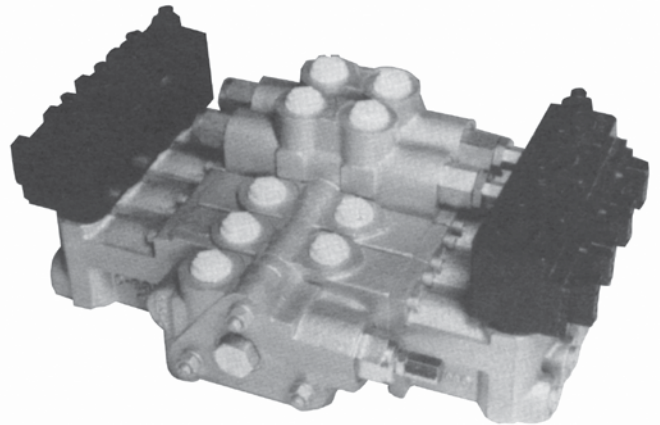
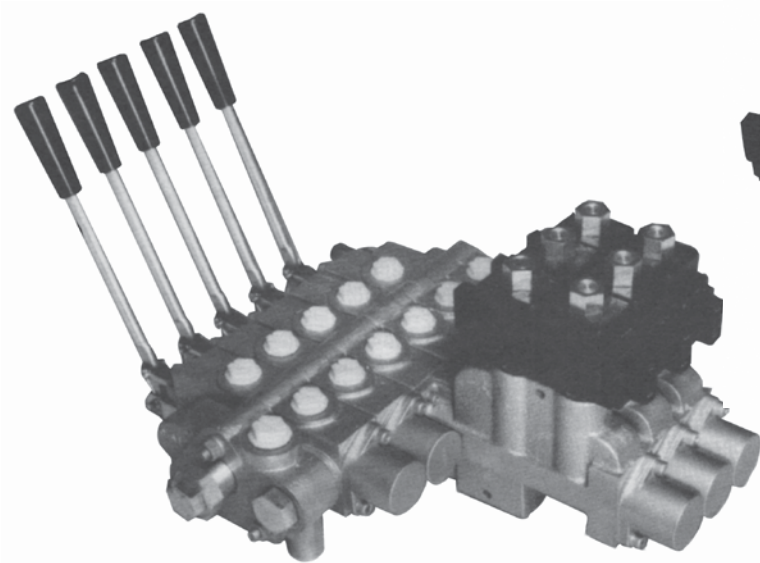


Directional Control Valves

SV SOLENOID OPERATED

Work Sections

- Type “-T” Solenoid Operated
- Type “-S” Solenoid and Manual Operation



VALVES

STANDARD FEATURES

- Open center or closed center applications
- Port relief options available
- Internal pilot supply and drain
- 12VDC, 24VDC and 120VAC
- Power beyond capability
- Load checks on each section
- May be stacked with Manual SV Sections

SPECIFICATIONS

Parallel or Series Circuit Construction

Pressure Rating

Maximum Operating Pressure 3000 psi

Maximum Tank Pressure 150 psi

Nominal Flow Rating 12 GPM

Differential Pressure

Required to Actuator **Approx. 150 PSI**

Filtration: For general purpose valves, fluid cleanliness should meet the ISO 4406 19/17/14 level. For extended life or for pilot operated valves, the 18/16/13 fluid cleanliness level is recommended.

Foot Mounting

Maximum Operating Temp. 180°F

Weight Per Section

Inlet Section Approx. 3.75 lbs.

Outlet Section Approx. 3.75 lbs.

Solenoid Operated

Type “-T” Work Section Approx. 11.0 lbs.

Type “-S” Work Section Approx. 14.5 lbs.

TYPE “-T” SOLENOID DESCRIPTION OF OPERATION

The **Type “-T” Solenoid Operated SV Work Section** allows remote electrical on-off control. This solenoid operated SV section may be assembled with other standard SV manual sections, or type “-S” solenoid and manual sections.

The **Type “-T” Solenoid Operated SV Section contains** two 3-way 2-position solenoid cartridge valves, one at each end of the main valve body. When both solenoids are de-energized, both ends of the control valve spool are open to tank pressure and the spool remains spring centered. When solenoid “A” is energized, pilot pressure is applied to one end of the control valve spool causing the spool to shift from neutral to full stroke on “A” work port. When solenoid “B” is energized, pilot pressure is applied to the other end of the control valve spool causing the spool to shift to full stroke on “B” work port.

