

# 3 Port Solenoid Valve

## Rubber Seal, Body Ported/Base Mounted

# Series VZ500

### How to Order

**Body ported** VZ5 **1** 2 **5** L **01**

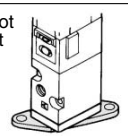
**Base mounted** VZ5 **1** 4 **5** L

**Thread type**

Nil	Rc
F	G
N	NPT
T	NPTF

**Option**

F: With foot bracket



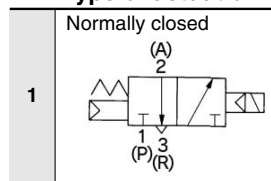
Note) • Bracket is not mounted.  
• Except external pilot.

**Port size**

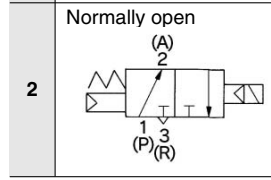
01 1/8

**Type of actuation**

1 Normally closed



2 Normally open

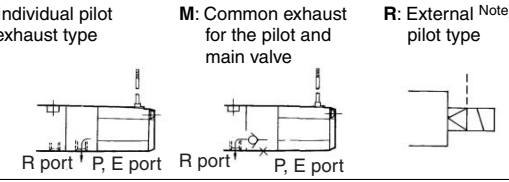


**Body option**

Nil: Individual pilot exhaust type

M: Common exhaust for the pilot and main valve

R: External pilot type



Note) VZ5□2R is for manifold only.

**Rated voltage**

1	100 VAC, 50/60 Hz
2	200 VAC, 50/60 Hz
3*	110 VAC, 50/60 Hz
4*	220 VAC, 50/60 Hz
5	24 VDC
6*	12 VDC
9*	Other

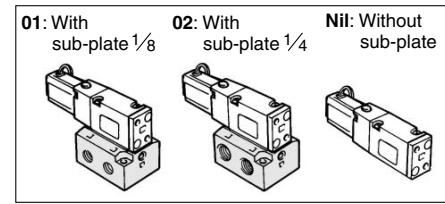
\* Option

**Port size**

01: With sub-plate 1/8

02: With sub-plate 1/4

Nil: Without sub-plate

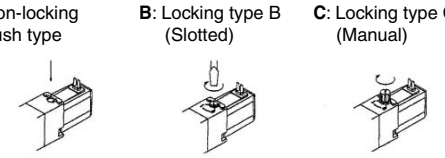


**Manual override**

Nil: Non-locking push type

B: Locking type B (Slotted)

C: Locking type C (Manual)




**Light/Surge voltage suppressor**

Nil	None
Z*	With light/surge voltage suppressor
S	With surge voltage suppressor

\* Not available for "GZ", "HZ" and "DOZ"

**Electrical entry**

Grommet	L plug connector	M plug connector		DIN terminal
G: Lead wire length 300 mm	L: With lead wire (Length 300 mm)	M: With lead wire (Length 300 mm)	MN: Without lead wire	D: With connector
H: Lead wire length 600 mm	LN: Without lead wire	LO: Without connector	MO: Without connector	DO: Without connector



\* "LN", "MN" type: With 2 sockets.

- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

# Series VZ500

**Low power consumption:  
1.8 W DC**

**Applicable for vacuum use  
-100 kPa**

500R: External pilot type

**Exhausting equipment for  
pilot valve not required.**

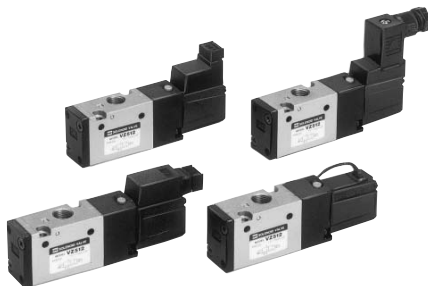
500M: Central exhaust type

It is not necessary to take exhaust  
measures for the pilot valve for  
environmental protection.

**Possible to use as either a  
selector or divider valve**

500R: External pilot type

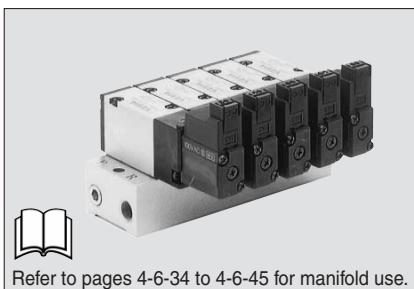
Can be used for universal porting.



Body ported



Base mounted



Refer to pages 4-6-34 to 4-6-45 for manifold use.

## Specifications

Fluid	Air	
Operating pressure range (MPa)	Internal pilot	0.15 to 0.7
Ambient and fluid temperature (°C)	-10 to 50 (No freezing. Refer to page 4-18-4.)	
Response time (ms) (at the pressure of 0.5 MPa) <sup>(1)</sup>	20 or less	
Max. operating frequency (Hz)	10	
Flow characteristics	Refer to the table below.	
Manual override <sup>(2)</sup>	Non-locking push type Locking slotted type, Locking lever type	
Pilot exhaust method	Individual pilot exhaust type, Common exhaust (pilot and main valve) type	
Lubrication	Not required	
Mounting orientation	Unrestricted	
Shock/Vibration resistance (m/s <sup>2</sup> ) <sup>(3)</sup>	300/50	
Enclosure	Dustproof	



Note 1) Based on dynamic performance test, JIS B 8374-1981. (Coil temperature: 20°C, at rated voltage, without surge suppressor)

Note 2) When operating the locking type manually, apply torque of 0.2 N·m or less.

Note 3) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)

Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)

## Solenoid Specifications

\* Option

Electrical entry	Grommet (G)/(H), L plug connector (L), M plug connector (M), DIN terminal (D)		
Coil rated voltage (V)	AC50/60 Hz	100, 200, 24*, 48*, 110*, 220*	
	DC	24, 6*, 12*, 48*	
Allowable voltage fluctuation (%)	-15 to +10% of rated voltage		
Power consumption (W) [Current mA] Note	DC	1.8 (With indicator light 2.1) [24 VDC: 75 (With indicator light 87.5)]	
Apparent power (VA) <sup>Note)</sup> [Current mA]	AC	Inrush	4.5/50 Hz, 4.2/60 Hz [100 VAC: 45/50 Hz, 42/60 Hz 200 VAC: 22.5/50 Hz, 21/60 Hz]
		Holding	3.5/50 Hz, 3/60 Hz [100 VAC: 35/50 Hz, 30/60 Hz 200 VAC: 17.5/50 Hz, 15/60 Hz]
Surge voltage suppressor	DC: Diode, AC: ZNR		
Indicator light	DC: LED (Red), AC: Neon bulb		



Note) At rated voltage

## Flow Characteristics/Weight

Model	Type of actuation	Port size	Flow characteristics						Weight <sup>Note)</sup> (g)	
			1 → 2 (P → A)			2 → 3 (A → R)				
			C [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(s·bar)]	b	Cv		
Body ported	VZ512	N.C.	1/8	2.8	0.43	0.77	2.5	0.51	0.76	110
	VZ522	N.O.		2.7	0.38	0.72	2.4	0.42	0.69	
Base mounted (With sub-plate)	VZ514	N.C.	1/8	2.9	0.32	0.71	2.7	0.34	0.69	160 (Without sub-plate: 110)
	VZ524	N.O.		2.8	0.21	0.71	2.3	0.45	0.63	
	VZ514	N.C.	1/4	3.0	0.31	0.74	2.6	0.33	0.66	
	VZ524	N.O.		2.7	0.31	0.68	2.3	0.48	0.64	



Note) Weight stands for grommet type.

