Circuit Selector Valves
RRV-04-RRV-06

NIMCO
NIMCO
NIMCO
CONTROLS

Reliability from Quality

Contents

The Nimco RRV 3/2 circuit selector valve is designed to handle flow rates up to 120 l/min (32 USGpm) at a maximum pressure of 250 bar (3630 psi).

The valve can be equipped with a number of different spools with or without built -in load holding check valves designed to provide 3/2 as well as 3/3 functions.

As with all other Nimco valves the RRV circuit selector valve can be delivered with very low spool leakage rates and with either positive or negative over lapping spools.

The RRV can be controlled either by hand or any direct acting force on the spool in combination with spring center or detent mechanism.

When remote control of the valve is preferred the RRV can be equipped with pneumatic, electrical pneumatic, hydraulic or electrical hydraulic controls.

Technical data:

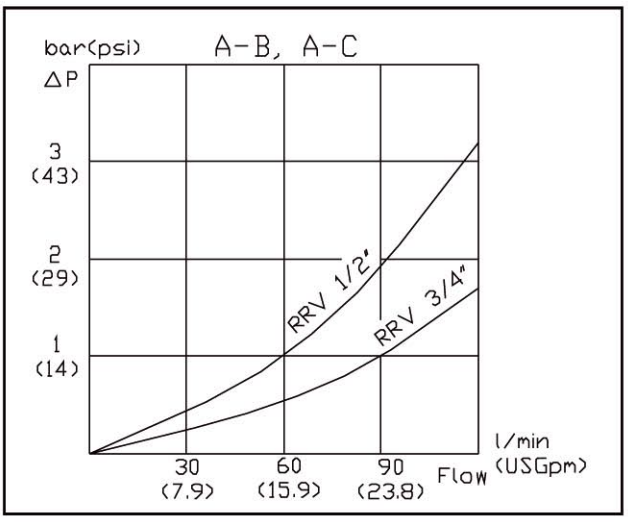
Max. working pressure	**bar**	**psi**
	250	3630
Max. flow rate	**l/min**	**USGpm**
	120	32
Temperature range	**°C**	**°F**
Standard seals:	-40 to +80	-40 to +176
Spool leakage at 100 bar (1450 psi) and 25 mm²/s (cSt) (117 SSU) viscosity	**cm³/min** 10-30	**inch³/min** 0.6-1.8

Filtration
Contamination level equal to or better then 18/14 according to ISO 4406.

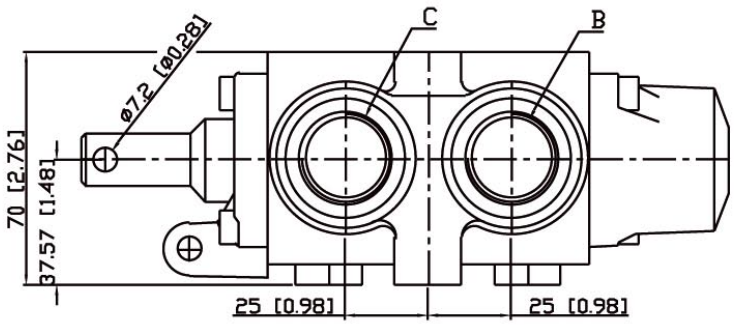
Viscosity	**mm²/s(cSt)**	**SSU**
	10-400	47-1875
Weight	**kg**	**lbs**
	3	6.6
Operating force at the spool	**N**	**kp**
	300	30

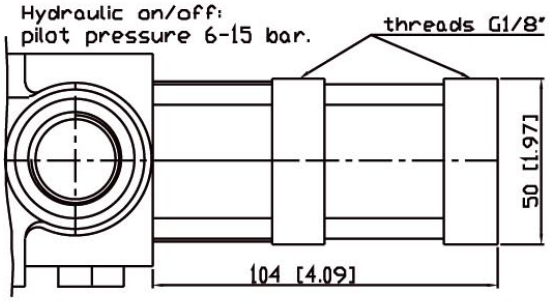
Performance curve

Pressure drops at 25 mm²/s(cSt) (117 SSSU) viscosity, 50°C (122 °F) temperature and spool type 3.

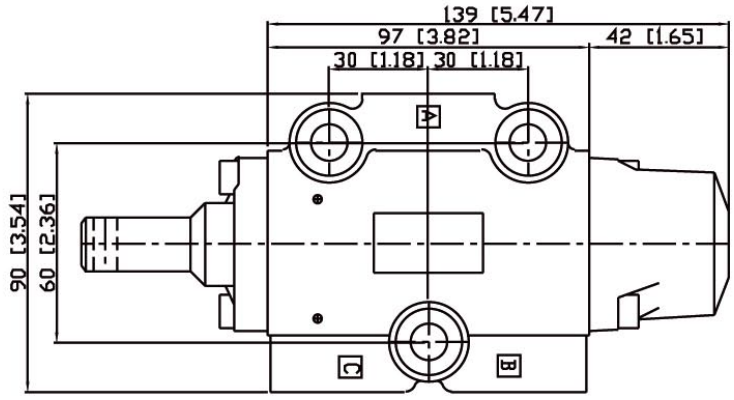


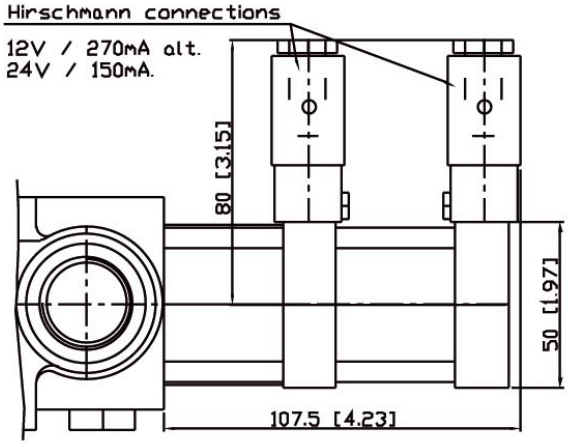
Dimensions



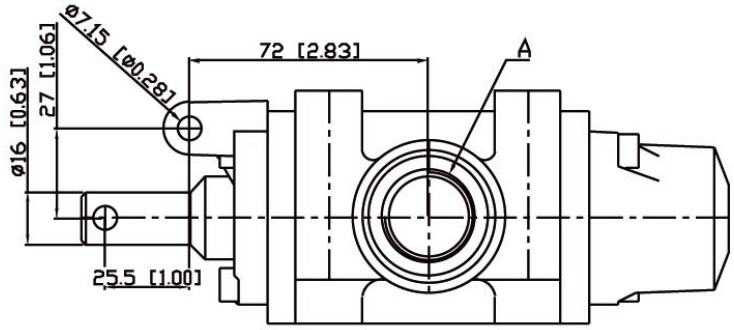


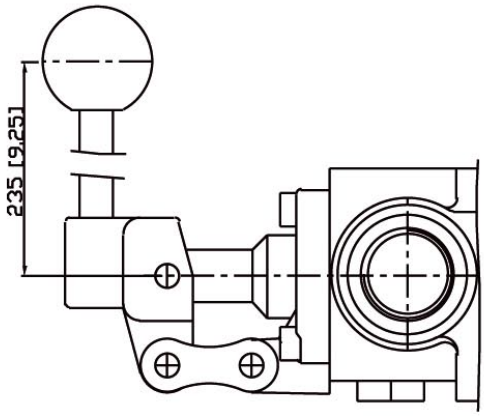
Pneumatic on/off and Hydraulic on/off





Electro-pneumatic on/off





Hand lever vertical. Horizontal also available.

Available threads on the ports A, B and C:

RRV	BSP	SAE	Metric
04	1/2”	3/4-16” SAE8	M18 x 1.5
06	3/4”	11/16” SAE12	M22 x 1.5

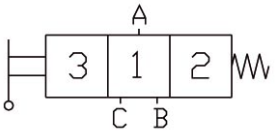
Standard Valves & Order Code

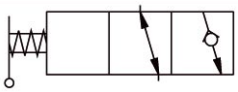
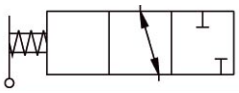
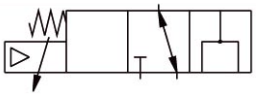
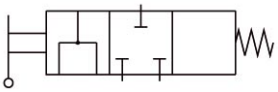
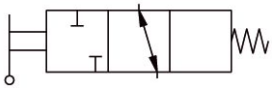
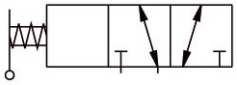
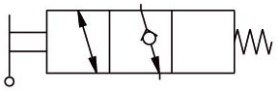
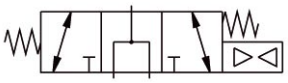
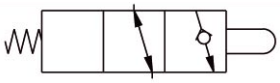
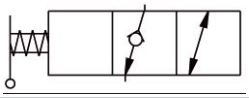
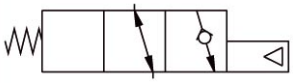
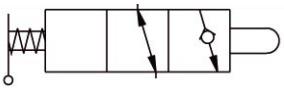
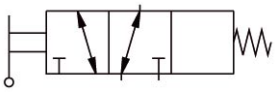
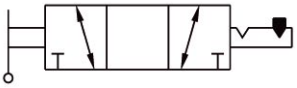
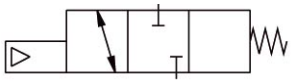
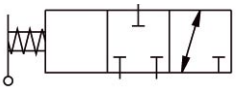
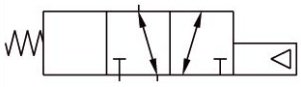
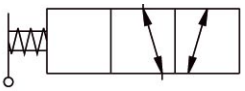
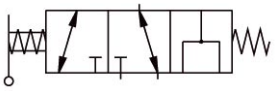
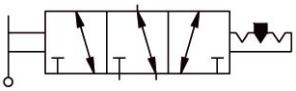
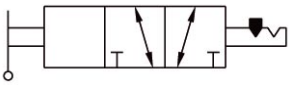
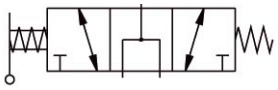
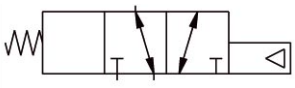
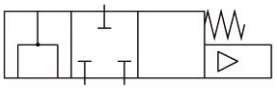
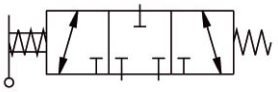
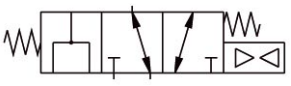
Please use below hydraulic symbols and order codes when ordering the RRV valve.