Internal pilot lines provide pilot pressure to the solenoid actuators. Pilot pressure is generated by a “Pressure Build-Up Valve” that is installed in the standard outlet section. Two versions of the pressure build-up valve are offered. The open center pressure build-up valve and the power beyond pressure build-up valve. Both versions supply 150-200 PSI pilot pressure to the solenoid actuators.

TYPE “-S” SOLENOID AND MANUAL DESCRIPTION OF OPERATION

The **Type “-S” Solenoid and Manual Operated SV Work Section** allows remote electrical on-off or manual control. This solenoid operated SV section may be assembled with other standard SV manual sections, or type “-T” solenoid sections.

The **Type “-S” Solenoid and Manual Operated SV Section contains** two, 3-way 2-position solenoid cartridge valves and a pilot operated piston attached to the main control spool. When both solenoids are de-energized both sides of the pilot piston are open to tank pressure and the spool remains spring centered. When solenoid “A” is energized, pilot pressure is applied to one side of the pilot piston causing the spool to shift from the neutral position to work port “A”. When solenoid “B” is energized, pilot pressure is applied to the other side of the pilot piston causing the spool to shift to work port “B”.

Internal pilot lines provide pilot pressure to the solenoid actuator. Pilot pressure is generated by a “Pressure Build-Up Valve” that is installed in the standard outlet section. Two versions of the pressure build-up valve are offered. The open center pressure build-up valve and the power beyond pressure build-up valve. Both versions supply 150-200 PSI pilot pressure to the solenoid actuator.

APPLICATION INFORMATION

For over center or light load applications if the required work port load pressure drops below 200 PSI, the pilot pressure to the spool will drop to the same pressure causing the spring to move the control spool back towards the neutral position. The spool will end up in an intermediate position between neutral and fully shifted. **A restrictor installed in the work port or line may be required for this type of application.**

For closed center applications the Pressure Build-Up Valve is not required. However, a system pressure of 200 PSI must be maintained in the closed center position to actuate the valve properly.

Proper operation of the solenoid actuators requires a pressure differential of 150-200 PSI above tank pressure. **The maximum tank port pressure should not exceed 150 PSI.** Excessive tank pressure will increase “Seal Drag” and may prohibit, the spool from shifting.

The solenoid operated SV section may be converted to accept an external hydraulic pilot supply to the solenoid actuators. Please consult a Sales Representative for information.

On Line Information Available

Additional valve information is available on line at www.princehyd.com
Information available includes:

- Parts manuals for many common Prince valves.
- CAD drawing files for many common Prince valves.
- Instruction sheets.
- Updated Prince catalog pages.
- Prince catalog in electronic format.

ORDERING INFORMATION:

The following is a listing of valve sections available from stock on a standard basis.

STANDARD SECTIONS AVAILABLE:

SOLENOID OPERATED SVW WORK SECTIONS ALL HAVE #8 SAE PORTS AND LOAD CHECK

PART NO.	SPOOL TYPE/VOLTAGE
SVW1BA-T12Q	4 WAY-3 POSITION/12 VDC
SVW1AA-T12Q	3 POSITION/12 VDC
SVW1CA-T12Q	4 WAY-3 POSITION MOTOR/12 VDC
SVW1BA-T11C	4 WAY-3 POSITION/120 VAC