## Option

Description	Part no.	Note
Foot bracket	DXT201-19-1A	With screw (For VZ5□2)

**Made to Order** Made to Order Specifications  
(For details, refer to page 4-6-46.)

# 3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted Series VZ500

## External Pilot

### VZ500R

Pilot valve pressure is supplied separately from the main valve pressure through the use of a separate supply port. It can be used in the vacuum (up to -100 kPa) or low pressure line with 0.15 MPa or less.

### Specifications

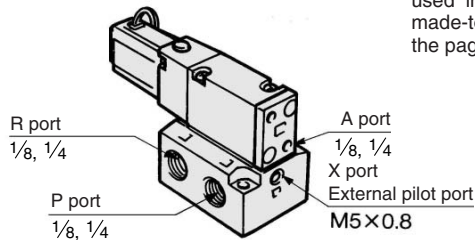
Applicable model	Base mounted (VZ314R, VZ324R)	
Operating pressure range (MPa)	Main pressure	-100 kPa to 0.7
	External pilot pressure	0.15 to 0.7



Note 1) For manifold base, refer to page 4-6-34.

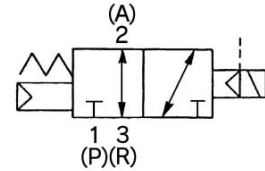
Note 2) In the case of the body ported type, the pilot type (VZ5□2R) is used exclusively on a manifold.

An external pilot style that can be used individually is available as a made-to-order. For details, refer to the page 4-6-46.

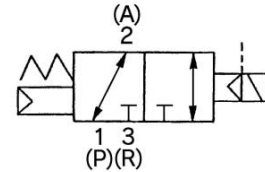


### JIS Symbol

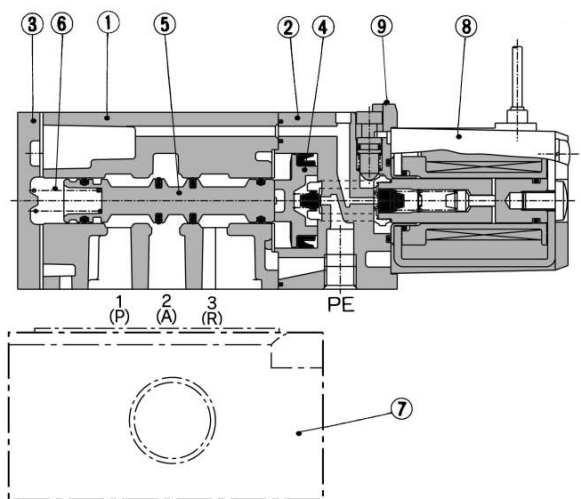
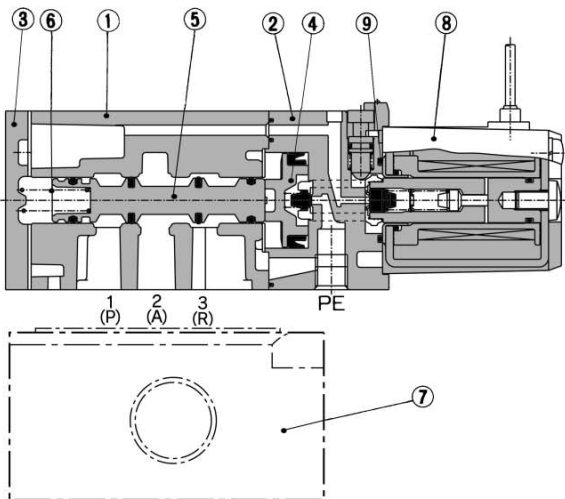
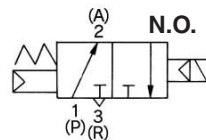
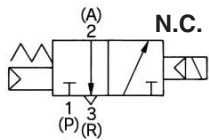
VZ51□R



VZ52□R



## Construction



### Component Parts

No.	Description	Material	Note
①	Body	Aluminum die-casted	Platinum silver
②	Piston plate	Resin	Black
③	End cover	Aluminum die-casted	Black
④	Piston	Resin	—
⑤	Spool valve assembly	—	—
⑥	Spool spring	Stainless steel	—

### Replacement Parts

No.	Description	Material	Part no.	Note
⑦	Sub-plate	Aluminum die-casted	DXT201-2-1□P DXT201-2-2□P	1/8 1/4
⑧	Solenoid assembly	Epoxy/Stainless steel		
⑨	O-ring	NBR	13 x 11 x 1	Common with VZ100