Shown here are standard combinations available. Please contact our factory if you should require any other combination of spools, spool controls or threads.

Kindly specify whether you require valves with positive or negative over lapping and if you require meter in/out or on/off functions only.

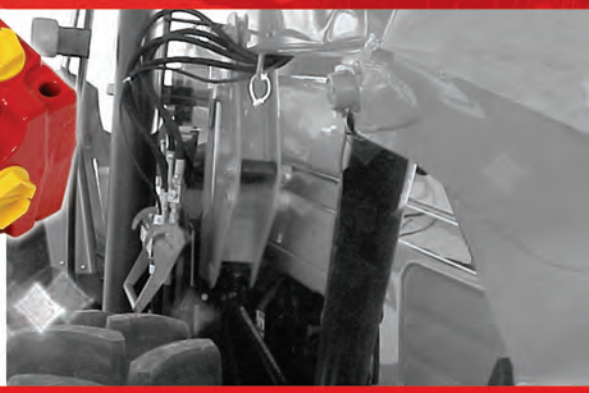
Also specify separately the type of hand lever you require with each valve (see previous page for specifics on hand lever).



Code	Hydraulic symbol	Code	Hydraulic symbol	Code	Hydraulic symbol
4S-1790		4S-1839		3S-6631	
4S-1830		4S-1840		4S-6681	
4S-1831		4S-1841		4S-6682	
4S-1832		3S-6603		4S-6684	
4S-1833		3S-6609		4S-6686	
4S-1834		3S-6611		4S-6687	
4S-1835		4S-6620		4S-6688	
4S-1837		3S-6624		4S-6692	
4S-1838		3S-6625			

Order example: RRV-3/4"-4S-1790-positive overlapping-on/off - hand lever vertical.

Circuit Selector Valves
SVB-03-SVB-04



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CONTROLS

Reliability from Quality

Contents

The SVB 03 and SVB 04 stackable 6 port/2 way circuit selector valves are designed to be used when extra circuits are to be operated from one control lever on machines such as fork lift trucks, agricultural front end loader, telescopic handlers, and in transmission circuits.

Up tp 3 SVB valves can be stacked up allowing for the diverting of flow into 2, 3 or 4 directions depending on the combination chosen.

NIMCO's SVB 03 and SVB 04 circuit selector valves have been carefully designed to meet the demands of progressive machine manufacturers for cost effective, reliable circuit selectors. The valve bodies are made from a special high quality cast iron alloy which is machined, using NIMCO's advanced machining techniques, to precise tolerances, ensuring, along with the other component parts, the consistency of the finished product.

They are designed for a max. working pressure of 280 bar (4060 psi) and will accept flows up to 90 l/min (23.8 USgpm) - 1/2" ported version. The advanced design of the valve spool ensures that fast spool switching can take place under any conditions without the use of a seperate drain line.

The NIMCO circuit selector valves are often connected to the service ports of a double acting spool valve, to allow two double acting services to be operated from the one service (see circuit 1 on page 7).

The SVB valves can also be used to benefit circuits where the spool valves are located a long distance from the pumps. In this case the de-energized SVB valve will return both lines to tank and, when energized, feed the circuit spool valves. This provides the advantage of minimizing the pressure drop through the system when needed, such as when transporting a machine in non-operational mode (see circuit 2 on page 7).

A third possibility is to use one (or two) SVB valves in a closed type hydrostatic system where one pump drives two (or three) different motors. In this instance the SVB valve will replace two (or three) directional control valves (see circuit 3 on page 7).

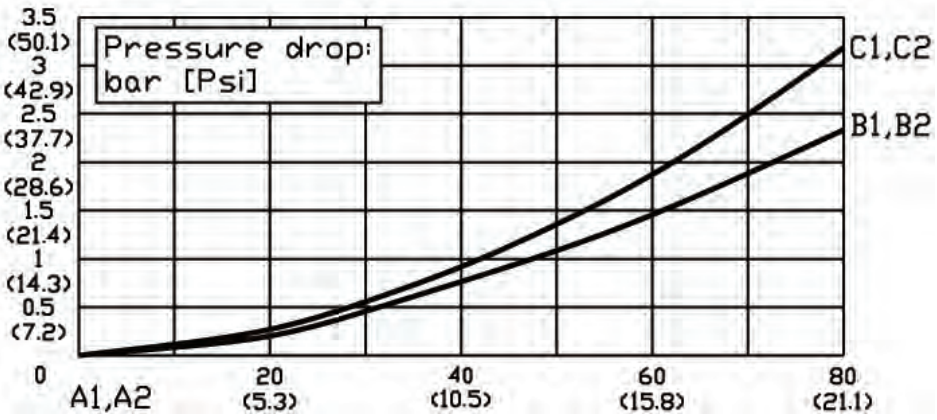
The valve is actuated from one position to the other by a constant-rated wet pin type solenoid. Solenoid operation of the valve allows it to be controlled from a switch located in a control lever handle. This allows an operator to activate an SVB selector valve quickly as part of sequence of machine operations, such as on an agricultural tractor loader switching from bucket tilt to a grab or rotator unit.

The NIMCO SVB valve's constant-rated wet pin solenoid is capable of switching from one circuit to another at the rated flow and pressure.

The SVB valve bank can be optionally equipped with a flangeable housing, containing a dual cross-over relief valve, on the outlet end of the valve, thereby protecting the motor or cylinder operated by the B ports of the last downstream valve section against excessive pressure.

Max. working pressure	bar	psi
	280	4060
Max. nominal flow	**l/min**	**USgpm**
	90	23.8
Temperature Range	**°C**	**°F**
Standard seals	-40 to +95	-40 to +203
Spool leakage	**cm³/min**	**inch³/min**
100 bar (1450 psi) and 25 mm²/s (cSt) (117 SSU) viscosity	2.0	0.12
Recomended filtration		
Contamination level equal to or better then	18/14 according to ISO 4406	NAS 1638-class 10
Recomended viscosity	**mm²/s (cSt)**	**SSU**
	10-400	47 - 1875
Soleinoid operating power		