For Inlets, Outlets and Tie-rod Kits, please refer to SV Section

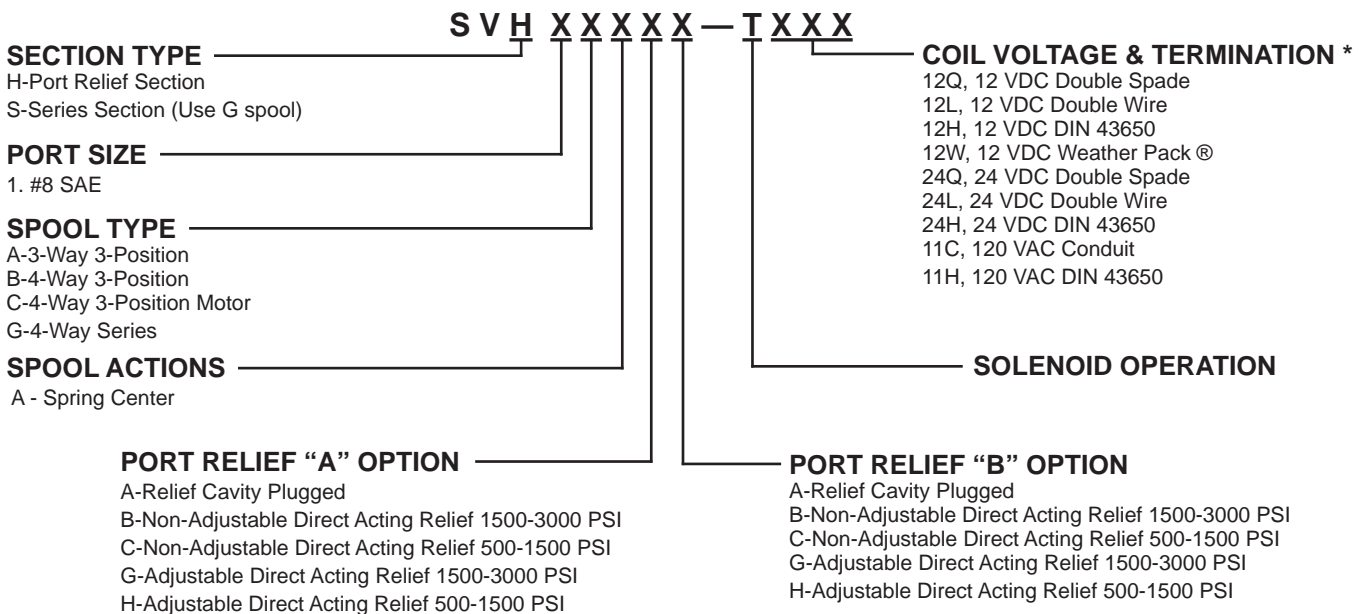
SOLENOID OPERATED SVH WORK SECTIONS ALL HAVE #8 SAE PORTS AND LOAD CHECK. MODELS WITH RELIEF, FACTORY SET AT 2000 PSI AT 3 GPM

PART NO.	SPOOL TYPE/VOLTAGE	PORT RELIEFS
SVH1BAGG-T12Q	4 WAY-3 POSITION/12 VDC	ADJUSTABLE 1500-3000 PSI
SVH1BAAA-T12Q	4 WAY-3 POSITION/12 VDC	PORT RELIEF PLUGGED
SVH1CAGG-T12Q	4 WAY-3 POSITION MOTOR/12 VDC	ADJUSTABLE 1500 - 3000 PSI

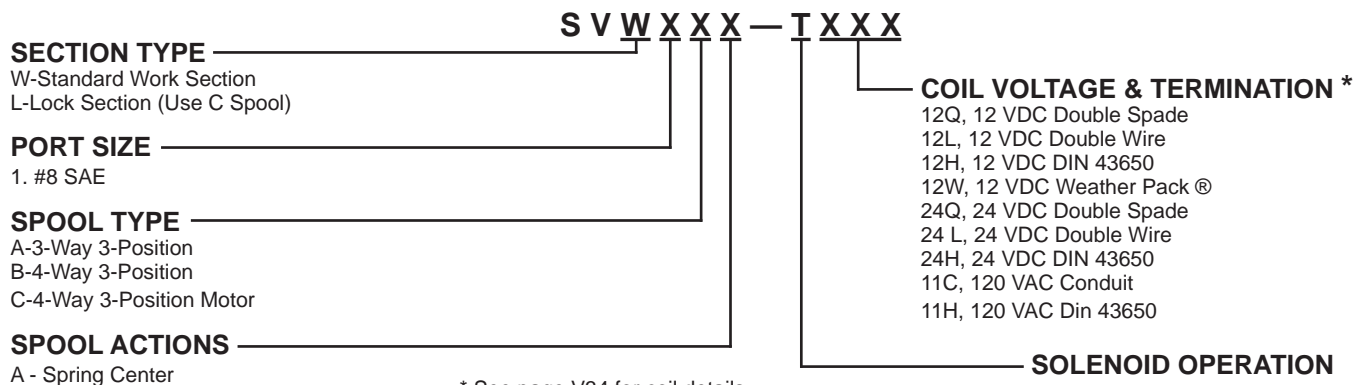
SPECIAL SECTIONS AVAILABLE:

Sections other than the standard models listed can be made to order. Use the order code Matrix below to generate a model number that meets your requirements. If you prefer, contact your Sales Representative with your specific requirements and a model number will be assigned for you. This model number can then be used for future orders. A minimum order quantity will apply to special valves. Please contact your Sales Representative.