Sub-plate part no.: DXT201-2- $\frac{1}{2}$ □P

Thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

V100

SY

SYJ

VK

**VZ**

VT

VP

VG

VP

S070

VQ

VKF

VQZ

VZ

VS

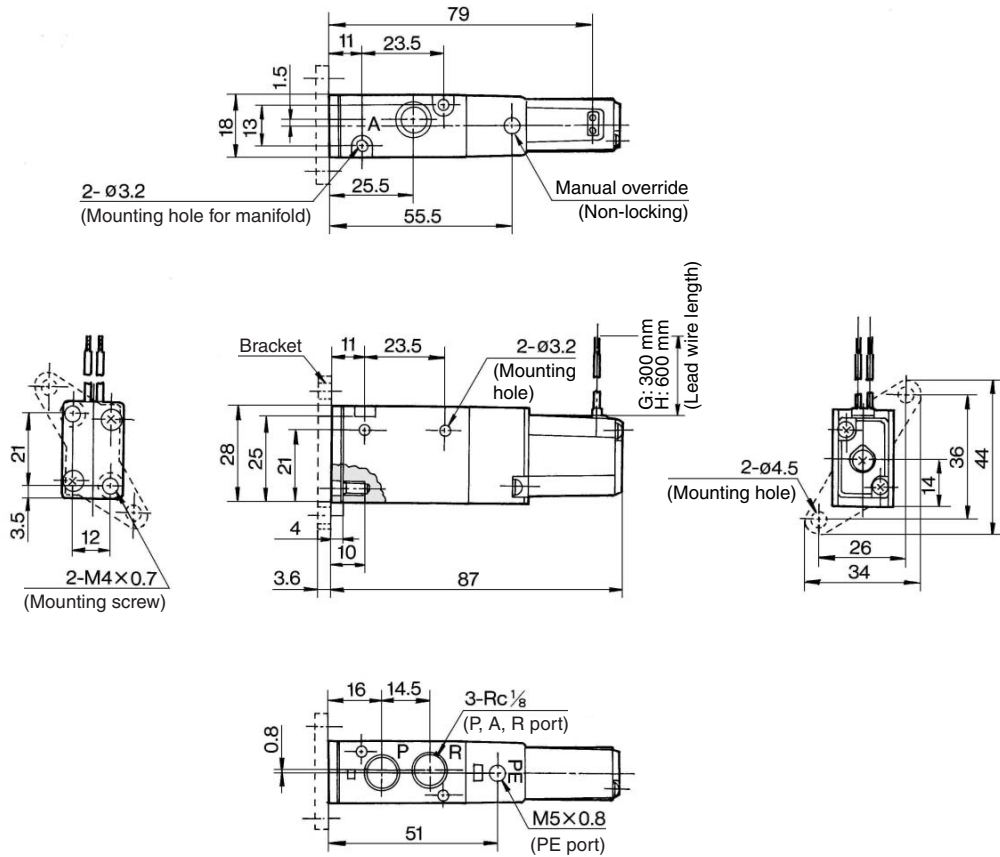
VFN

# Series VZ500



## Body Ported

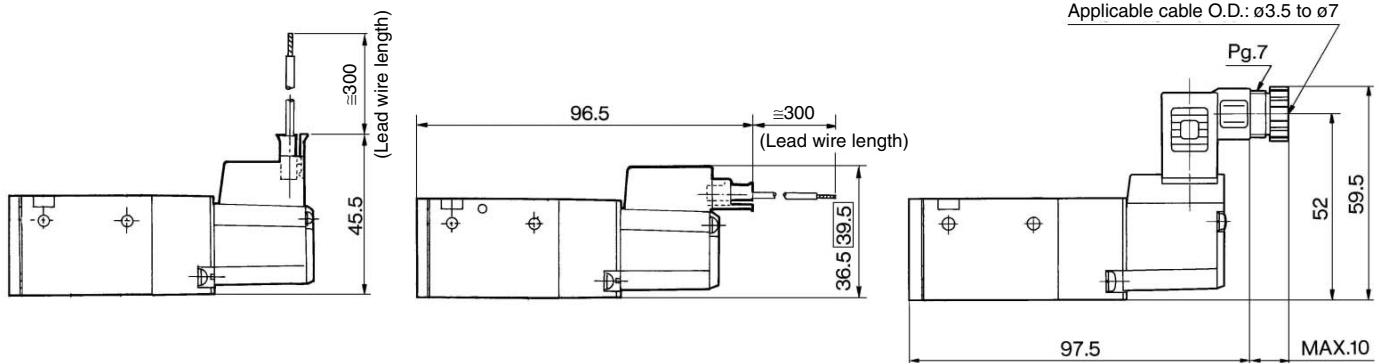
### Grommet (G), (H) VZ5□2-□<sup>G</sup>□□-01(-F)



