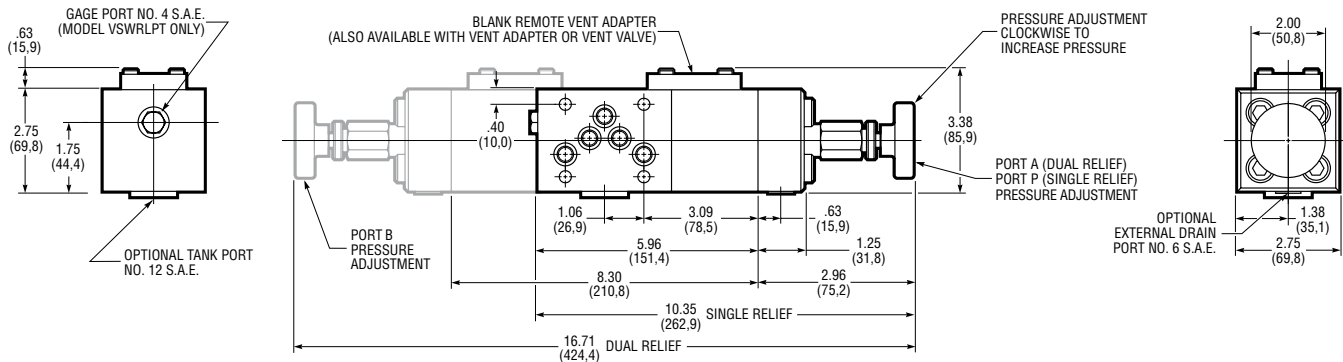
The relief valve drawing shows the standard blocked vent port adapter. Venting options for both valves are shown in the decompression valve drawing. Decompression models must be vented and should be specified in model code.



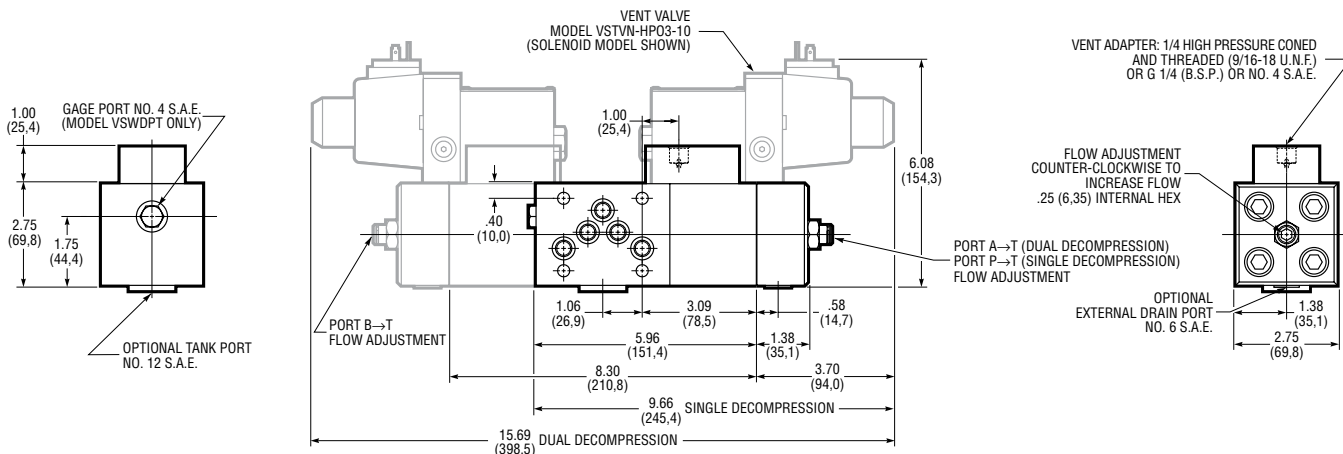
Model VSWCHAB-HP05*-10 (Dual Pilot Operated Check Valve)

HP05 Mounting Bolt Kits

Mounting bolts must be ordered separately in kit P31-BK-60. This kit contains four .3125-18 U.N.C. Threaded x 3.75 inches (95.2 mm) long, for mounting one VSW valve.



Model VSWRLPT-HP05*-10 (P→T Relief Valve) and Model VSWRLABT-HP05*-10 (A, B→T Dual Relief Valve) Shown Printed in Gray



Model VSWDPT-HP05*-10 (P→T Decompression Valve) and Model VSWDABT-HP05*-10 (A, B→T Dual Decompression Valve) Shown Printed in Gray

VSW SERIES SANDWICH VALVES

TYPICAL MODEL CODE

VSW RL PT - HP05 CR - EO - 115HA - D - XD - * - 1 0

Valve Type
Sandwich Valve

Function	
CH	Check Valve
D	Decompression Valve ^①
RL	Relief Valve
^① Not available with HP03 Pattern models.	

Mounting Pattern (Special High Pressure)	
HP03	HP03 Pattern
HP05	HP05 Pattern

Vent Options (HP05 Only) ^①	
No Code	Vent Port Blocked ^②
AC	Air Vent, Normally Closed
AO	Air Vent, Normally Open
AV	Vent Port, 1/4 High Pressure Coned and Threaded, 9/16-18 U.N.F. ^{③④}
BV	Vent Port, G 1/4 (B.S.P.) ^{④⑤}
CR	Corrosion Resistant Adjustment ^⑥
EC	Electric Vent, Normally Closed
EO	Electric Vent, Normally Open
HC	Hydraulic Vent, Normally Closed
HO	Hydraulic Vent, Normally Open
SV	Vent Port, No. 4 S.A.E. ^④

- ^① Not available with "CH" check valve function.
^② Not available with "D" function.
^③ Port uses Autoclave, Butech or equivalent fittings.
^④ Vent port adaptor block not offered with Electric, Air or Hydraulic Vent function options.
^⑤ Vent port uses British Standard Pipe fittings.
^⑥ Available with relief valve function only.

Modification Number

Design Number	
1	HP05 All Functions, HP03 Relief Valve
2	HP03 Check Valve

Seals	
No Code (Standard)	Fluorocarbon (Viton® or Fluorel®)
E	EPR ^①
N	Buna-N ^①
^① Contact the Dynex sales department for complete ordering information.	

Drain Options (HP05 Only)	
No Code	Standard Internal Drain
XD	External Drain

"EV" General Options (HP05 Only)	
D	High Pressure Tank Port, Maximum: AC models, 2000 psi (140 bar); DC models, 2500 psi (170 bar).
M	Hand Actuated Manual Override
^① Fits DIN Connector Standard 43650 Form A ("Hirschmann" type). ^② For other voltages, contact the Dynex sales department.	

Options		HP03 Pattern	HP05 Pattern
Check Valves:			
AB	Dual Pilot Operated Check		
Relief Valves:			
PT	P→T Relief		
ABT	A, B→T Dual Relief		
Decompression Valves:			
PT	P→T Decompression	-	
ABT	A, B→T Dual Decompression	-	

"EV" Electric Options (HP05 Only)	
Plug-In Terminal Solenoids: ^{①②}	
115HA	Dual Frequency AC, 115V/60Hz/110V/50Hz
230HA	Dual Frequency AC, 230V/60Hz/220V/50Hz
12HD	12VDC
24HD	24VDC
Explosion-Proof Solenoids: ^②	
24EP	24VDC
115EP	115V/60Hz
110EP	110V/50Hz
220EP	220V/50Hz
^① Fits DIN Connector Standard 43650 Form A ("Hirschmann" type). ^② For other voltages, contact the Dynex sales department.	