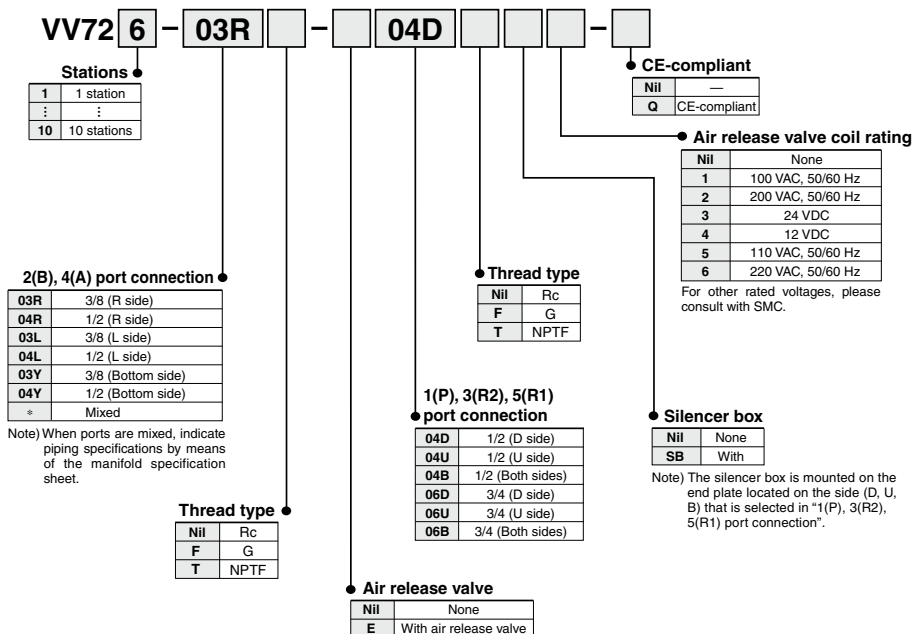


Manifold VV72 Series

VQ7-8 Series



How to Order Manifold



Manifold Specifications

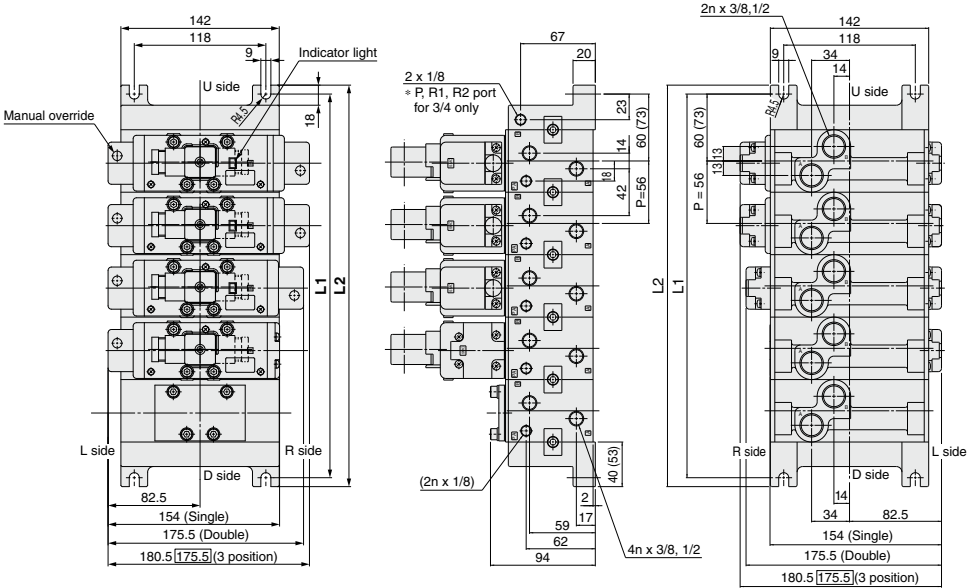
Manifold block size	Applicable solenoid valve	Porting specifications		Stations	Weight (kg)
		2(B), 4(A) port size	1(P), 3(R2) 5(R1) port size		
ISO size 2	VQ7-8 Series ISO size 2	3/8 1/2	1/2 3/4	Max. 10 stations	0.96n + 0.77 (n: Stations)

SV
SYJ
SZ
VF
VP4
VQ 1/2
VQ 4/5
VQC 1/2
VQC 4/5
VQZ
SQ
VFS
VFR
VQ7

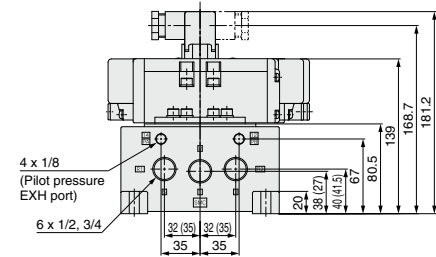
VQ7-8 Series

DIN Terminal Type

VV72□-□-□□□



Bottom ported drawing



* () : 3/4
Dimensions inside □
are for rubber seals.