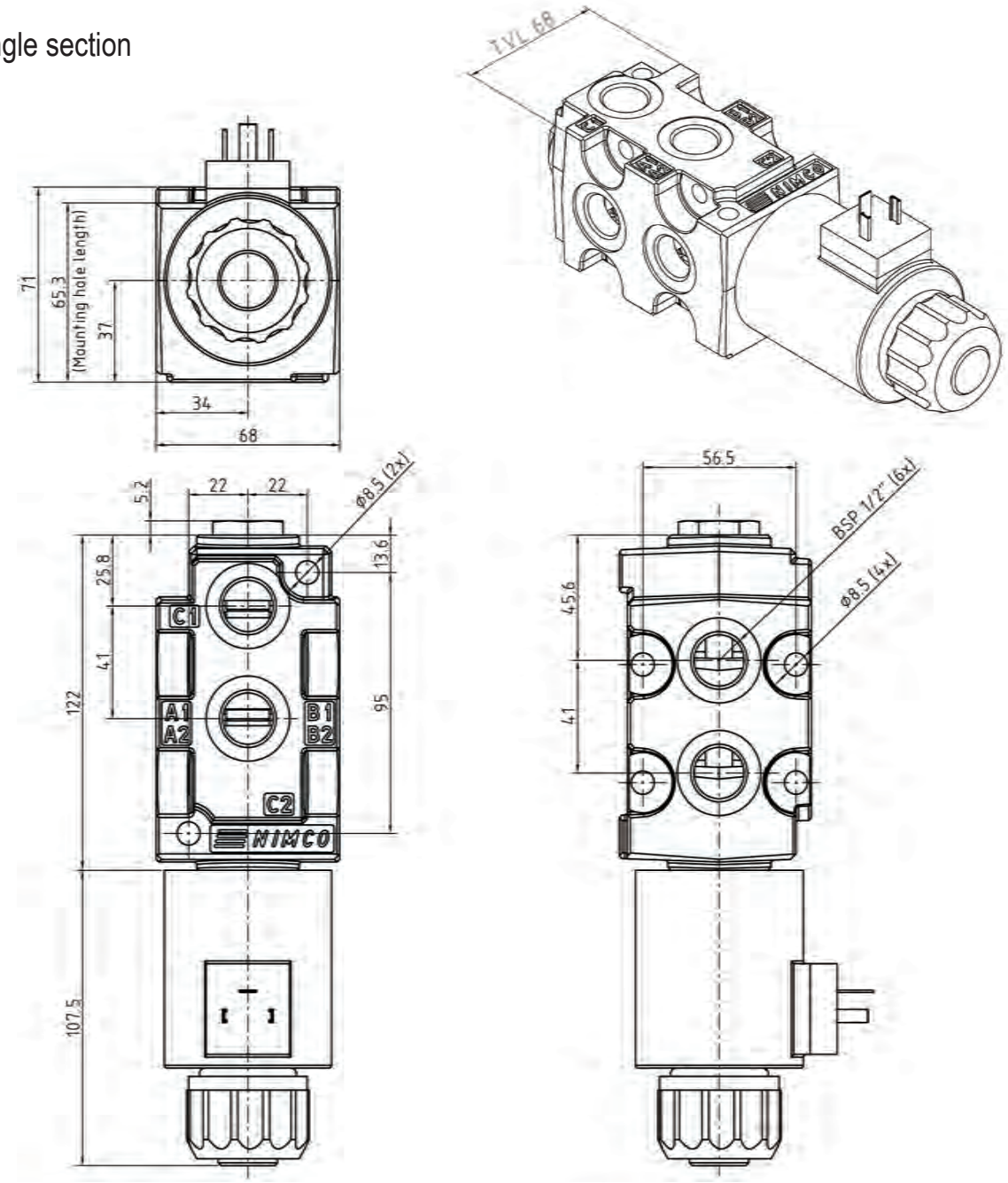
12 V 65 Watts
40 V 65 Watts
100% ED



Dimensions and Options

1 section allowing for one extra function

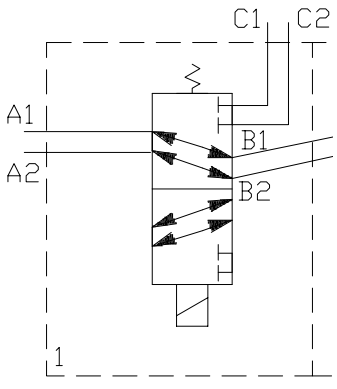
Single section



OPTIONAL THREAD SIZES		
BSP	SAE	METRIC
3/8”	6	-
1/2”	8	18x1.5

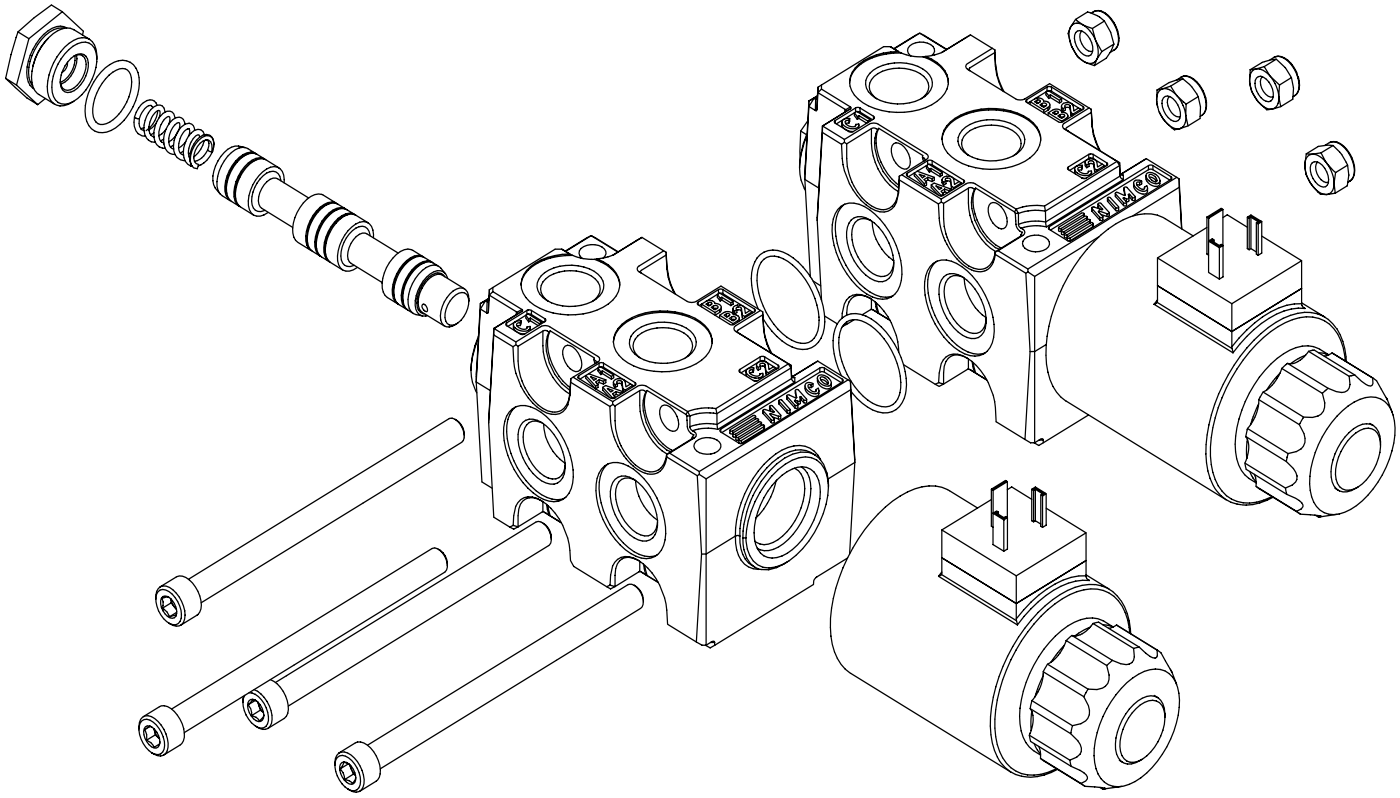
TVL*		
Single	Double	Triple
68	136	204

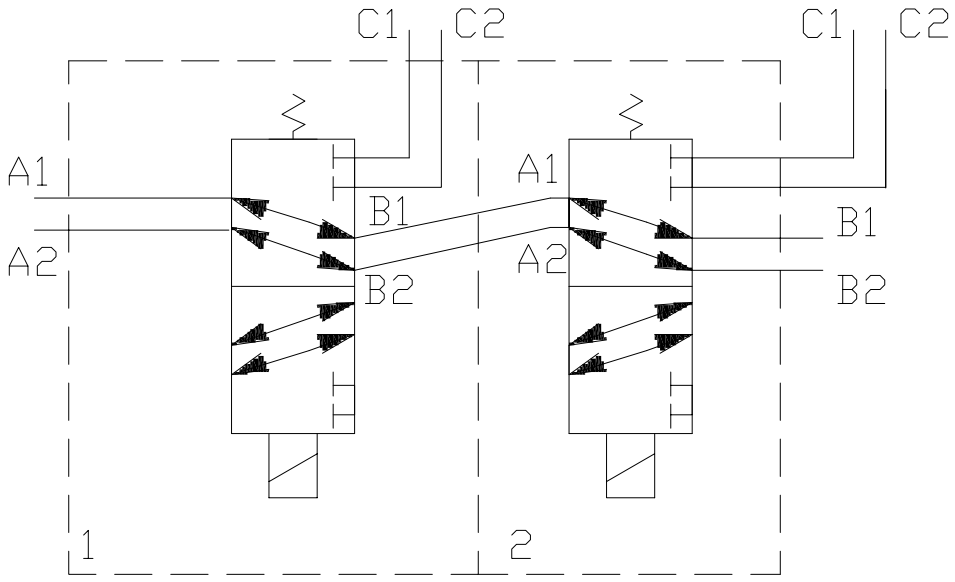
* TVL = Total Length of Valves when assembled



Valve Assembly & Schematics

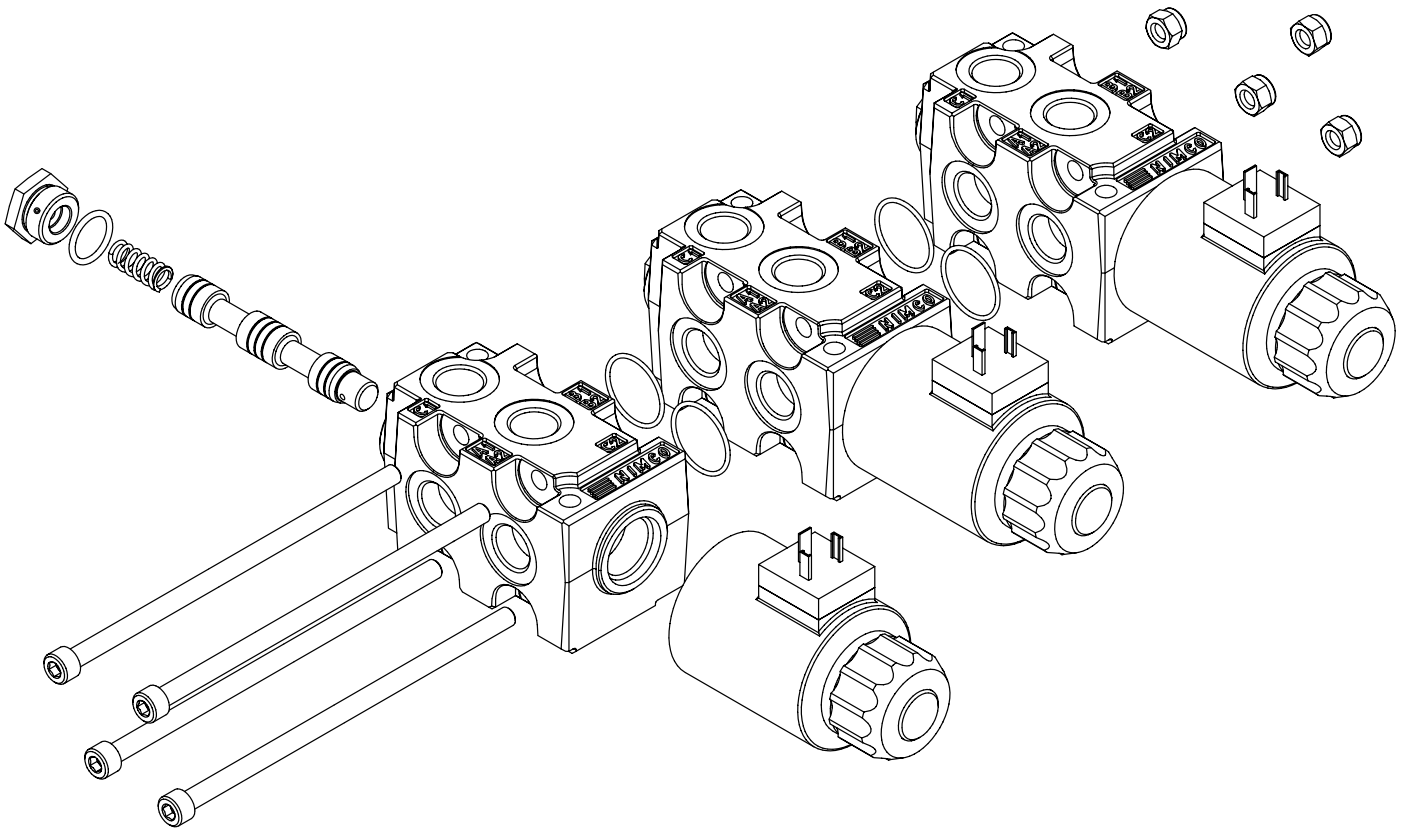
2 sections allowing for two extra functions