SOLENOID OPERATED PORT RELIEF WORK SECTION



SOLENOID OPERATED SVW AND SVL WORK SECTIONS



* See page V34 for coil details

ORDERING INFORMATION: "-S" SOLENOID AND MANUAL WORK SECTIONS

The following is a listing of valve sections available from stock on a standard basis.

STANDARD SECTIONS AVAILABLE:

SOLENOID OPERATED SVW WORK SECTIONS ALL HAVE #8 SAE PORTS, LOAD CHECK AND STANDARD LEVER HANDLE

PART NO.	SPOOL TYPE/VOLTAGE
SVW1AA1-S12Q	3 WAY-3 POSITION/12 VDC
SVW1BA1-S12Q	4 WAY-3 POSITION/12 VDC
SVW1CA1-S12Q	4 WAY-3 POSITION MOTOR/12 VDC
SVW1BA1-S24Q	4 WAY-3 POSITION/24 VDC

For Inlets, Outlets and Tie-rod Kits, please refer to SV Section

SOLENOID OPERATED SVH WORK SECTIONS ALL HAVE #8 SAE PORTS, LOAD CHECK AND STANDARD LEVER HANDLE MODELS WITH RELIEF, FACTORY SET AT 2000 PSI AT 3 GPM

PART NO.	SPOOL TYPE/VOLTAGE	PORT RELIEFS
SVH1BA1AA-S12Q	4 WAY DOUBLE ACTING/12 VDC	PORT RELIEF PLUGGED
SVH1BA1AA-S24Q	4 WAY DOUBLE ACTING/24 VDC	PORT RELIEF PLUGGED
SVH1BA1BB-S12Q	4 WAY DOUBLE ACTING/12 VDC	SHIM ADJ. 1500-3000 PSI
SVH1BA1BB-S24Q	4 WAY DOUBLE ACTING/24 VDC	SHIM ADJ. 1500-3000 PSI

SPECIAL SECTIONS AVAILABLE:

Sections other than the standard models listed can be made to order. Use the order code Matrix below to generate a model number that meets your requirements. If you prefer, contact your Sales Representative with your specific requirements and a model number will be assigned for you. This model number can then be used for future orders. A minimum order quantity will apply to special valves. Please contact your Sales Representative.

SOLENOID OPERATED SVW AND SVL SECTION

S V W X X X X - S X X X

SECTION TYPE

W-Standard Work Section
L-Lock Section (Use C Spool)

PORT SIZE

1. #8 SAE

SPOOL TYPE

A-3-Way 3-Position
B-4-Way 3-Position
C-4-Way 3-Position Motor

SPOOL ACTIONS

A - Spring Center

HANDLE OPTION

1. Std. Lever Handle
2. Less Handle Only
3. Less Complete Handle Assembly
4. Adjustable Handle
5. Tang Spool End Only
6. Clevis Spool End Only

COIL VOLTAGE & TERMINATION *

12Q, 12 VDC Double Spade
12L, 12 VDC Double Wire
12H, 12 VDC DIN 43650
12W, 12VDC Weather Pack®
24Q, 24 VDC Double Spade
24 L, 24 VDC Double Wire
24H, 24 VDC DIN 43650
11C, 120 VAC Conduit
11H, 120 VAC DIN 43650

SOLENOID AND MANUAL OPERATION

7. Vertical Handle
8. Straight Handle
11. Enclosed Handle
12. Extended Enclosed Handle

PORT RELIEF WORK SECTIONS

S V H X X X X X X - S X X X

SECTION TYPE

H-Port Relief Section
S-Series Section (Use G spool)

PORT SIZE

1. #8 SAE

SPOOL TYPE

A-3-Way 3-Position
B-4-Way 3-Position
C-4-Way 3-Position Motor
G-4-Way Series

SPOOL ACTIONS

A - Spring Center

HANDLE OPTION

1. Std. Lever Handle
2. Less Handle Only
3. Less Complete Handle Assembly
4. Adjustable Handle
5. Tang Spool End Only
6. Clevis Spool End Only
7. Vertical Handle
12. Extended Enclosed Handle