### L plug connector (L) VZ5□2-□L□□-01

### M plug connector (M) VZ5□2-□M□□-01

### DIN terminal (D) VZ5□2-□D□□-01



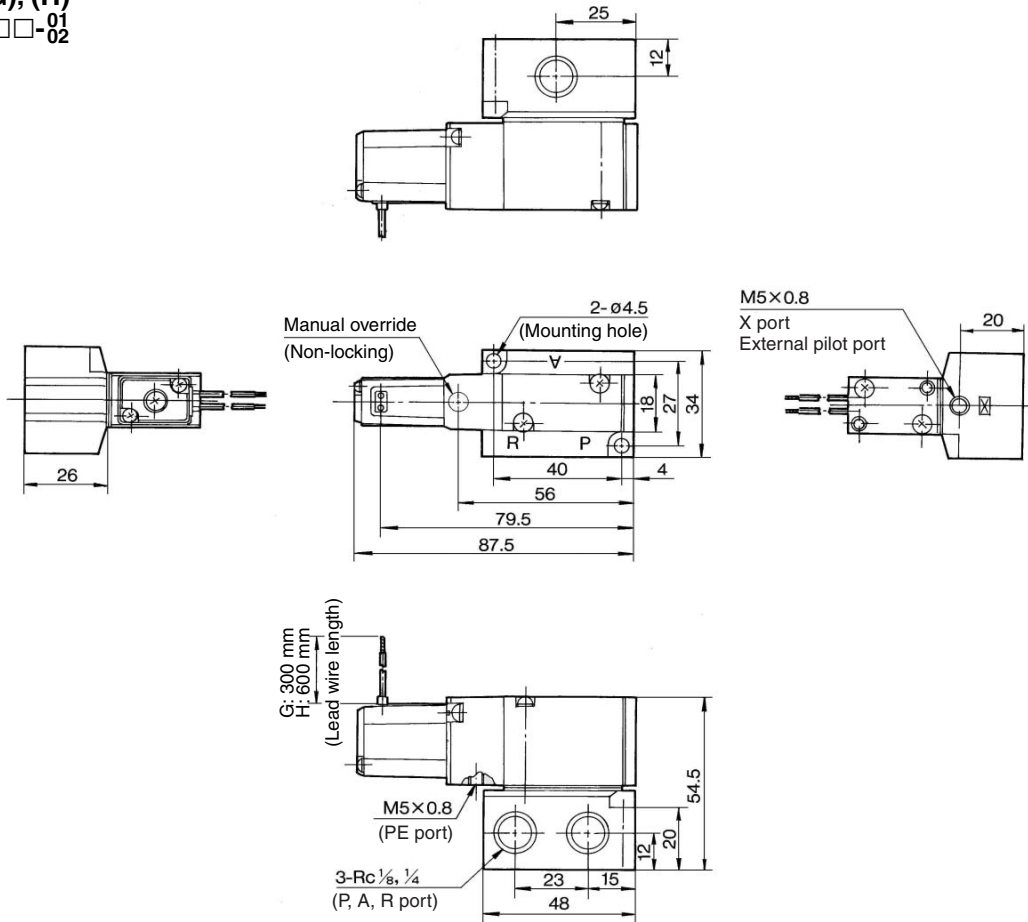
□: With light/surge voltage suppressor

# 3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ500**

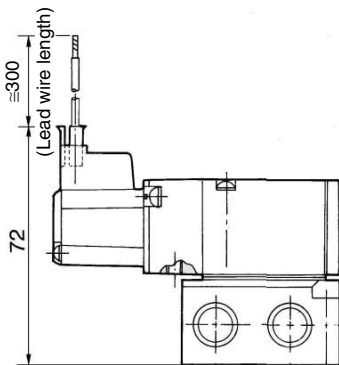


## Base Mounted (With sub-plate)

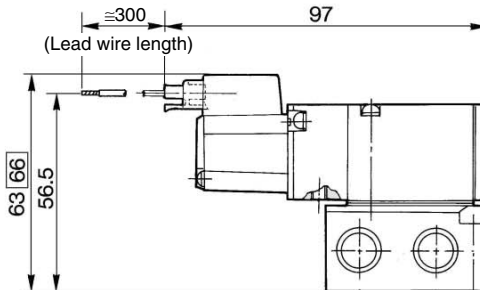
**Grommet (G), (H)**  
**VZ5□4-□<sup>G</sup>□□-<sup>01</sup>/<sub>02</sub>**



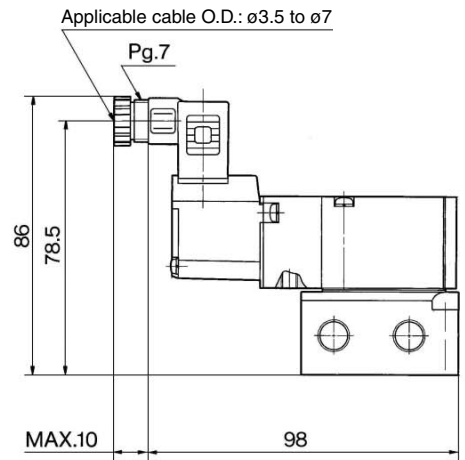
**L plug connector (L)**  
**VZ5□4-□□L□□-<sup>01</sup>/<sub>02</sub>**



**M plug connector (M)**  
**VZ5□4-□□M□□-<sup>01</sup>/<sub>02</sub>**



**DIN terminal (D)**  
**VZ5□4-□□D□□-<sup>01</sup>/<sub>02</sub>**

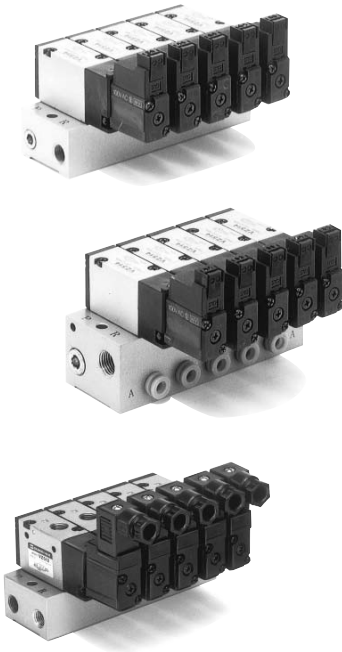


□: With light/surge voltage suppressor

V100
SY
SYJ
VK
<b>VZ</b>
VT
VP
VG
VP
S070
VQ
VKF
VQZ
VZ
VS
VFN

# Series VZ500

# Manifold Specifications



## Flow Characteristics

Manifold			Port size		Flow characteristics					
					1 → 2 (P → A)			2 → 3 (A → R)		
			1(P), 3(R) port	2(A) port	C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
Body ported For internal pilot	VV3Z5-20-□1	VZ5□2	1/8	1/8	2.2	0.34	0.55	2.3	0.27	0.59
	VV3Z5-21-□1		1/4	1/8	2.2	.39	0.59	2.4	0.32	0.62
Base mounted For internal pilot	VV3Z5-40-□2	VZ5□4	1/8	1/8	2.1	0.35	0.59	2.3	0.27	0.54
	VV3Z5-41-□2		1/4	1/8	2.2	0.35	0.59	2.4	0.36	0.66
	VV3Z5-41-□1		1/4	1/8	2.0	0.27	0.47	2.2	0.32	0.56
			1/4	C6	1.6	0.32	0.39	2.2	0.27	0.54
Body ported For external pilot	VV3Z5-21R-□1	VZ5□2R	1/4	1/8	2.2	0.34	0.55	2.4	0.32	0.62
	VV3Z5-41R-□2		1/4	1/8	2.2	0.35	0.59	2.4	0.36	0.66
Base mounted For external pilot	VV3Z5-41R-□2	VZ5□4R	1/4	1/8	2.0	0.27	0.47	2.2	0.32	0.56
			1/4	C6	1.6	0.32	0.39	2.2	0.27	0.54
	VV3Z5-41R-□1		1/4	C8	2.1	0.24	0.51	2.3	0.31	0.59
			1/4	C8	2.1	0.24	0.51	2.3	0.31	0.59

Note) Value at manifold base mounted

## How to Order Manifold

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.

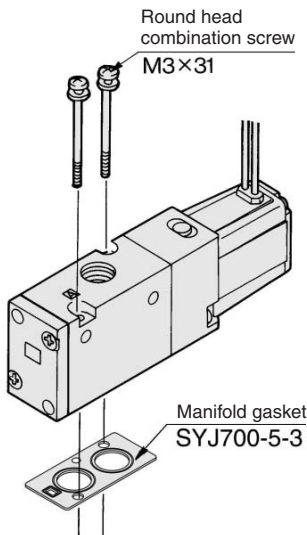
(Example)  
 VV3Z5-20-031.....1 pc. (Manifold base)      VV3Z8-41R-031-01.....1 pc. (Manifold base)  
 \*VZ512-5LZ-01.....2 pcs. (Valve)              \*VZ514R-5G.....2 pcs. (Valve)  
 \*DXT201-15-6A.....1 pc. (Blanking plate assembly) \*DXT201-15-4A.....1 pc. (Blanking plate assembly)

↳The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

## Option

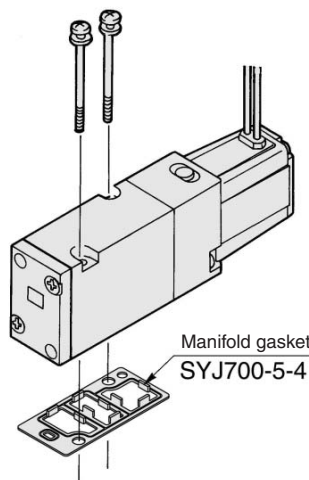
### Combinations of Solenoid Valve, Manifold Gasket and Manifold Base