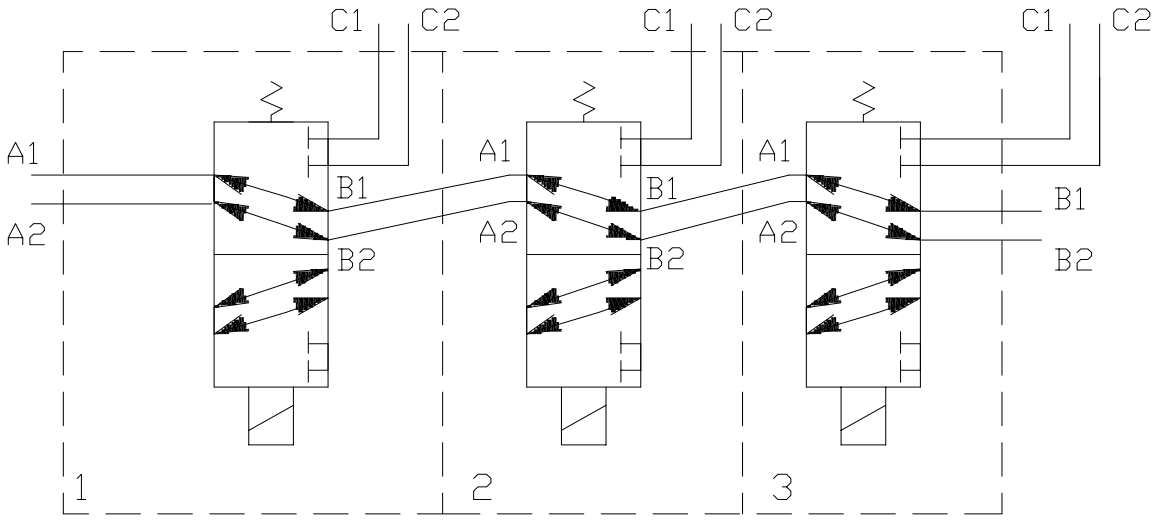




Valve Assembly & Schematics

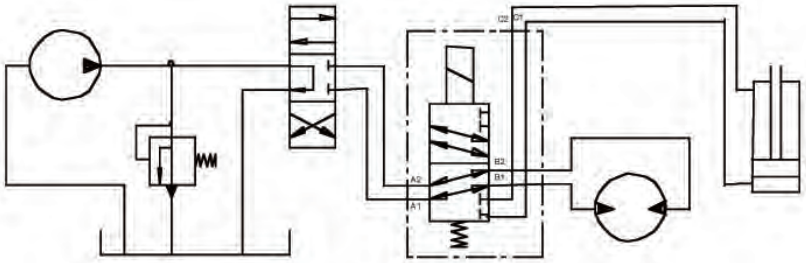
3 sections allowing for three extra functions



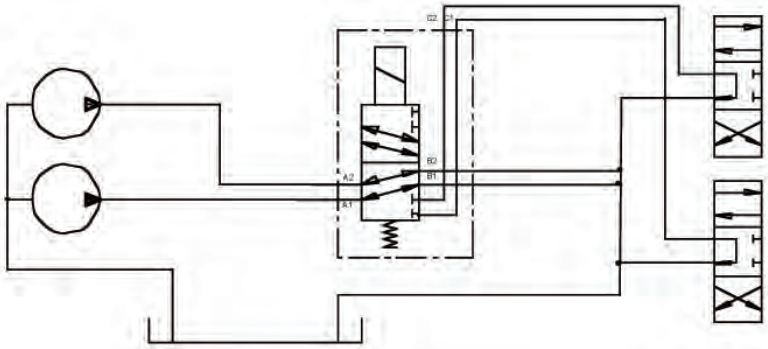


Applications and Ordering Codes

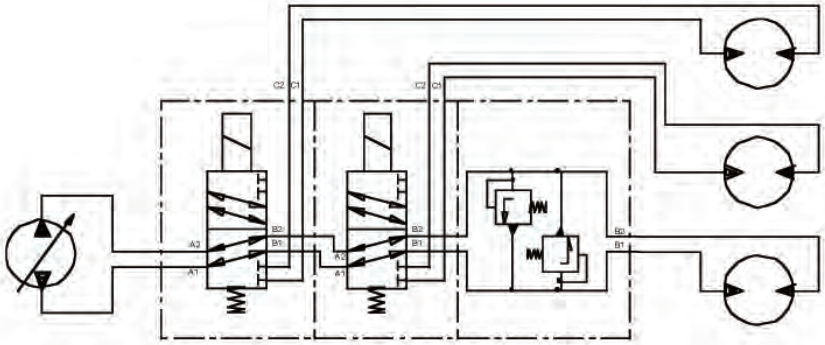
Circuit Diagram N° 1



Circuit Diagram N° 2



Circuit Diagram N° 3



Ordering Codes

Valve type	Cyl. port tThreads	Voltage	Bankable	Cross-over relief valve	Pressure setting B1	Pressure setting B2
Write appropriate option codes (bold characters) in empty squares below and copy as order form!						
Available options (select codes)						
SVB	**GS**= G3/8" **GL**= G1/2" **M**= M18 x 1,5 **S**= SAE 8 3/4"-16	**12**=12 V DC **24**=24 V DC	**B**=Yes **N**=No	**DRV**=Yes **N**=No	Adjustable 80-250 bar (1160-3600 psi) State **setting** above!	Adjustable 80-250 bar (1160-3600 psi) State **setting** above!

By means of an appropriate assembly kit, the SVB03/SVB04 valves can be banked to obtain e.g. 3 ways from two valves, etc. When marking "B" in the "Bankable" ordering square, an assembly kit is automatically delivered.

PRODUCT NEWS FOR LOADERS

Improves loader operators visibility
Saves on couplings and installation time

COMPACT ATTACHMENT VALVE
SVL

NIMCO
NIMCO
NIMCO
CONTROLS

RELIABILITY FROM QUALITY

Content

The SVL Compact Attachment valves are designed to be assembled on the cross beam of an agricultural loader. Through their special design they will combine standard and auxiliary functions that otherwise would have to be combined by a number of different valves while allowing for improved load visibility by the tractor operator.

The SVL-300 works as a central connecting point for all hoses from the loader valve which keeps all plumbing assembled close to the tractor. The SVL can also offer the control and plumbing to auxiliary functions, as needed.

The standard version of the valve (SVL-300-1) offers an integrated 6/2 circuit selector valve operation of a third machine function and two cross-over relief valves to protect the bucket circuit of a loader.
The SVL-300-1 can also be combined with an additional 6/2 circuit selector valve for the electrical operation of a fourth machine function. Through the possibility to mount the fourth function valve directly on to the SVL-300-1, the valve package remains small and keeps the visibility at an optimal level.

An added feature is the possibility to connect an accumulator for a more comfortable ride directly to the valve. The accumulator for the soft ride function can be activated either manually (SVL-300-2) or by an electrical 12 or 24-volt valve (SVL-300-3). The possibility to attach a fourth function valve like the SVL-400-1 is also given here.
The SVL valve also offers the possibility to attach a tool lock valve to the valve block.

The SVL series is available with BSP, SAE and metric threads.

Rated Pressure	bar	psi
	280	4060
Rated Flow	**l/min**	**USgpm**
	90	23.8
Secondary Valves	**Yes**	
Temperature Range	**°C**	**°F**
Standard seals	-40 to +95	-40 to +203

Port Connection

T Tank
BSP G⅜" SAE 6 Metric M16x1.5

A Tilt cylinder (left side)
BSP G⅜" SAE 6 Metric M16x1.5

B Tilt cylinder (left side)
BSP G⅜" SAE 6 Metric M16x1.5

C 3:rd function
BSP G½" SAE 8 Metric M18x1.5

D 3:rd function
BSP G½" SAE 8 Metric M18x1.5

E Lift cylinder (left side)
BSP G⅜" SAE 6 Metric M16x1.5

F Lift cylinder (left side)
BSP G⅜" SAE 6 Metric M16x1.5

G Optional accumulator port
BSP G⅜" SAE 6 Metric M16x1.5

H Tilt cylinder (right side)
BSP G⅜" SAE 6 Metric M16x1.5

J Tilt cylinder (right side)
BSP G⅜" SAE 6 Metric M16x1.5

K Tilt function in from loader valve
BSP G½" SAE 8 Metric M18x1.5

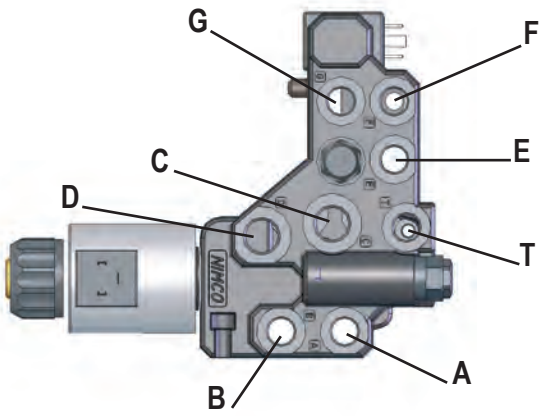
L Tilt function in from loader valve
BSP G½" SAE 8 Metric M18x1.5

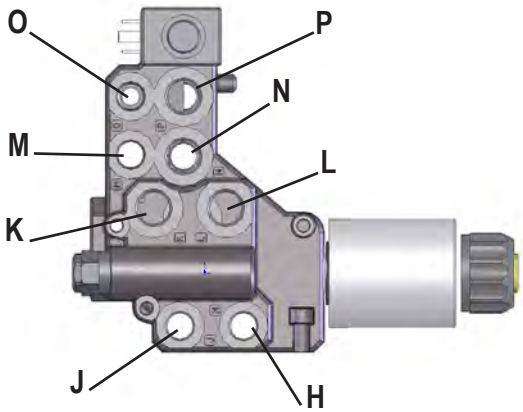
M Lift Cylinder (right side)
BSP G⅜" SAE 6 Metric M16x1.5