COIL VOLTAGE & TERMINATION*

12Q, 12 VDC Double Spade
12L, 12 VDC Double Wire
12H, 12 VDC DIN 43650
12W, 12 VDC Weather Pack®
24Q, 24 VDC Double Spade
24 L, 24 VDC Double Wire
24H, 24 VDC DIN 43650
11C, 120 VAC Conduit
11H, 120 VAC DIN 43650

SOLENOID AND MANUAL OPERATION

PORT RELIEF "B" OPTION

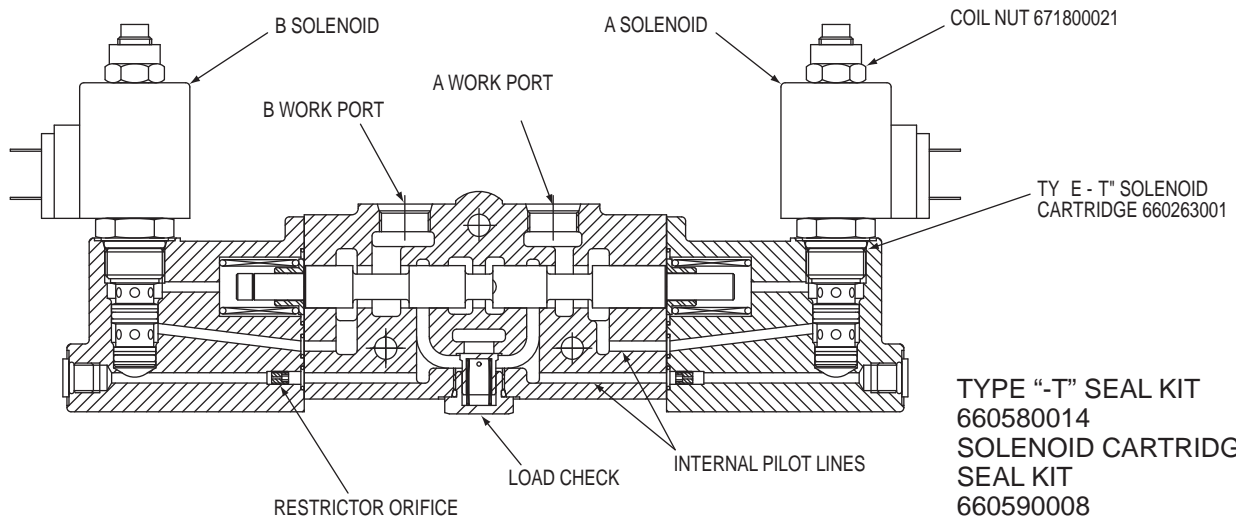
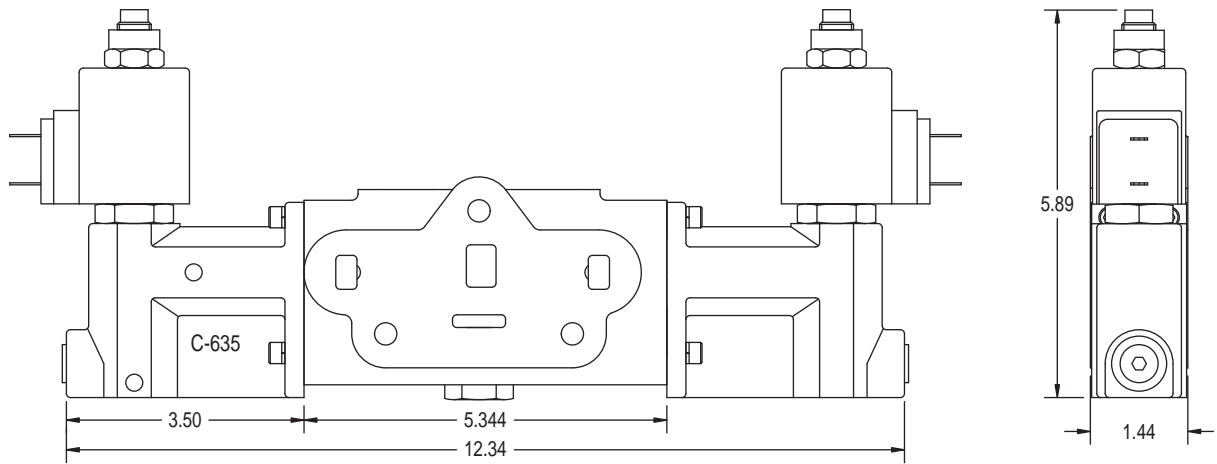
A-Relief Cavity Plugged
B-Non-Adjustable Direct Acting Relief 1500-3000 PSI
C-Non-Adjustable Direct Acting Relief 500-1500 PSI