#### Body ported (VZ5□2)



Applicable base  
 VV3Z5-20-□1 } Manifold base  
 VV3Z5-21-□1 }  
 VV3Z5-21R-□1 }

#### Base mounted (VZ5□4)

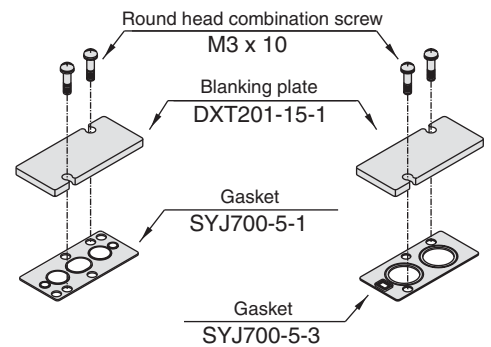


Applicable base  
 Sub-plate  
 VV3Z5-40-□2 } Manifold base  
 VV3Z5-41-□2 }  
 VV3Z5-41-□1 }  
 VV3Z5-41R-□2 }  
 VV3Z5-41R-□1 }

### Blanking Plate Assembly

Part no.:  
**DXT201-15-4A**  
 (In common for body ported type and base mounted type)

Part no.:  
**DXT201-15-6A**  
 (For shipping assembled manifold base for body ported type)



#### Applicable Blanking Plate Assembly

Manifold base	Blanking plate assembly part no.
VV3Z5-20	DXT201-15-6A
VV3Z5-21(R)	
VV3Z5-40	DXT201-15-4A
VV3Z5-41(R)	

Note) Only in the case of assembled with manifold base at the time of shipment.

\* For shipping blanking plate assembly alone, DXT201-15-4A (In common use for body ported type, base mounted type)

## ⚠ Caution

**Mounting Screw Tightening Torques**

M3: 0.8 N·m  
 4-6-34

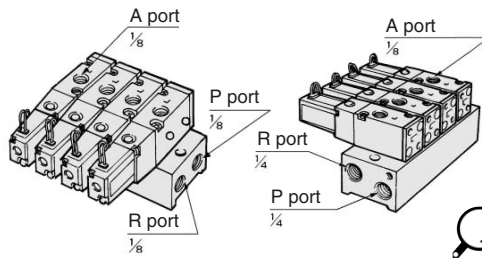
## ⚠ Warning

When mounting a solenoid valve on the manifold base or sub-plate, etc., the mounting direction is determined. If mounted in the wrong direction, the equipment to be wired might result in malfunction. Refer to dimensions of this catalog and use caution to the mounting direction.

# 3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ500**

## Manifold for Internal Pilot

### Type 20/21



#### How to Order

**VV3Z5-20-05 1-**   

Manifold	
20	Type 20
21	Type 21

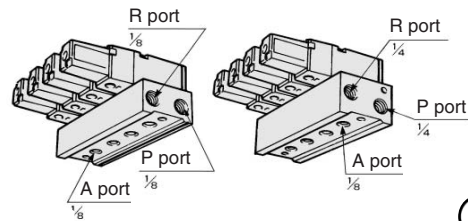
Stations	
02	2 stations
⋮	⋮
20	20 stations

P/R port thread type	
Nil	Rc
00F	G
00N	NPT
00T	NPTF

**Applicable solenoid valve**  
 VZ512-□□□□-01□  
 VZ512M-□□□□-01□  
 VZ522-□□□□-01□  
 VZ522M-□□□□-01□  
**Applicable blanking plate assembly**  
 DXT201-15-4A

Note) If there are more than 6 stations for type 20, or more than 9 stations for 21 type, supply air to both sides of P port and exhaust air from both sides of R port.

### Type 40/41 (Bottom ported)



#### How to Order

**VV3Z5-40-05 2-01**   

Manifold	
40	Type 40
41	Type 41

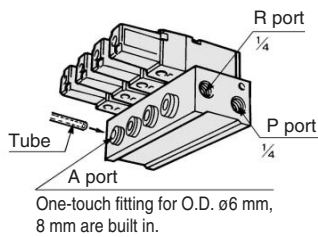
Stations	
02	2 stations
⋮	⋮
20	20 stations

P/R port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTF

**Applicable solenoid valve**  
 VZ514-□□□□  
 VZ514M-□□□□  
 VZ524-□□□□  
 VZ524M-□□□□  
**Applicable blanking plate assembly**  
 DXT201-15-4A

Note) If there are more than 6 stations for type 40, or more than 9 stations for 41 type, supply air to both sides of P port and exhaust air from both sides of R port.

### Type 41 (Side ported)



#### How to Order

**VV3Z5-41-05 1-C6**   

Stations	
02	2 stations
⋮	⋮
20	20 stations

A port side	
01	1/8
C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
B7	One-touch fitting for ø1/4
B9	One-touch fitting for ø5/16

P/R port thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

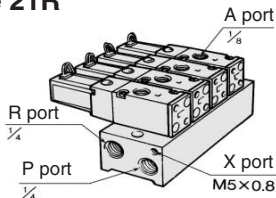
**Applicable solenoid valve**  
 VZ514-□□□□  
 VZ514M-□□□□  
 VZ524-□□□□  
 VZ524M-□□□□  
**Applicable blanking plate assembly**  
 DXT201-15-4A

Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

## Manifold for External Pilot

Pilot valve pressure is supplied separately from the main valve pressure through the use of a separate supply port. It can be used in the vacuum (up to -100 kPa) or low pressure line with 0.15 MPa or less.

### Type 21R



#### How to Order

**VV3Z5-21R-05 1-**   

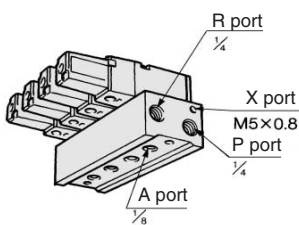
Stations	
02	2 stations
⋮	⋮
20	20 stations

P/R port thread type	
Nil	Rc
00F	G
00N	NPT
00T	NPTF

**Applicable solenoid valve**  
 VZ512R-□□□□-M5  
 VZ522R-□□□□-M5  
**Applicable blanking plate assembly**  
 DXT201-15-4A

Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

### Type 41R (Bottom ported)



#### How to Order

**VV3Z5-41R-05 2-01**   

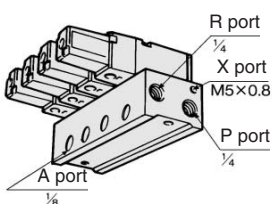
Stations	
02	2 stations
⋮	⋮
20	20 stations