N Lift function in from loader valve
BSP G½" SAE 8 Metric M18x1.5

O Lift cylinder (right side)
BSP G⅜" SAE 6 Metric M16x1.5

P Lift function in from loader valve
BSP G½" SAE 8 Metric M18x1.5



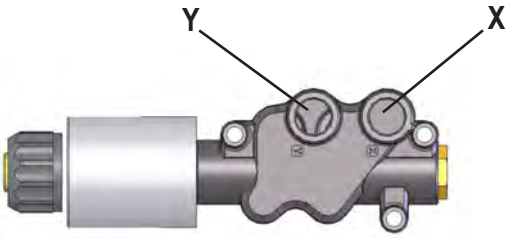


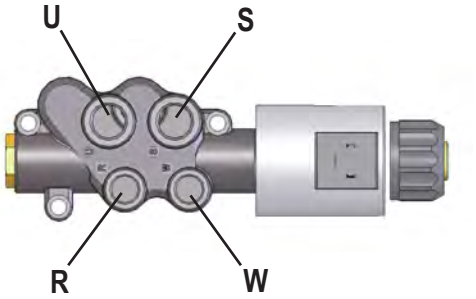
Rated Pressure	bar	psi
	280	4060
Rated Flow	**l/min**	**USgpm**
	90	23.8
Temperature Range	**°C**	**°F**
Standard seals	-40 to +95	-40 to +203

Port Connection

X mounted to K port from SVL-300
Y mounted to L port from SVL-300

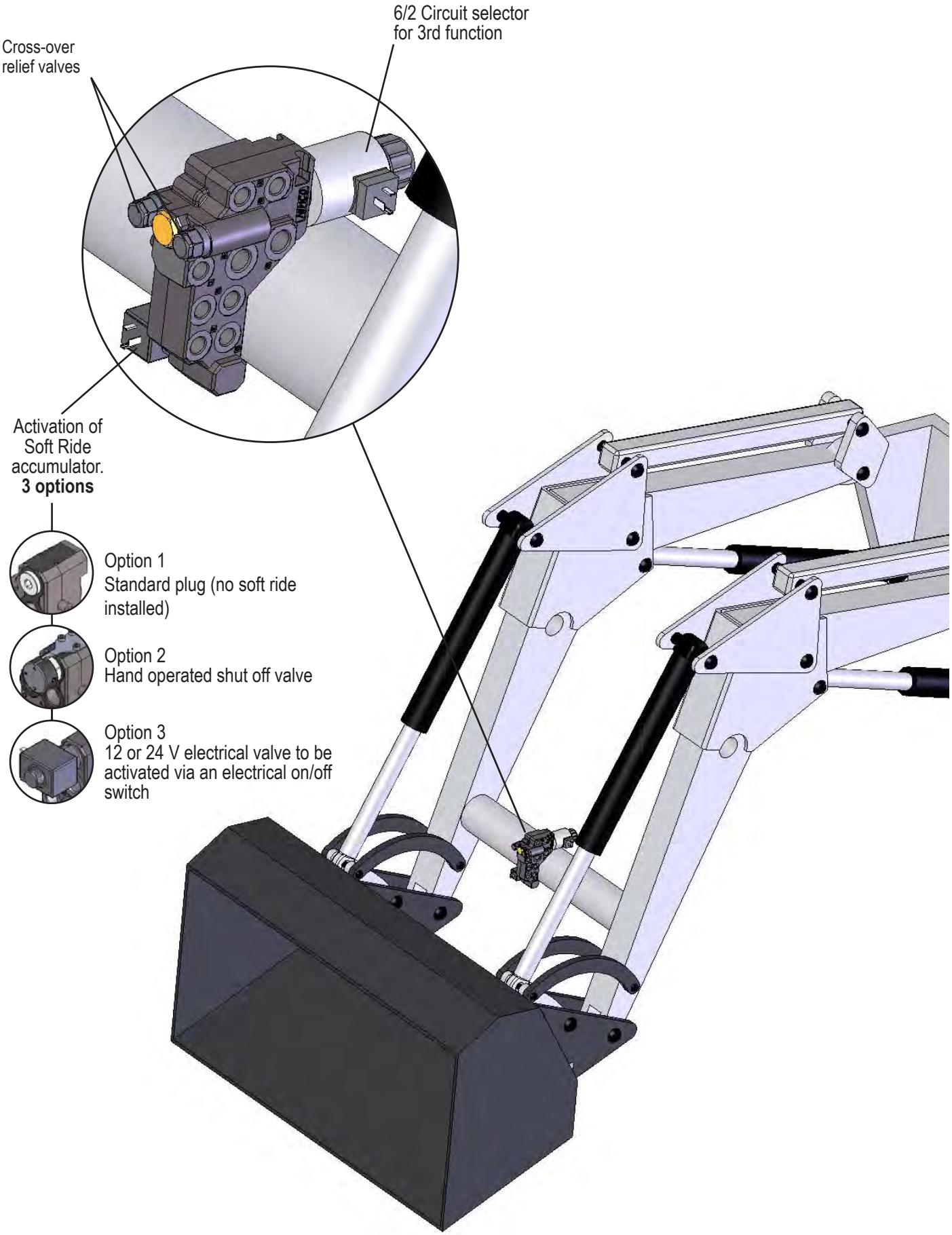
W 4th function
BSP G⅜" SAE 6 Metric M16x1.5
R 4th function
BSP G⅜" SAE 6 Metric M16x1.5
S Tilt function in from loader valve
BSP G½" SAE 8 Metric M18x1.5
U Tilt function in from loader valve
BSP G½" SAE 8 Metric M18x1.5





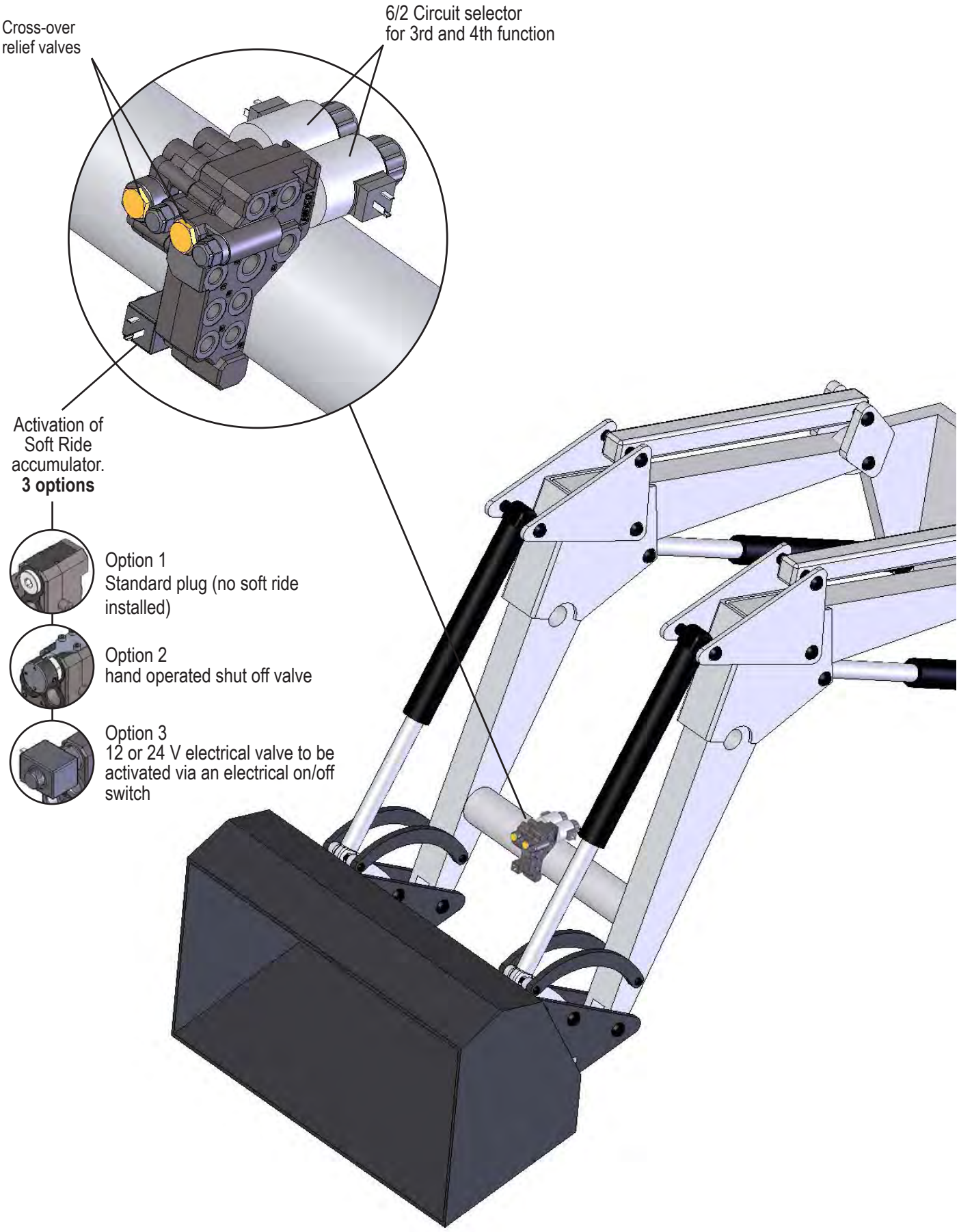
Application

SVL-300



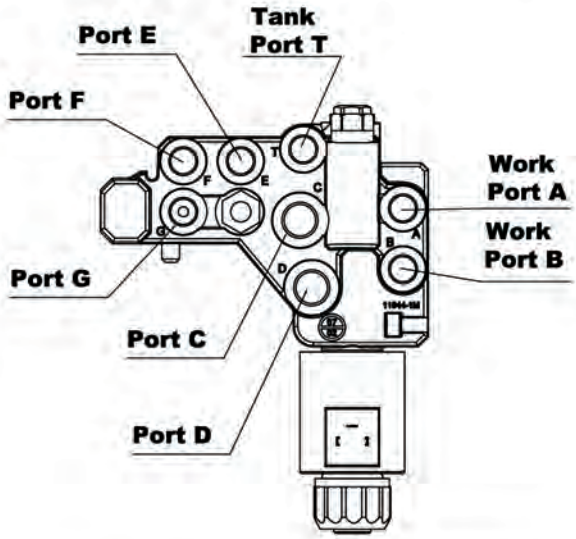
Application

SVL-300 mounted with the SVL-400



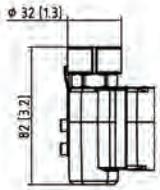
Dimensional drawings - SVL-300

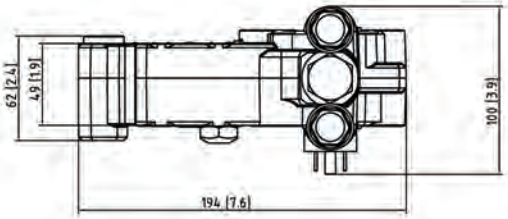
General Dimensional Drawing shown without Accumulator option (see inserts for options 2&3)