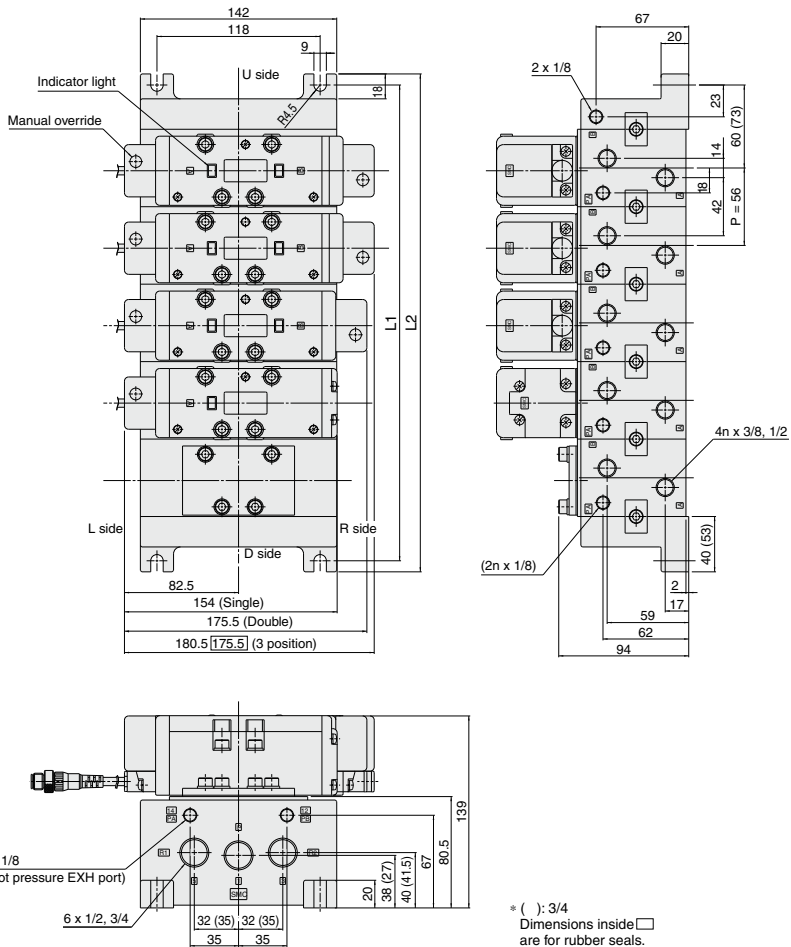
L Dimension

P, R1, R2 port	L	n	1	2	3	4	5	6	7	8	9	10	Formula
1/2	L1		120	176	232	288	344	400	456	512	568	624	n: Stations L1 = 56n + 64
	L2		136	192	248	304	360	416	472	528	584	640	L2 = 56n + 80
3/4	L1		146	202	258	314	370	426	482	538	594	650	n: Stations L1 = 56n + 90
	L2		162	218	274	330	386	442	498	554	610	666	L2 = 56n + 106

Note) L dimension of SB type with a port size of 1/2 is the same as of SB type with a port size of 3/4.

Pre-wired Connector Type

VV72□-□-□□□



SV
SYJ
SZ
VF
VP4
VQ 1/2
VQ 4/5
VQC 1/2
VQC 4/5
VQZ
SQ
VFS
VFR
VQ7

L Dimension

P, R1, R2 port	L^n	1	2	3	4	5	6	7	8	9	10	Formula
1/2	L1	120	176	232	288	344	400	456	512	568	624	n: Sten + 64
	L2	136	192	248	304	360	416	472	528	584	640	L2 = 56n + 80
3/4	L1	146	202	258	314	370	426	482	538	594	650	L1 = 56n + 90
	L2	162	218	274	330	386	442	498	554	610	666	L2 = 56n + 106

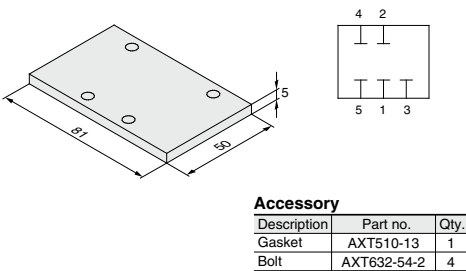
Note) L dimension of SB type with a port size of 1/2 is the same as of SB type with a port size of 3/4.

VQ7-8 Series

Manifold Option Parts

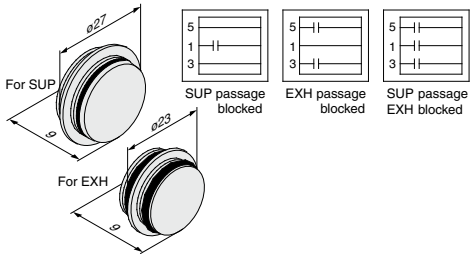
Blanking plate assembly AXT512-9A

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.



Block plate (For SUP/EXH passages) AXT512-14-1A (For SUP) AXT512-14-2A (For EXH)

When two or more different high pressures are supplied to one manifold, block plates are installed between stations having different pressures. Also, in cases such as when valve exhaust effects other stations in a circuit, block plates are used for exhaust at stations where the exhaust is to be separated.