P/R port thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

**Applicable solenoid valve**  
 VZ514R-□□□□  
 VZ524R-□□□□  
**Applicable blanking plate assembly**  
 DXT201-15-4A

Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

### Type 41R (Side ported)



#### How to Order

**VV3Z5-41R-05 1-01**   

Stations	
02	2 stations
⋮	⋮
20	20 stations

P/R port thread type	
Nil	Rc
F	G
N	NPT
T	NPTF

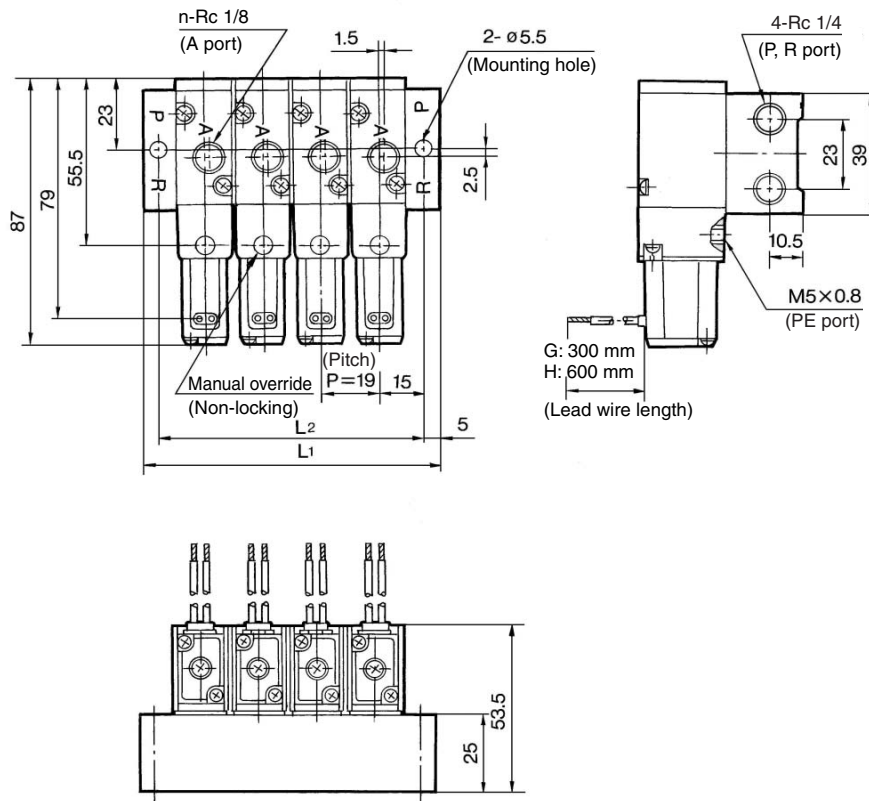
**Applicable solenoid valve**  
 VZ514R-□□□□  
 VZ524R-□□□□  
**Applicable blanking plate assembly**  
 DXT201-15-4A

Note) For more than 9 stations, supply air to both sides of P port and exhaust air from both sides of R port.

# Series VZ500

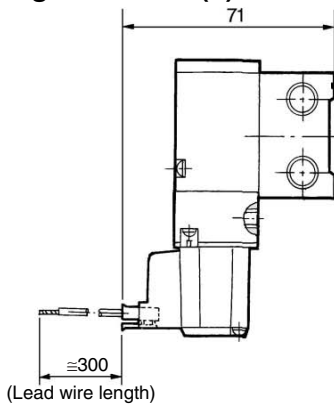
For Internal Pilot  
Type 20 Manifold: Top Ported

VV3Z5-20- Stations 1  
Grommet (G), (H)

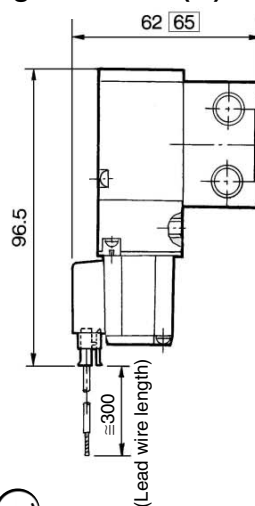


Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$L_1$	59	78	97	116	135	154	173	192	211	230	249	268	287	306	325	344	363	382	401
$L_2$	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

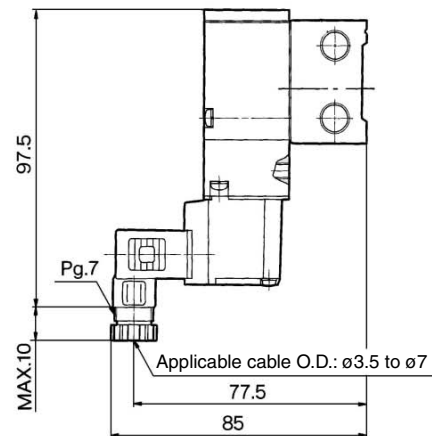
L plug connector (L)



M plug connector (M)



DIN terminal (D)