OPTION 2

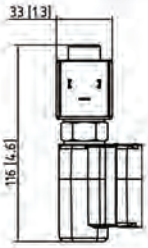
Accumulator Dampening Control SVL-300-2
Manually Operated Shut Off Valve

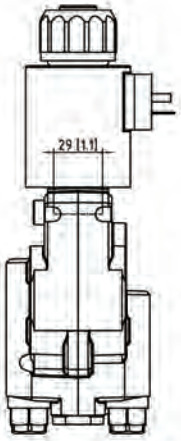


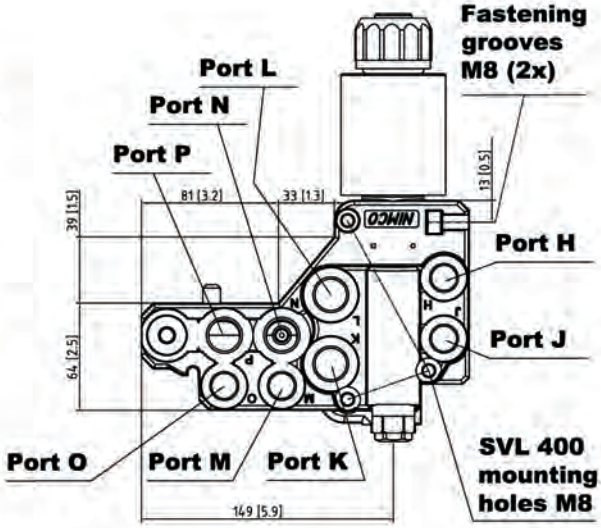


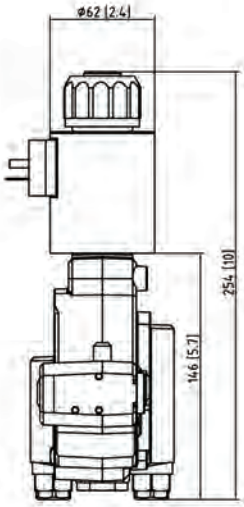
OPTION 3

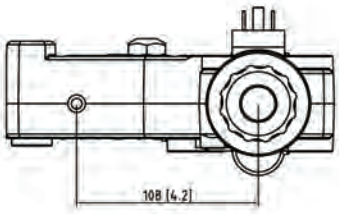
Accumulator Dampening Control SVL-300-3
Solenoid Valve 12 or 24 VDC





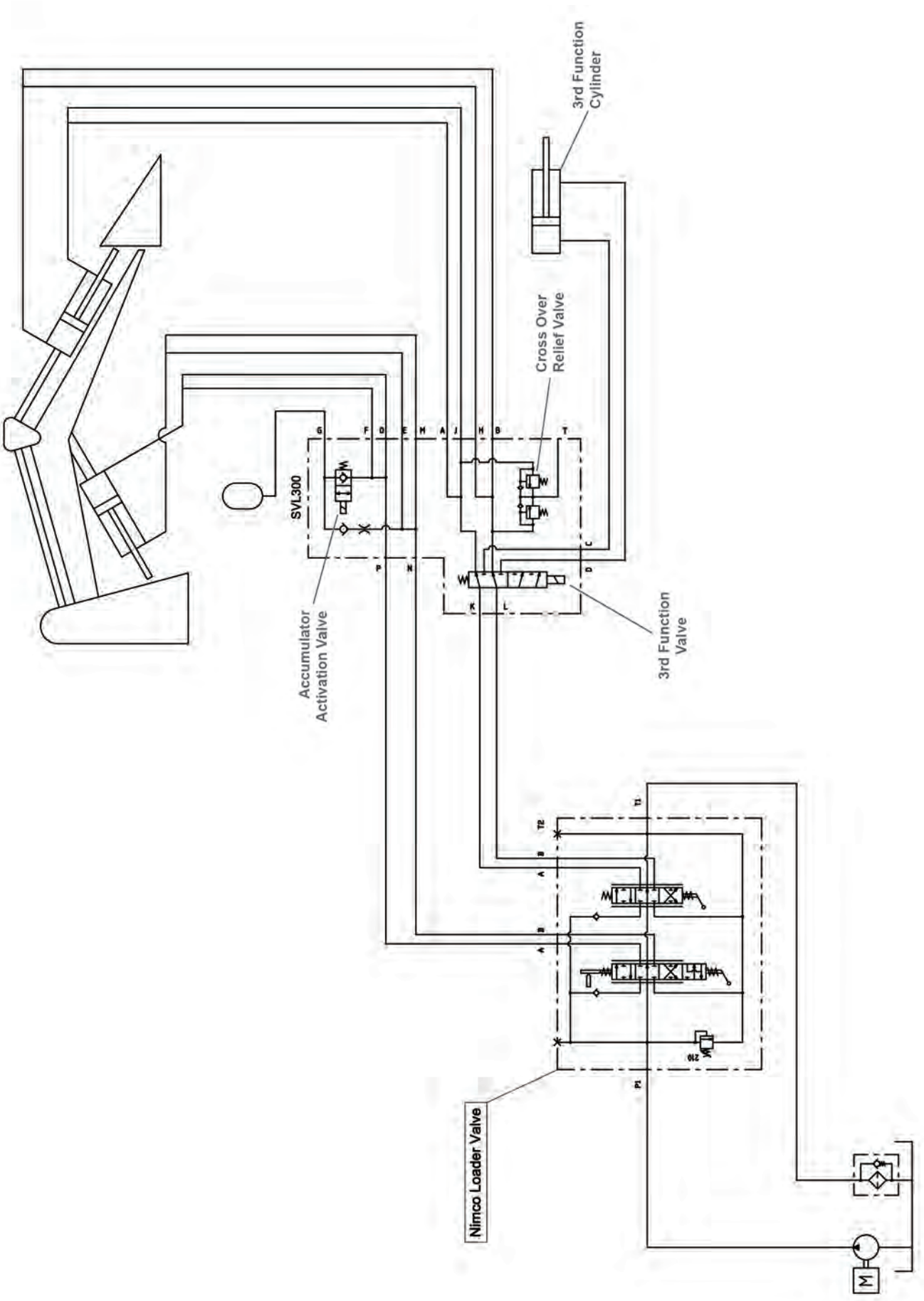






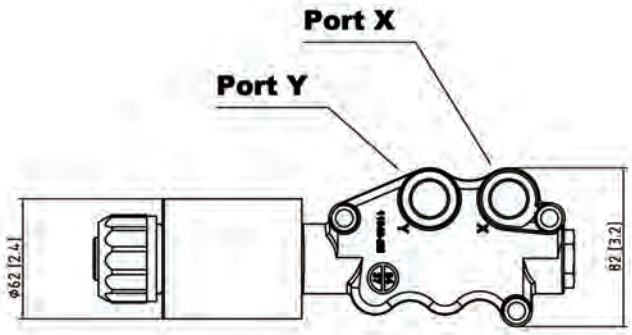
Port	Thread
Work port A, B	BSP ISO 3/8" SAE 6 M16x1.5
E, F, G, H, J, M, O	BSP ISO 3/8" SAE 6 M16x1.5
C, D, K, L, N, P	BSP ISO /2" SAE 8 M18x1.5
Tank port T	BSP ISO 3/8" SAE 6 M16x1.5