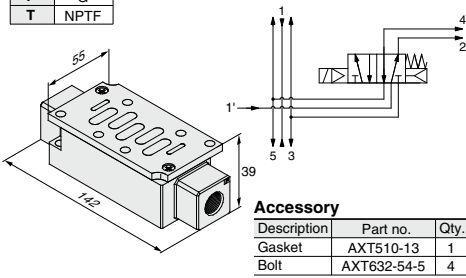


Individual SUP spacer VV72-P-03

Thread type

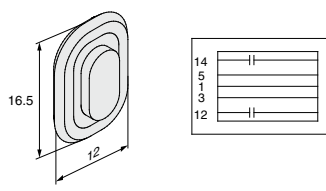
Nil	Rc
F	G
T	NPTF

By mounting individual SUP spacers on a manifold block, it is possible to provide individual supply ports for each valve.



Block plate (For pilot EXH passage) AZ512-49A

When a valve's pilot valve exhaust effects other valves in a circuit, block plates are used between stations where the pilot exhaust passages are to be separated.

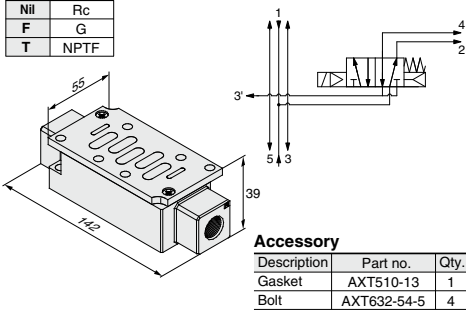


Individual EXH spacer VV72-R-03

Thread type

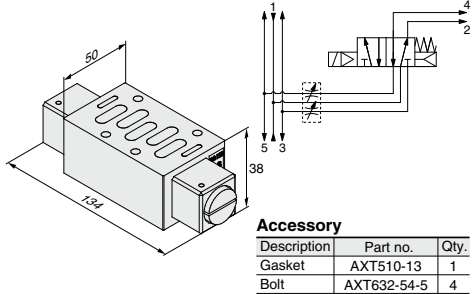
Nil	Rc
F	G
T	NPTF

By mounting individual EXH spacers on a manifold block, exhaust ports can be provided individually for each valve. (3, 5 common exhaust type)



Throttle valve spacer AXT510-32A

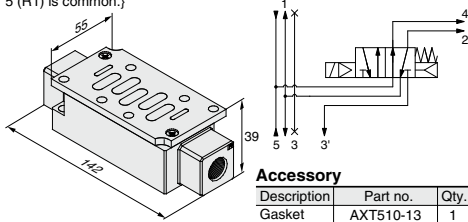
A throttle valve spacer is mounted on a manifold block to control cylinder speed by throttling exhaust air flow.



Reverse pressure spacer

AXT512-19A-1

With reverse pressure control manifold specifications, when pressure is changed individually on one side (ex. high speed cylinder return), pressure can be supplied individually to the R2 side by mounting a reverse pressure spacer. {Port 3 (R2) is individual and 5 (R1) is common.}



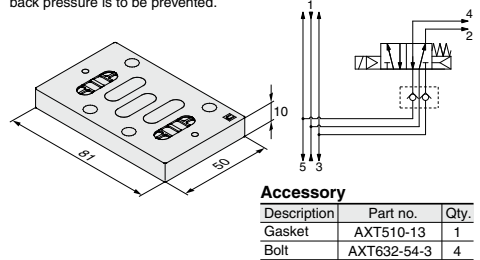
Accessory

Description	Part no.	Qty.
Gasket	AXT510-13	1
Bolt	AXT632-54-5	4

Main EXH back pressure check plate

AXT512-25A

In cases where back pressure effects actuator operation due to simultaneous operation of manifold valves, etc., this effect can be eliminated by installing a plate between the manifold block and the valve from which back pressure is to be prevented.



Accessory

Description	Part no.	Qty.
Gasket	AXT510-13	1
Bolt	AXT632-54-3	4

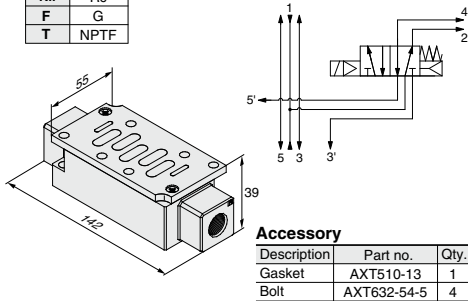
R1/R2 individual EXH spacer

VV72-R2-04

By mounting an individual EXH spacer on a manifold block, individual exhaust is possible from both R1 and R2. (3 (R2) and 5 (R1) are individual ports.)