PORT RELIEF "A" OPTION

A-Relief Cavity Plugged
B-Non-Adjustable Direct Acting Relief 1500-3000 PSI
C-Non-Adjustable Direct Acting Relief 500-1500 PSI
G-Adjustable Direct Acting Relief 1500-3000
H-Adjustable Direct Acting Relief 500-1500 PSI

*See page V34 for Coil details

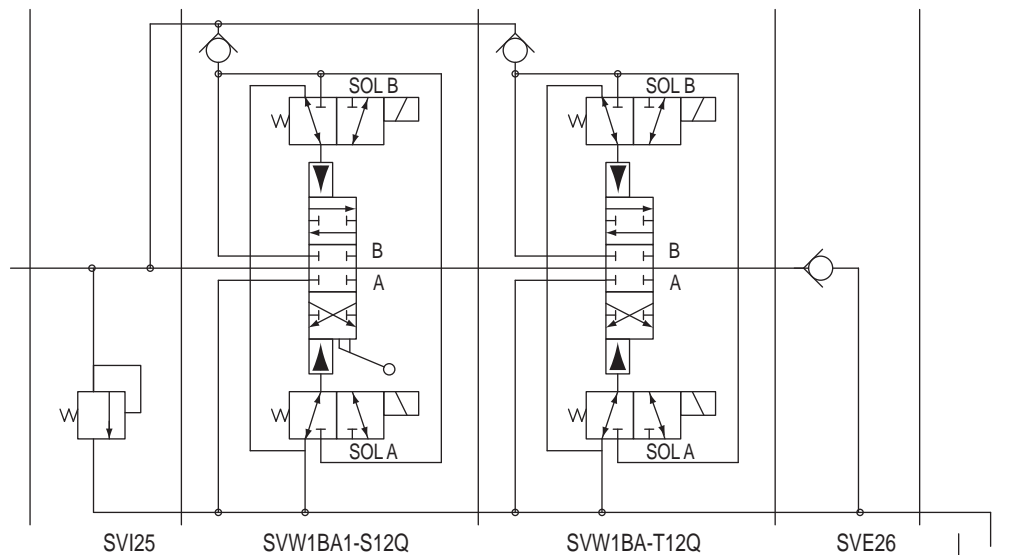
SOLENOID OPERATED TYPE "-T" WORK SECTION DIMENSIONAL DATA



TYPE "-T" SEAL KIT
 660580014
 SOLENOID CARTRIDGES
 SEAL KIT
 660590008
 NOTE: THIS OPTION CANNOT
 BE ADDED IN THE FIELD.