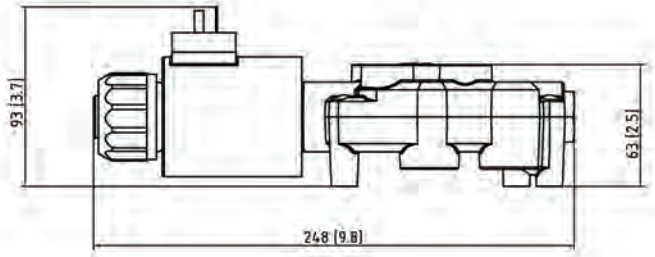
Hydraulic Schematic - SVL-300

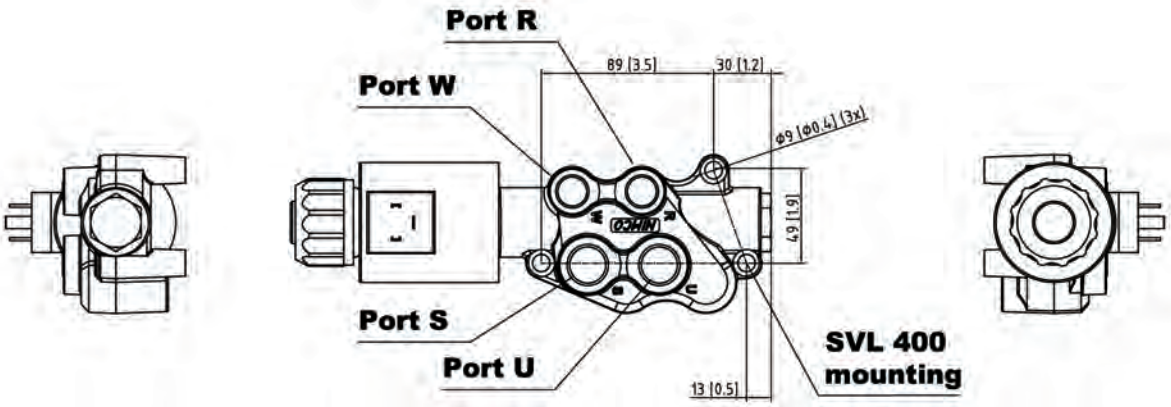


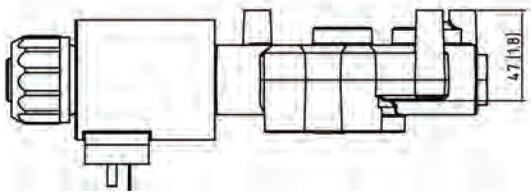
Dimensional drawings - SVL-400

4th function 6/2 12/24V circuit selector valve







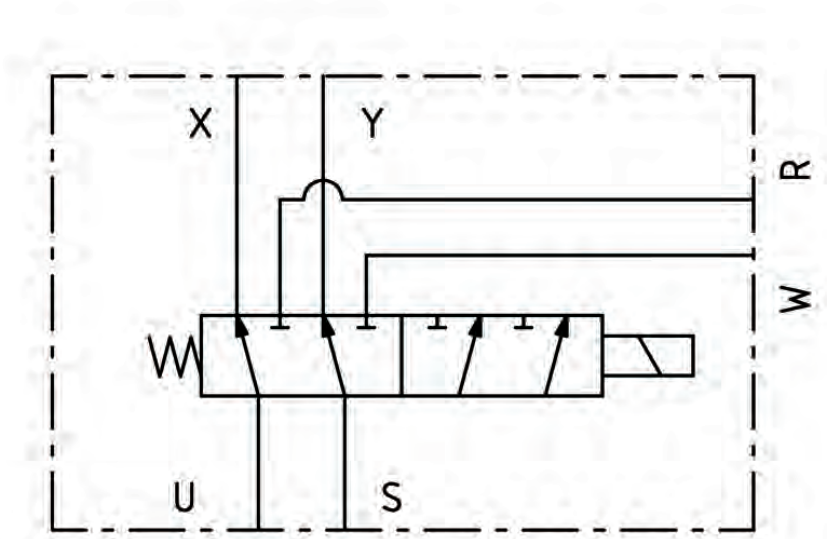


Complete SVL-401 valve with mounting bolt kit for fit-up to the SVL-300 including between valve port adaptors can be ordered as Nimco Part No. 12227-2S

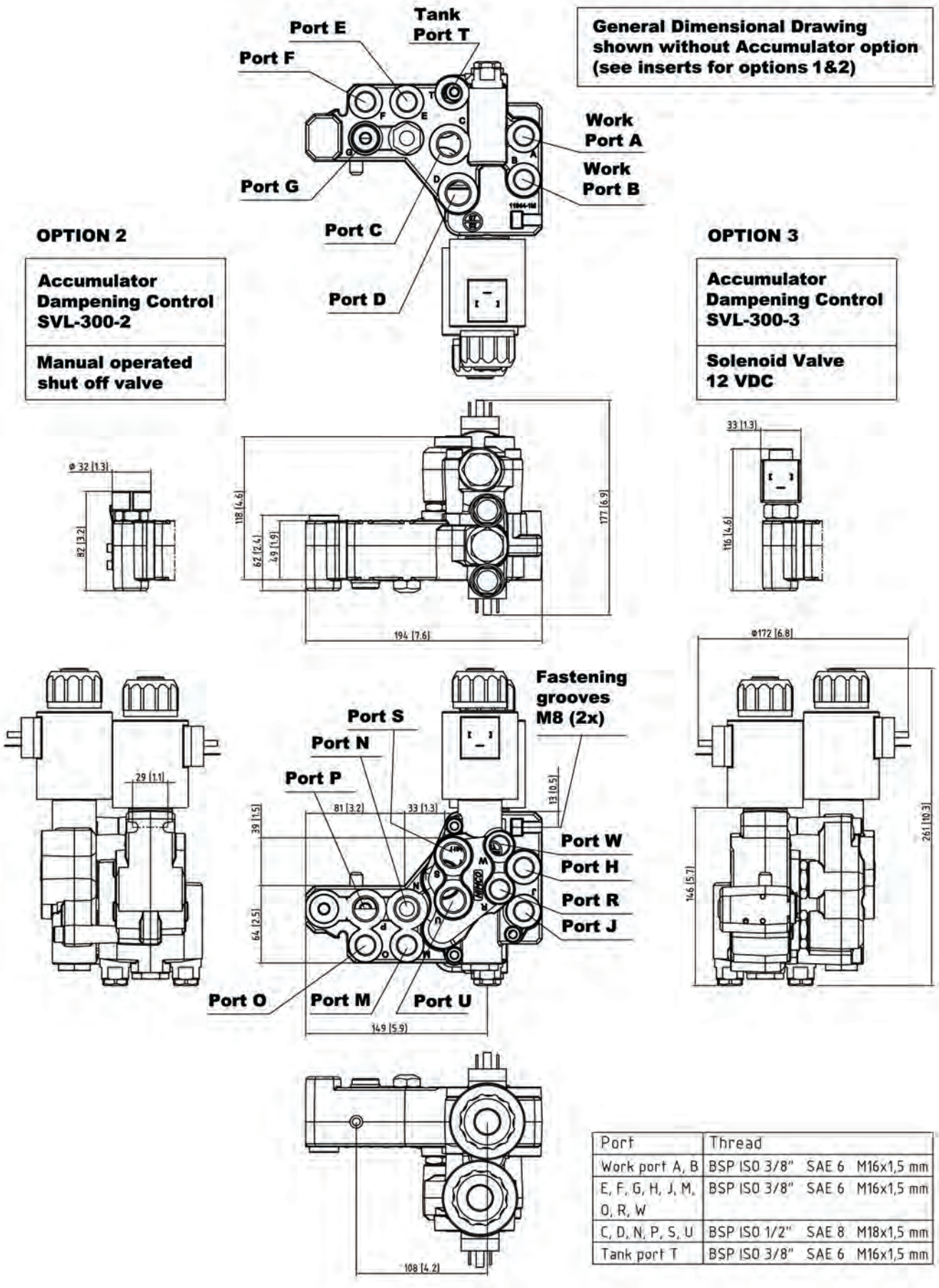
Port	Thread		
R, W	BSP ISO 3/8"	SAE 6	M16x1.5
S, U	BSP ISO 1/2"	SAE 8	M18x1.5
X, U	ø 19 mm		

Hydraulic Schematic - SVL-400

4th function 6/2 12/24V circuit selector valve schematic

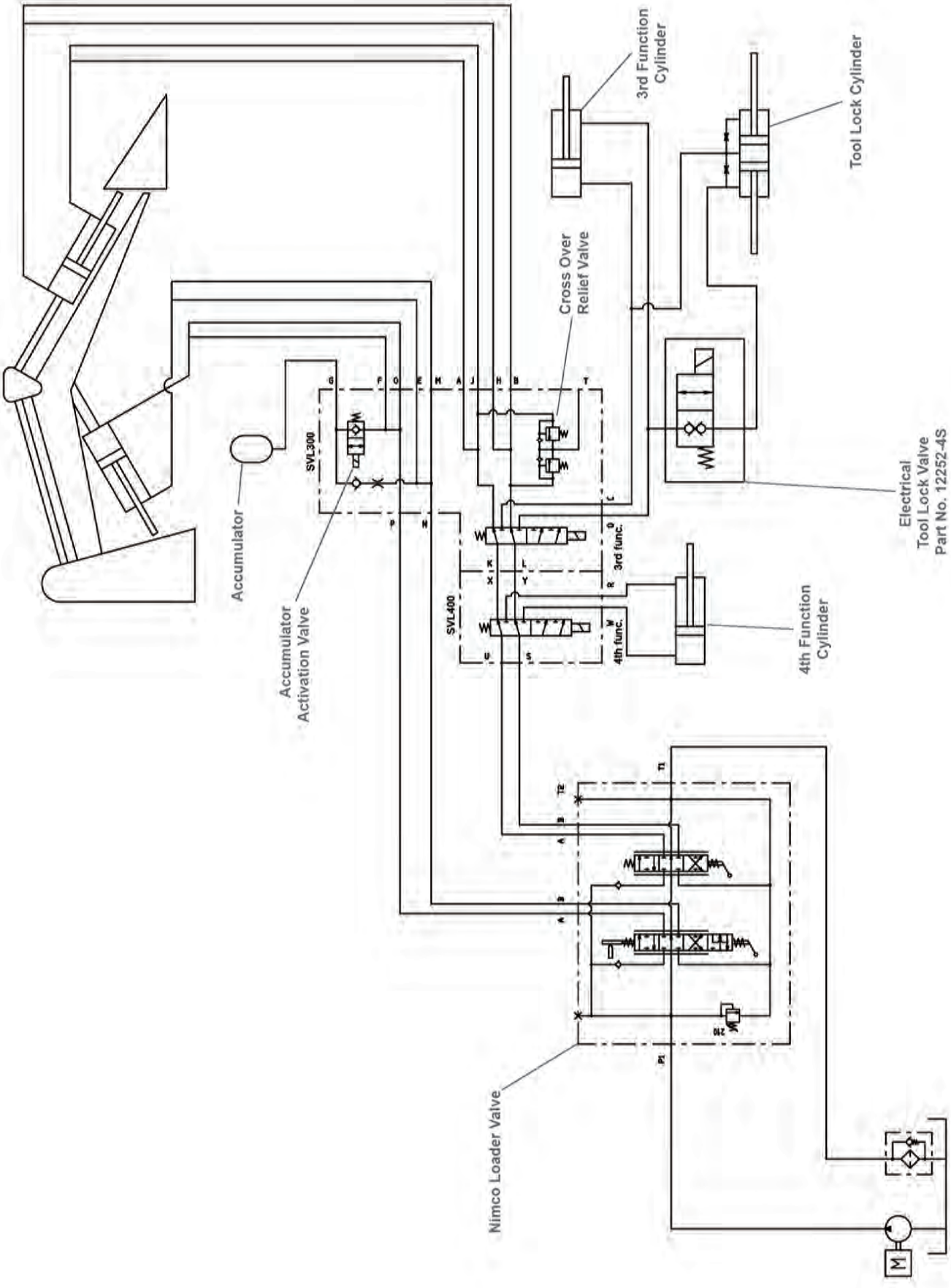


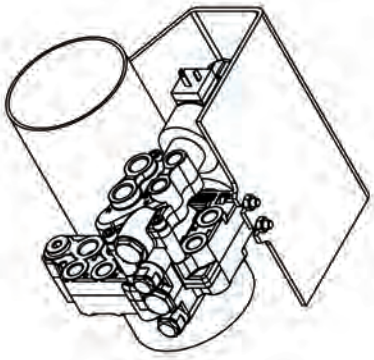
Dimensional drawings - SVL-300/400

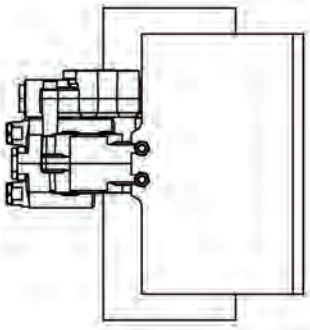


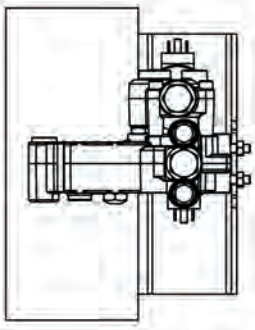
Port	Thread
Work port A, B	BSP ISO 3/8" SAE 6 M16x1,5 mm
E, F, G, H, J, M, O, R, W	BSP ISO 3/8" SAE 6 M16x1,5 mm
C, D, N, P, S, U	BSP ISO 1/2" SAE 8 M18x1,5 mm
Tank port T	BSP ISO 3/8" SAE 6 M16x1,5 mm