Thread type

Nil	Rc
F	G
T	NPTF



Accessory

Description	Part no.	Qty.
Gasket	AXT510-13	1
Bolt	AXT632-54-5	4

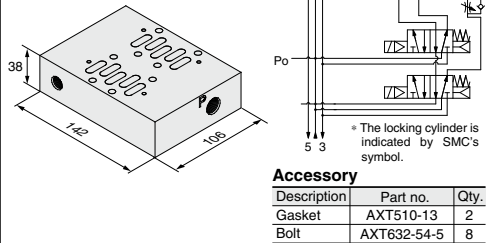
Adapter plate for locked-up cylinder

AXT602-6A

When using a locked-up cylinder with 2 valves for control, this spacer can be used by mounting on a manifold block. It consists of a circuit equipped with a function to prevent lurching during release.

Thread type

Nil	Rc 3/8
F	G 3/8
T	NPTF 3/8



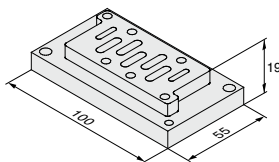
Accessory

Description	Part no.	Qty.
Gasket	AXT510-13	2
Bolt	AXT632-54-5	8

Conversion adapter plate

VV72-V-1

This conversion adapter plate allows a VQ7-6 (size 1) valve to be mounted on a VQ7-8 manifold base. (V type)



Accessory

Description	Part no.	Qty.
Gasket	AXT512-11	1
Bolt	M6 x 20 (With switch)	2
	M4 x 20 (With switch)	2

When a conversion adapter plate is mounted, remove the adapter plate on the manifold block and assemble in the order of gasket and conversion adapter plate.

VQ7-8 Series

Manifold Option Parts

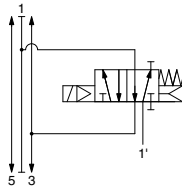
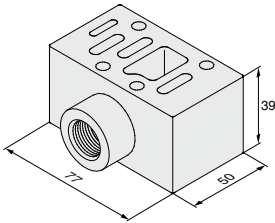
Release valve spacer

AXT512-17A

Combination of VQ7-8-FG-S (Single) and release valve spacer can be used as air release valve.
(Note) Mounting on 2 position double and 3 position valves is not possible.

Thread type

Nil	Rc(3/8)
F	G(3/8)
T	NPTF(3/8)



Accessory

Description	Part no.	Qty.
Gasket	AXT510-13	1
Bolt	AXT632-54-5	4

Residual pressure release valve spacer

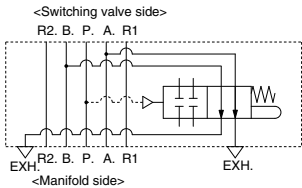
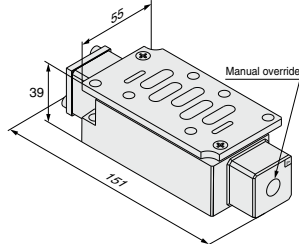
AZ512-59

At the same time as pilot pressure is released, residual pressure between the cylinder and valve is released.
There are two pilot types: internal pilot and external pilot.

Pilot type

A	Internal pilot
B	External pilot

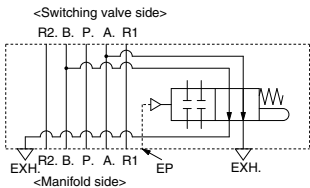
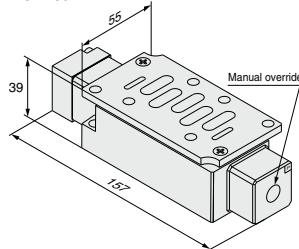
AZ512-59A



Accessory

Description	Part no.	Qty.
Gasket	AXT510-13	1
Bolt	AXT632-54-5	4

AZ512-59B

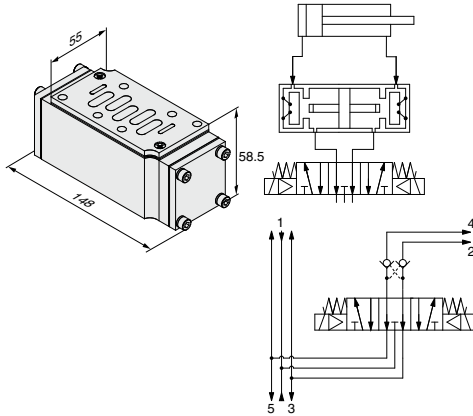


Specifications

Model	AZ512-59A	AZ512-59B
Switching signal type (Pilot type)	Internal pilot	External pilot
Applicable solenoid valve	VQ7-8	
Applicable sub-plate	ISO standard size 1	
Max. operating pressure	1.0 MPa	
Min. operating pressure	0.15 MPa (Pressure generated when the valve element is switched to the stopping side.)	
Ambient and fluid temperature	5 to 60°C	
Lubrication	Non-lube (Use turbine oil Class 1 (ISO VG32), if lubricated.)	

Double check spacer VV72-FPG

By combining a 3 position exhaust center valve with a double check spacer, an intermediate stopping position of a cylinder can be held for an extended period. It can also be used for drop prevention at the cylinder stroke end when releasing residual supply pressure, by combining it with a 2 position single or double valve.