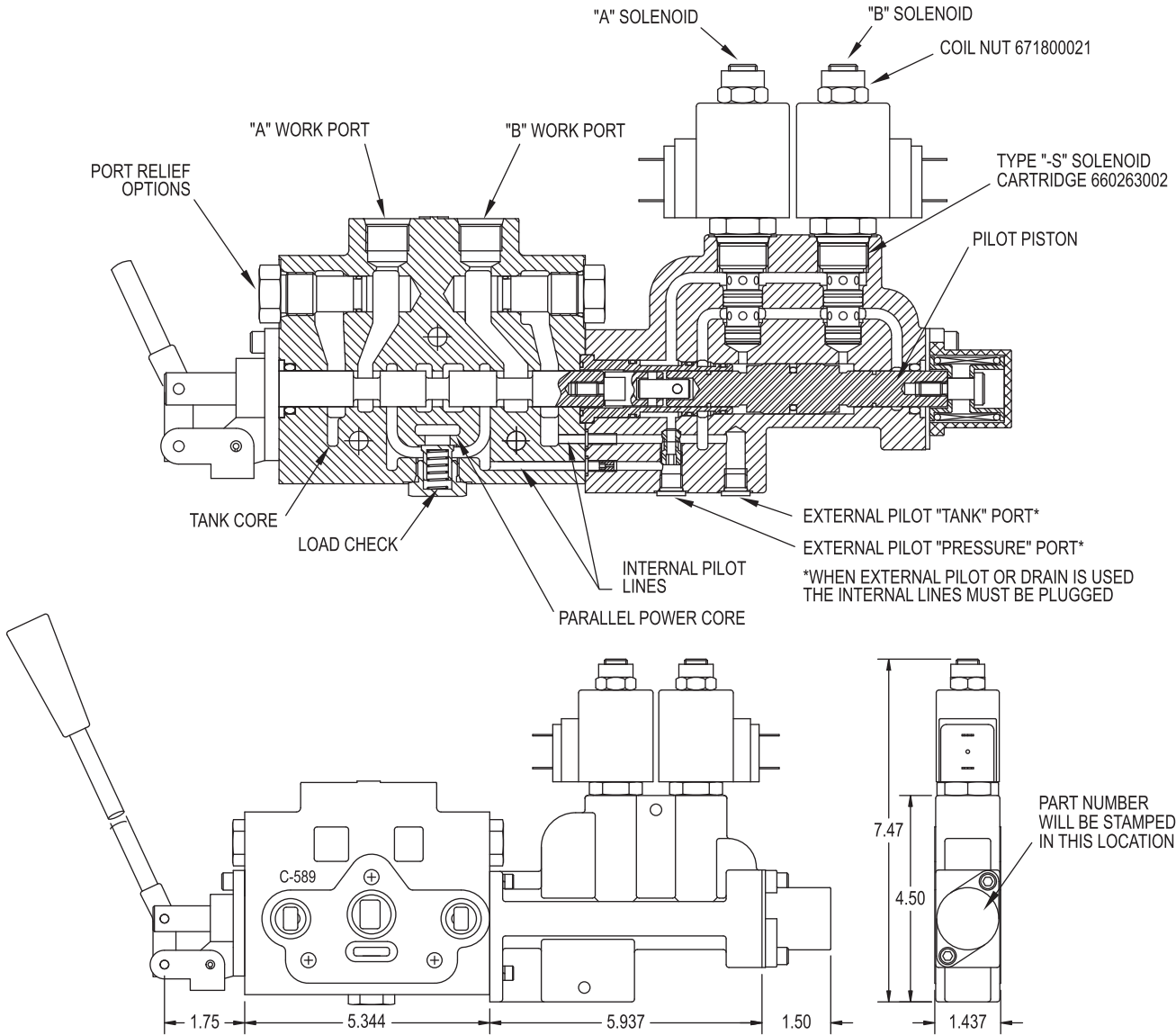
NOTE: For additional data on inlet and outlet sections, valve assemblies, etc. Please refer SV information in this catalog.

SYMBOL EXAMPLE TWO SECTION STACK



VALVES

SOLENOID AND MANUAL OPERATED WORK SECTION TYPE "-S" DIMENSIONAL DATA



TYPE "-S" SEAL KIT 660580005
SOLENOID CARTRIDGES SEAL KIT 660590008

NOTE: THIS OPTION CANNOT BE
ADDED IN THE FIELD

NOTE: For additional dimensional data on inlet and outlet sections, valve assemblies, etc. please refer SV information in this catalog.

SOLENOID COILS - ALL SOLENOID OPERATED SPOOLS

COIL PART NUMBERS

671302002 12 VDC H TYPE COIL DIN 43650
671302003 12 VDC L TYPE COIL DOUBLE WIRE
671322004 12 VDC Q TYPE COIL DOUBLE SPADE
671302013 12 VDC W TYPE COIL WEATHER PACK®
671302006 24 VDC H TYPE COIL DIN 43650
671302007 24 VDC L TYPE COIL DOUBLE WIRE
671322008 24 VDC Q TYPE COIL DOUBLE SPADE
671302009 120 VAC C TYPE COIL CONDUIT
671302010 120 VAC H TYPE COIL DIN 43650

COIL SPECIFICATIONS

DUTY RATINGCONTINUOUS AT 100% VOLTAGE
INGRESS PROTECTION RATING IP65
WATTAGE20 WATTS
STABILIZED TEMPERATURE 217°F WITH 77°F AMBIENT
AMP DRAW AT 77°

12VOLT 1.70 AMPS
24 VOLT83 AMPS
120 VOLT..... .18 AMPS

LEAD WIRE LENGTH 18 GAUGE 12" LONG

AC COILS ARE INTERNALLY RECTIFIED WITH A FULL WAVE
BRIDGE (NO IN RUSH CURRENT).

DIN STYLE COILS ARE DIN 43650 TYPE A.

USE WEATHER PACK® TYPE COILS WITH MALE PACKARD CONNECTOR #12015792
"WEATHER PACK CONNECTORS".