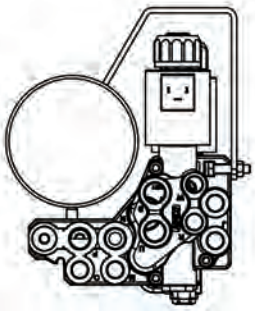
Hydraulic Schematic - SVL-300/400

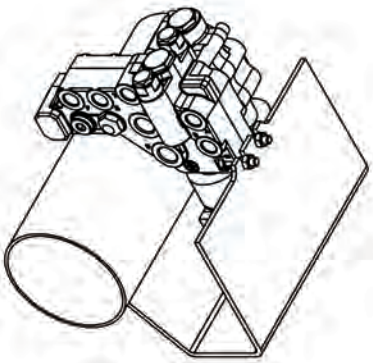


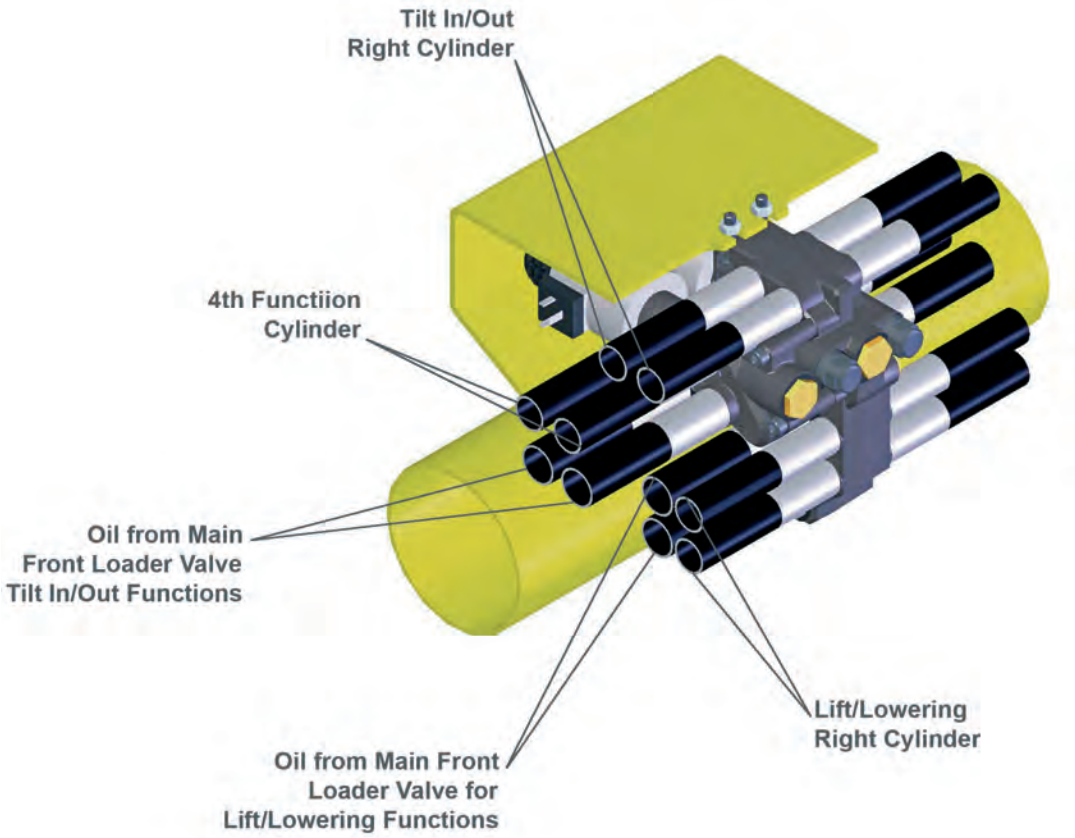


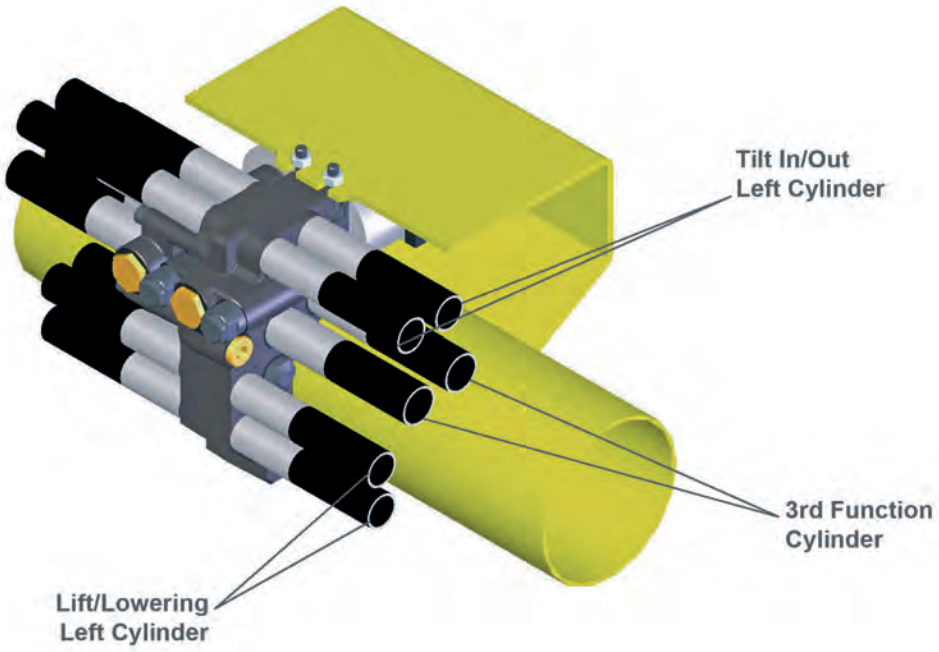


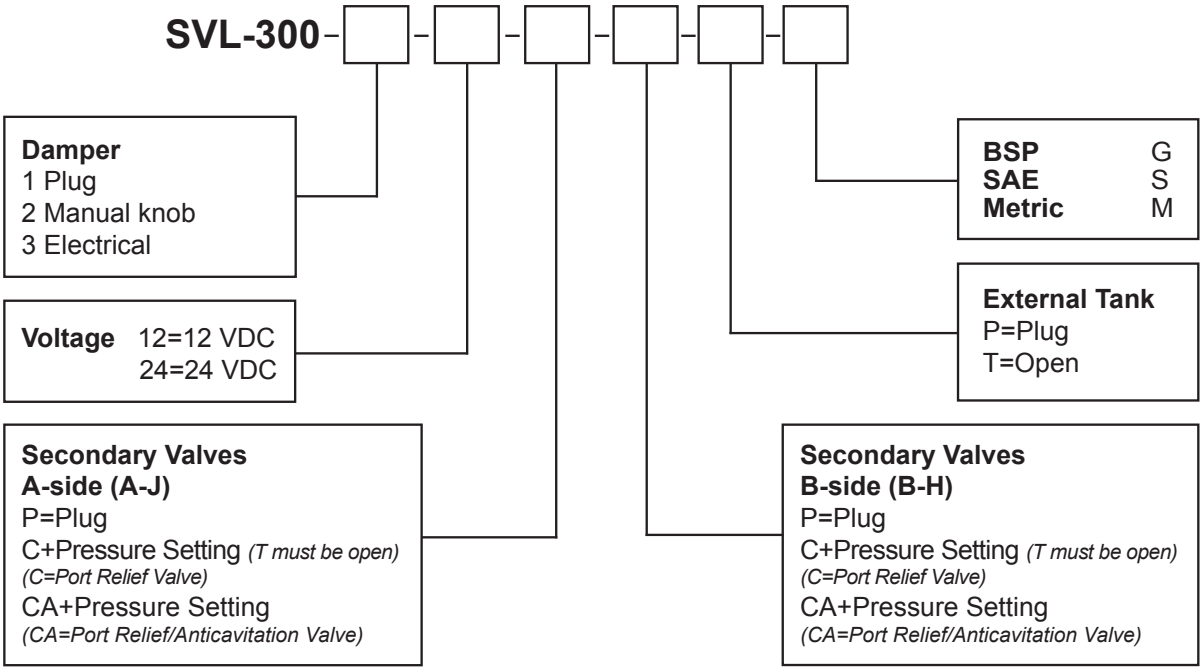


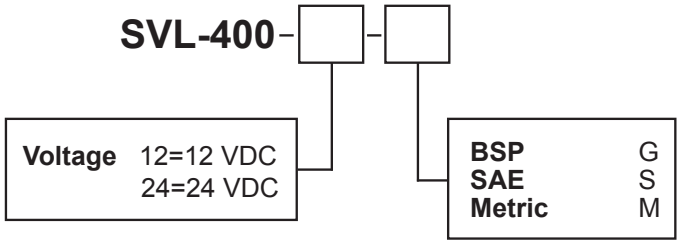





Tilt In/Out
Right Cylinder
4th Functiion
Cylinder
Oil from Main
Front Loader Valve
Tilt In/Out Functions
Oil from Main Front
Loader Valve for
Lift/Lowering Functions
Lift/Lowering
Right Cylinder


Tilt In/Out
Left Cylinder
3rd Function
Cylinder
Lift/Lowering
Left Cylinder





SVL-400: The Port Adaptors and the Bolt Kit are included