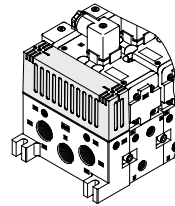


⚠ Caution

- Since extended cylinder stops are not possible if there are leaks from piping between the valve and cylinder or from fittings, etc., check for leakage using a neutral liquid detergent.
- Since One-touch fittings allow slight air leakage, screw piping is recommended when stopping the cylinder in the middle for a long time.
- Combination of 3 position, closed center and pressure center valves is not possible.
- Set the load weight so that the cylinder side pressure is less than two times the supply side pressure.
- When using the residual pressure release function, confirm the action of actuators, etc., and operate after providing for safety measures.
- Be aware that if the exhaust side of perfect spacer is restricted excessively, the intermediate stopping accuracy will decrease and will lead to improper intermediate stops.
- To combat the effects of back pressure, when required, we recommend installing an individual EXH spacer between the double check spacer and the manifold.

Silencer box VV72-□□□-□□-SB

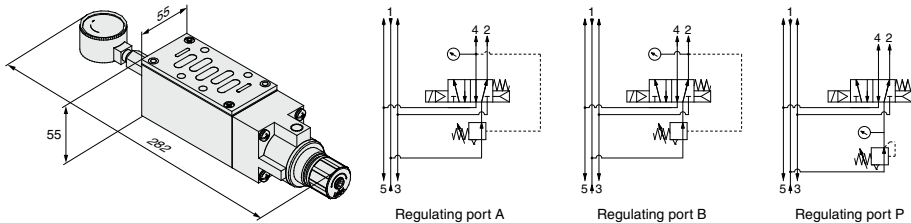
This can be provided as a unit on the end plate to reduce manifold exhaust noise and piping labor.



Interface regulator

ARB350-00-^A/_B

Spacer Interface regulators can be placed on top of the manifold block to reduce the pressure of each of the valves.



Accessory

Description	Part no.	Qty.
Gasket	AXT510-13	1
Bolt	AXT632-54-6	4

Part No.

P reduced pressure	ARB350-00-P
A reduced pressure	ARB350-00-A
B reduced pressure	ARB350-00-B

⚠ Caution

- When combining a pressure center valve and interface regulator with reduced pressure at ports A and B, use model ARB310-^A/_B.
- When combining a reverse pressure valve and interface regulator, use model ARB310-^A/_B. Further, it cannot be used with reduced pressure at port P.
- When combining a double check valve and an interface regulator, use a manifold or sub-plate as a basis, and stack them in the following order; the perfect spacer → the interface regulator → the valve.
- When a closed center valve is combined with the interface regulator's A, B port regulation, note that it cannot be used for intermediate stops of a cylinder because there is leakage from relief port on the regulator.

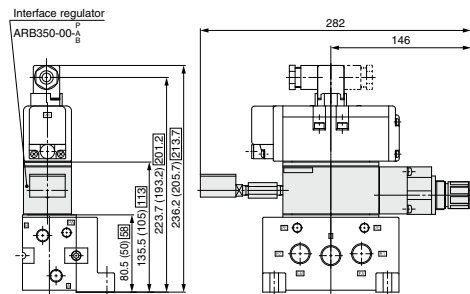
SV
SYJ
SZ
VF
VP4
VQ 1/2
VQ 4/5
VQC 1/2
VQC 4/5
VQZ
SQ
VFS
VFR
VQ7

VQ7-8 Series

Manifold Option Parts

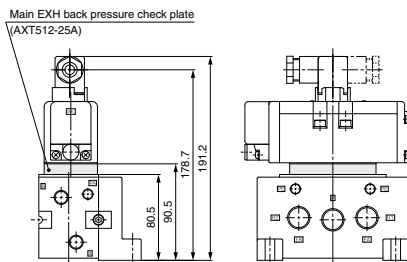
Interface regulator

ARB350-00-^P_A^B

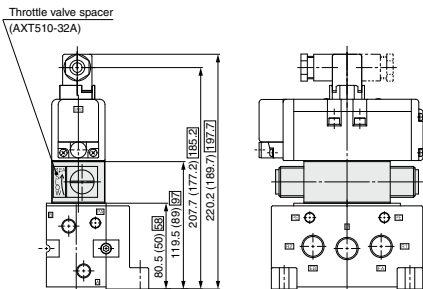


* Dimensions inside () are for sub-plate aperture 3/8 and 1/2.
Dimensions inside [] are for sub-plate aperture 3/4.

Main EXH back pressure check plate AXT512-25A

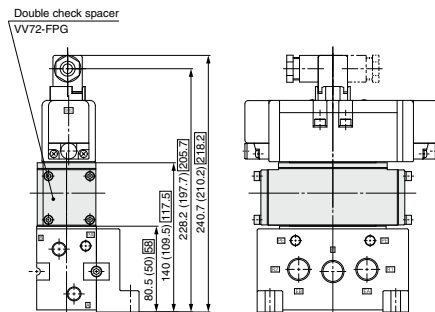


Throttle valve spacer AXT510-32A



* Dimensions inside () are for sub-plate aperture 3/8 and 1/2.
Dimensions inside [] are for sub-plate aperture 3/4.

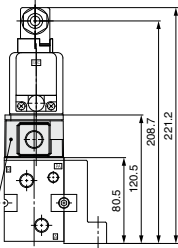
Double check spacer VV72-FPG



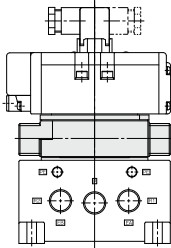
* Dimensions inside () are for sub-plate aperture 3/8 and 1/2.
Dimensions inside [] are for sub-plate aperture 3/4.

Individual EXH spacer
Individual SUP spacer
R1/R2 individual EXH spacer
Reverse pressure spacer

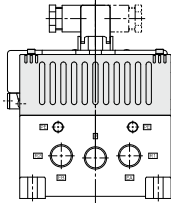
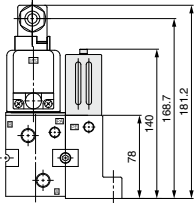
VV72-R-03, 04
VV72-P-03, 04
VV72-R2-04
AXT512-19A-₁



- Individual EXH spacer: VV72-R-
2 x 3/8, 1/2
- Individual SUP spacer: VV72-P-
2 x 3/8, 1/2
- R1, R2 individual EXH spacer: VV72-R2-04
2 x 1/2
- Reverse pressure spacer: AXT512-19A-
2 x 3/8, 1/2



Silencer box
AXT512-26A

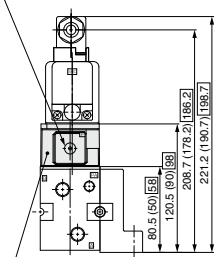


Spare parts

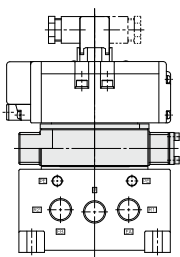
Description	Part no.
Element	AXT512-26-2

Residual pressure release valve spacer
AZ512-59^A_B

Manual override



Residual pressure release valve spacer
(AZ512-59^A_B)



* Dimensions inside () are for sub-plate aperture 3/8 and 1/2.
Dimensions inside [] are for sub-plate aperture 3/4.

SV
SYJ
SZ
VF
VP4
VQ 1/2
VQ 4/5
VQC 1/2
VQC 4/5
VQZ
SQ
VFS
VFR
VQ7

VQ7-6/VQ7-8 Series

Manifold Option Parts/Mounting Bolt Part No.

VQ7-6 Mounting Bolt Part No.

Number of options		0						Single stack				Double stack				
Mounting bolt	No.	AXT632-45-1	AXT632-45-2	AXT632-45-4	AXT632-45-5	AXT632-45-6	AXT632-45-7	AXT632-45-8	AXT632-45-9	AXT632-45-10	AXT632-45-11	AXT632-45-12	AXT632-45-13			
	Size	M5 x 35 with SW	M5 x 15 with SW	M5 x 45 with SW	M5 x 60 with SW	M5 x 65 with SW	M5 x 70 with SW	M5 x 75 with SW	M5 x 90 with SW	M5 x 95 with SW	M5 x 100 with SW	M5 x 105 with SW	M5 x 115 with SW			
Option mounting diagram																
		Valve	Blanking plate	Main exhaust back pressure check plate	Throttle valve spacer	Spacer (1)	Throttle valve spacer	Spacer (2)	Throttle valve spacer	Spacer (1)	Interface regulator	Throttle valve spacer	Spacer (2)	Spacer (2)		
												Note 2)	Note 3)			

Number of options		Triple stack				
Mounting bolt	No.	AXT632-45-14	AXT632-45-16	AXT632-45-17	AXT632-45-18	AXT632-45-19
	Size	M5 x 120 with SW	M5 x 130 with SW	M5 x 135 with SW	M5 x 140 with SW	M5 x 145 with SW
Option mounting diagram						
		Throttle valve spacer	Throttle valve spacer	Throttle valve spacer	Throttle valve spacer	Throttle valve spacer

The installation position of spacer (1) in the option mounting diagrams is limited only by the precautions given below.

Spacers

- Main EXH back pressure check plate
- Throttle valve spacer
- Release valve spacer
- Spacer (1)
 - Individual SUP spacer
 - Individual EXH spacer
 - R1, R2 individual EXH spacer
 - Reverse pressure spacer
 - Residual pressure release valve spacer
 - Individual SUP spacer with residual pressure release valve
- Spacer (2)
 - Interface regulator (P port regulation)
 - Interface regulator (A port regulation)
 - Interface regulator (B port regulation)
 - Double check spacer
 - Double check spacer with residual pressure release valve

- Note 1) A throttle valve spacer and double check spacer (including those with residual pressure release valve) cannot be combined.
- Note 2) When a double check spacer (Top) (including those with residual pressure release valve) and individual EXH spacer (Bottom) are combined with a R1, R2 individual EXH spacer (Bottom), be careful regarding the installation position.
- Note 3) When an interface regulator (Top) and double check spacer (Bottom) (including those with residual pressure release valve) (Bottom) are combined, be careful regarding the installation position.

VQ7-8 Mounting Bolt Part No.

Number of options		0		Single stack				Double stack			
Mounting bolt	No.	AXT632-54-1	AXT632-54-2	AXT632-54-3	AXT632-54-5	AXT632-54-6	AXT632-54-7	AXT632-54-8	AXT632-54-9	AXT632-54-10	AXT632-54-11
	Size	M6 x 45 with SW	M6 x 18 with SW	M6 x 55 with SW	M6 x 85 with SW	M6 x 100 with SW	M6 x 105 with SW	M6 x 125 with SW	M6 x 140 with SW	M6 x 145 with SW	M6 x 160 with SW
Option mounting diagram											
		Valve	Blanking plate	Main exhaust back pressure check plate	Spacer (1)	Interface regulator	Double check spacer	Spacer (1)	Interface regulator	Double check spacer	Interface regulator

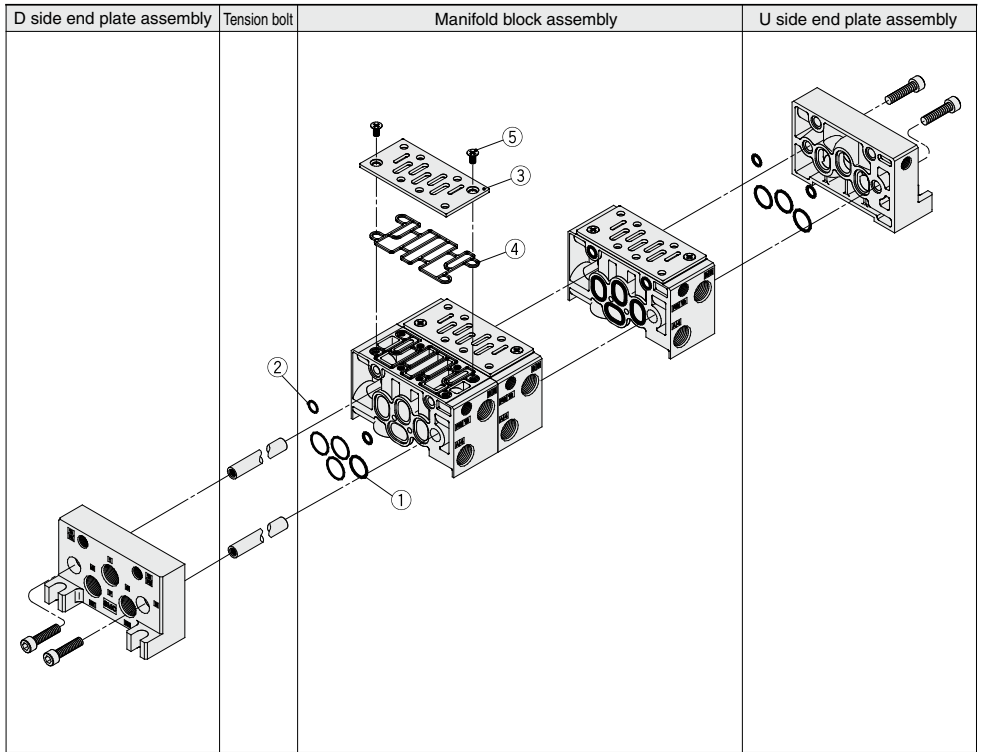
Number of options		Triple stack			
Mounting bolt	No.	AXT632-54-12	AXT632-54-13	AXT632-54-14	AXT632-54-15
	Size	M6 x 165 with SW	M6 x 180 with SW	M6 x 185 with SW	M6 x 200 with SW
Option mounting diagram					
		Throttle valve spacer	Interface regulator	Double check spacer	Interface regulator

Spacers

- Main EXH back pressure check plate
- Interface regulator (P port regulation)
- Interface regulator (A port regulation)
- Interface regulator (B port regulation)
- Double check spacer
- Spacer (1)
 - Individual SUP spacer
 - Individual EXH spacer
 - R1, R2 individual EXH spacer
 - Reverse pressure spacer
 - Residual pressure release valve spacer
- Throttle valve spacer
- Release valve spacer

- Note 1) A throttle valve spacer and double check spacer cannot be combined.
- Note 2) There is no limitation on the mounting position for spacer (1).
- Note 3) When a double check spacer (Top) (including those with residual pressure release valve) and individual EXH spacer (Bottom) are combined with a R1, R2 individual EXH spacer (Bottom), be careful regarding the installation position.
- Note 4) When an interface regulator (Top) and double check spacer (Bottom) (including those with residual pressure release valve) (Bottom) are combined, be careful regarding the installation position.

Exploded View of Manifold/VQ7-6



SV
SYJ
SZ
VF
VP4
VQ
1/2
VQ
4/5
VQC
1/2
VQC
4/5
VQZ
SQ
VFS
VFR
VQ7

<End Plate Assembly>

AXT502 - ☐ **A** - ☐ ☐

End plate position

L	U side
R	D side

P, R port size

02	1/4
03	3/8
C12	One-touch fitting for ø12

Thread type

Nil	Rc
F	G
T	NPTF

Note) It is not applicable to One-touch fittings.

<Tension Bolt Part No.>

AXT502 - 34 - ☐

Stations

2	For 2 stations
3	For 3 stations
:	:
10	For 10 stations

Note) These tie-rods are solid pieces for each number of stations.

<Manifold Block Assembly>

AXT502 - 1A - ☐ ☐ ☐ - ☐

Porting specifications

A	Side
B	Bottom

Cylinder port location

L	L side
R	R side

Cylinder port size

02	1/4
03	3/8
C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
C10	One-touch fitting for ø10

Thread type

Nil	Rc
F	G
T	NPTF

Note) It is not applicable to One-touch fittings.

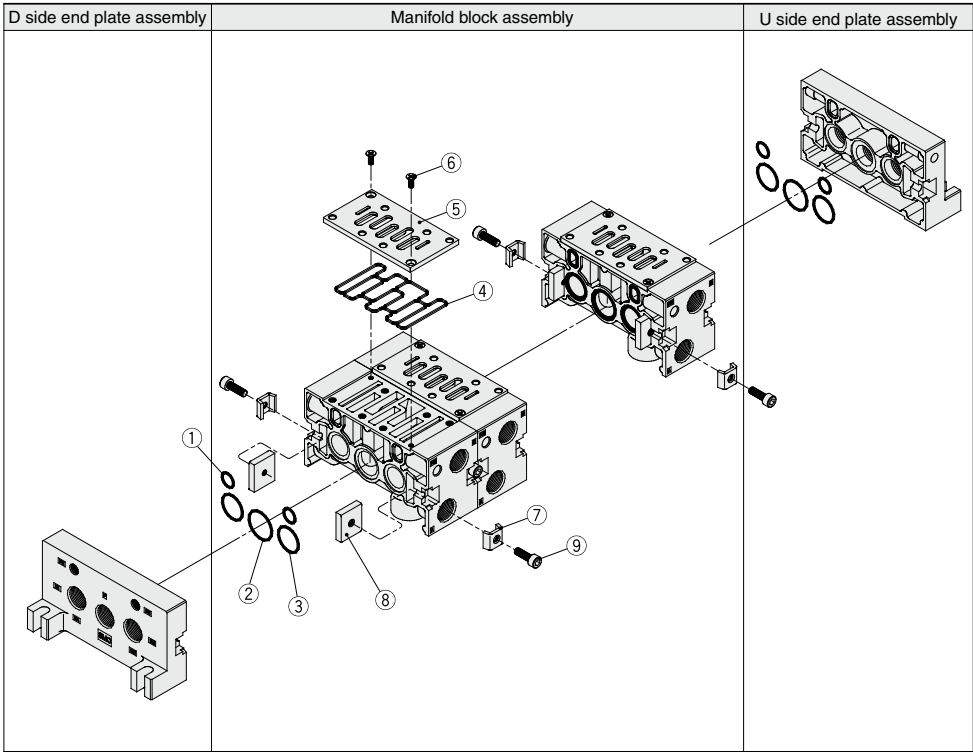
Note 1) Side piping only
Note 2) In this manifold block assembly, the tension bolt for increasing station (1 station) is included.

Replacement Parts (For manifold block)

	Part no.	Description	Qty.	Material
1	AXT502-19	O-ring	4	NBR
2	AXT502-20	O-ring	2	NBR
3	AXT502-22-2	Plate	1	SPCC
4	AXT502-31	Gasket	1	NBR
5	M4 x 8	Oval countersunk head screw	2	SWRH

VQ7-6/VQ7-8 Series

Exploded View of Manifold/VQ7-8



<End Plate Assembly>

AXT512-A-

End plate position

L	U side
R	D side

P, R port size

04	1/2
06	3/4
C12	One-touch fitting for ø12

Thread type

Nil	Rc
F	G
T	NPTF

Note) It is not applicable to One-touch fittings.

Replacement Parts (For manifold block)

Part no.	Description	Qty.	Material
1	AXT512-13	O-ring	2 NBR
2	AS568-022	O-ring	1 NBR
3	AS568-020	O-ring	2 NBR
4	AXT512-5	Gasket	1 NBR
5	AXT512-4	Plate	1 SPCC
6	M4 x 10	Oval countersunk head screw	2 SWRH
7	AXT512-6-1	Connection fitting A	2 SPCC
8	AXT512-6-4	Connection fitting B	2 SS
9	AXT512-6-3	Hexagon socket head screw	2 SCM

<Manifold Block Assembly>

AXT512-1A--

Porting specifications

A	Side
B	Bottom

Cylinder port size

03	3/8
04	1/2

Cylinder port location

L	L side
R	R side

Thread type

Nil	Rc
F	G
T	NPTF