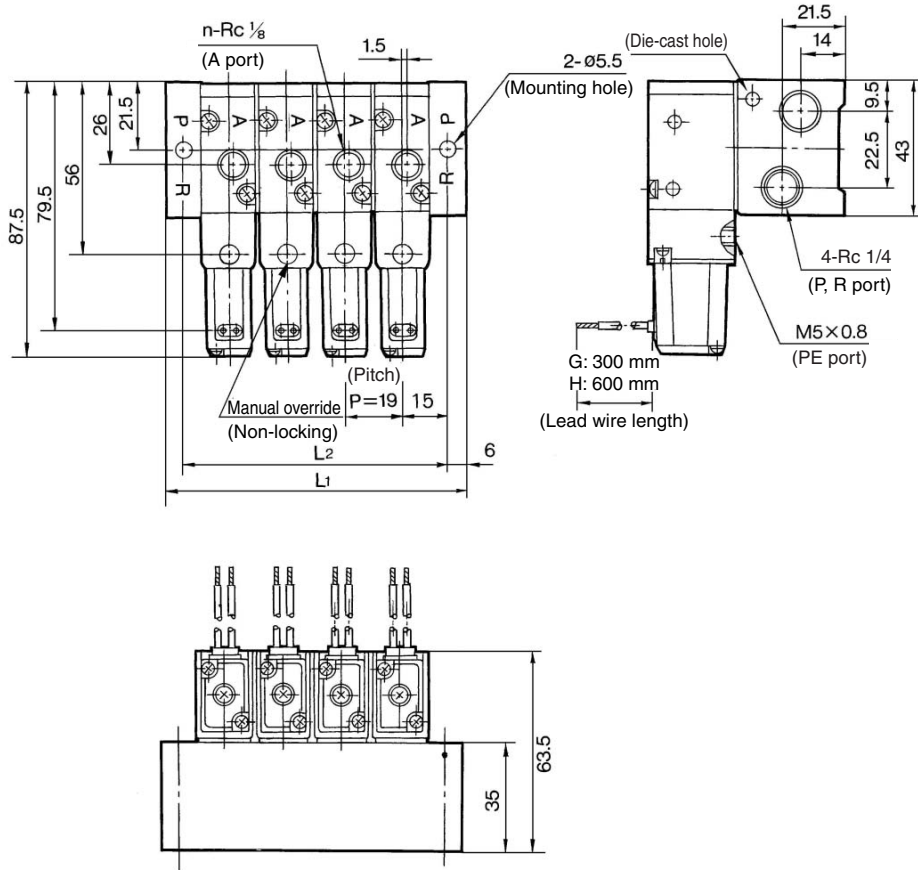
□: With light/surge voltage suppressor



# 3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ500**

**For Internal Pilot  
Type 21 Manifold: Top Ported**

**VV3Z5-21- Stations 1  
Grommet (G), (H)**



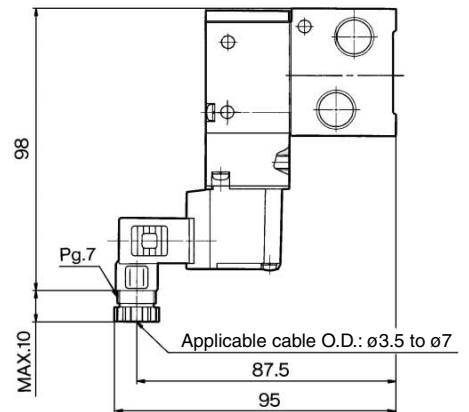
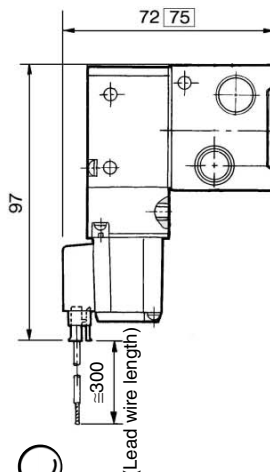
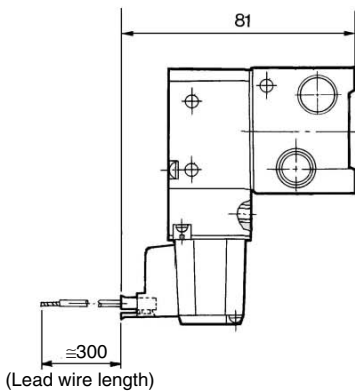
- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$L_1$	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
$L_2$	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

**L plug connector (L)**

**M plug connector (M)**

**DIN terminal (D)**

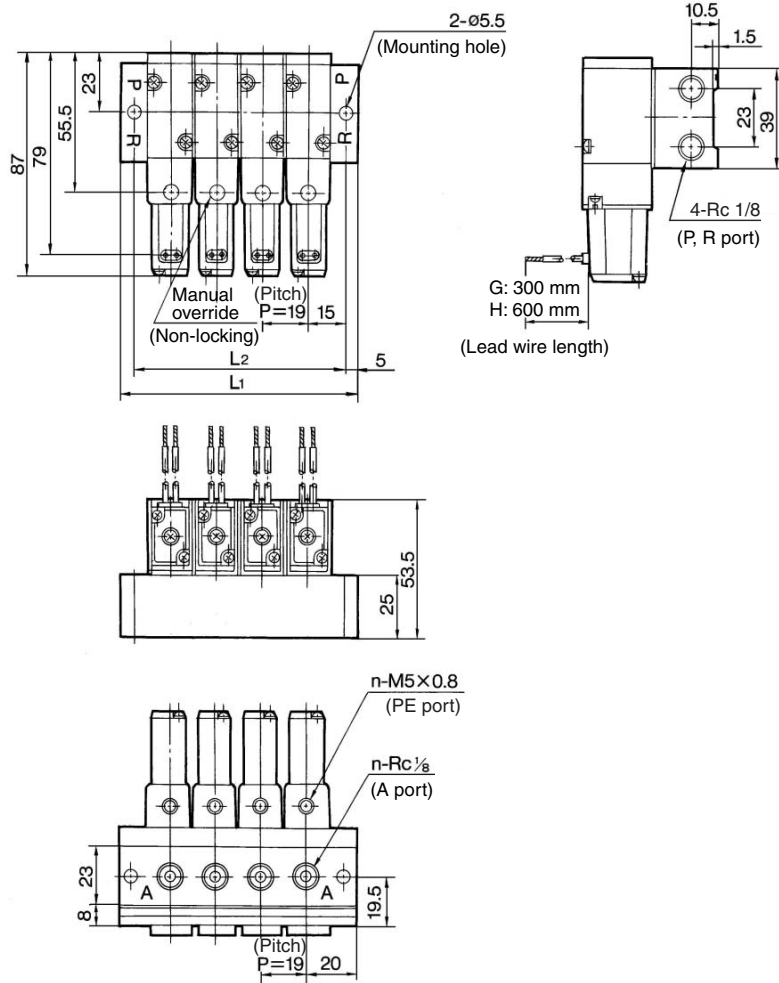


□: With light/surge voltage suppressor

# Series VZ500

For Internal Pilot  
Type 40 Manifold: Bottom Ported

VV3Z5-40- Stations 2-01  
Grommet (G), (H)

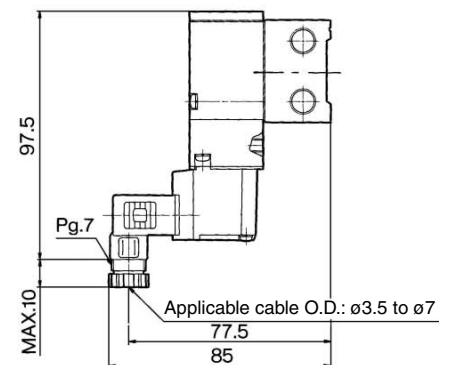
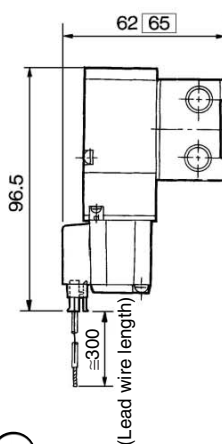
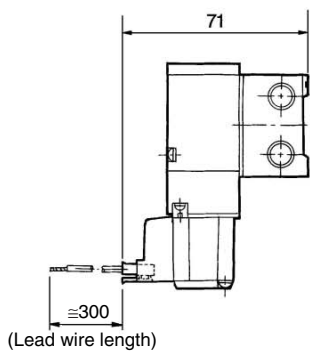


Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	59	78	97	116	135	154	173	192	211	230	249	268	287	306	325	344	363	382	401
L <sub>2</sub>	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

L plug connector (L)

M plug connector (M)

DIN terminal (D)

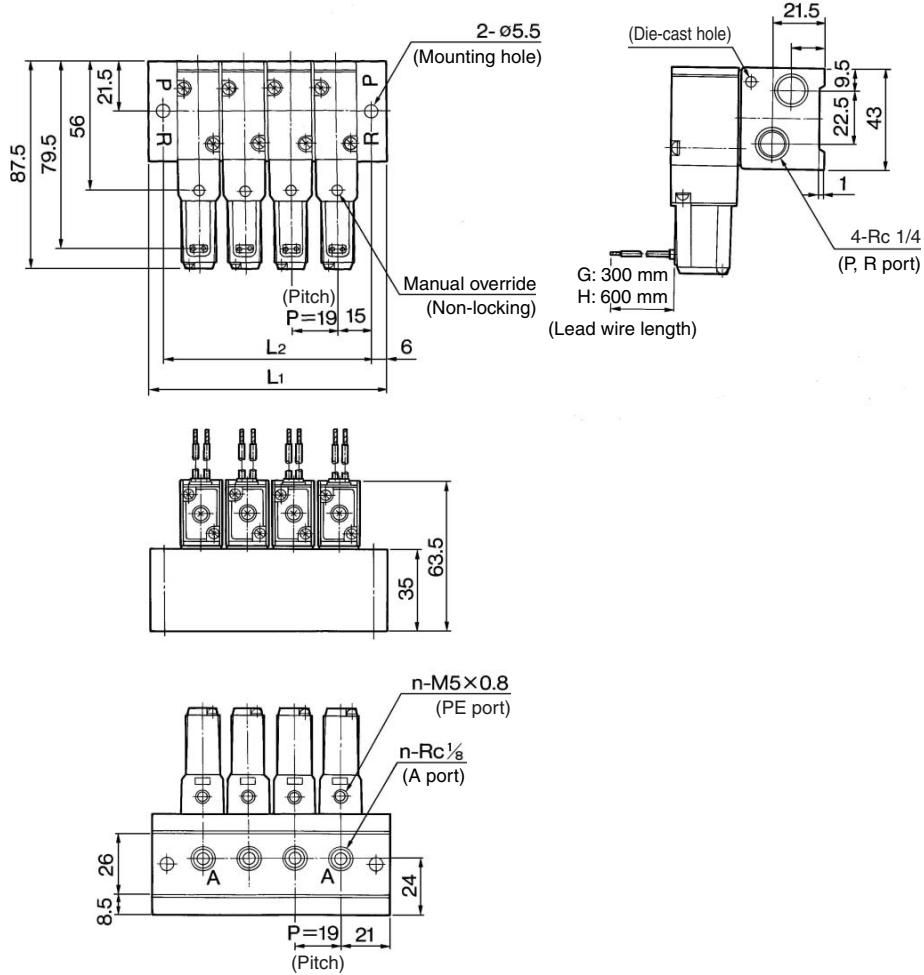


□: With light/surge voltage suppressor

# 3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ500**

**For Internal Pilot  
Type 41 Manifold: Bottom Ported**

**VV3Z5-41- Stations 2-01  
Grommet (G), (H)**



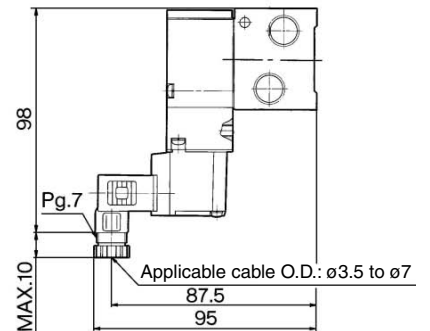
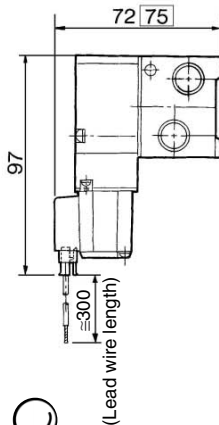
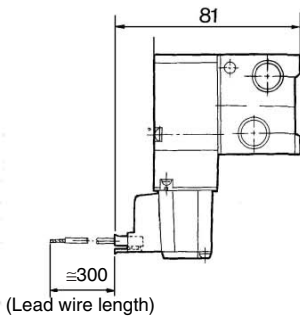
- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L <sub>2</sub>	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

**L plug connector (L)**

**M plug connector (M)**

**DIN terminal (D)**

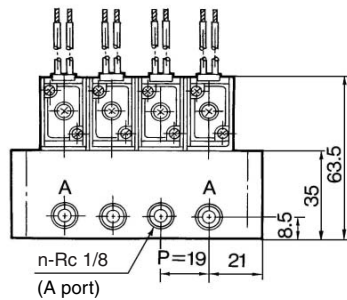
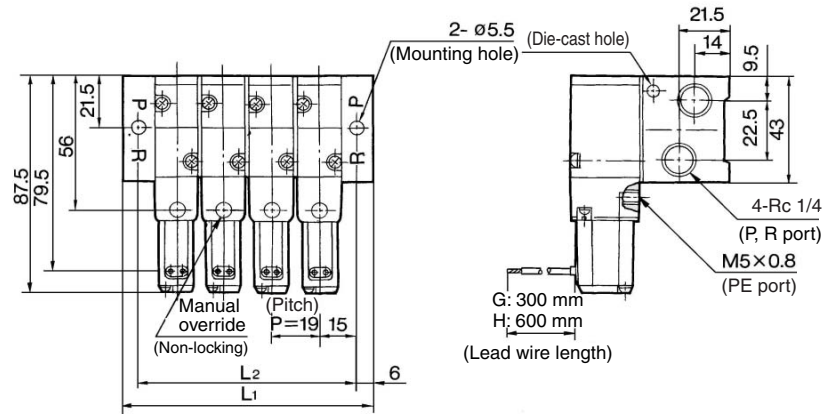


□: With light/surge voltage suppressor

# Series VZ500

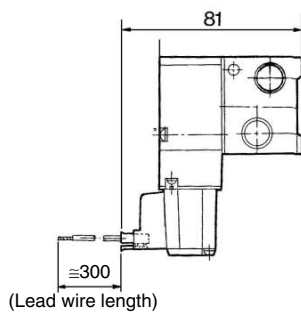
For Internal Pilot  
Type 41 Manifold: Side Ported

VV3Z5-41- Stations 1-01  
Grommet (G), (H)

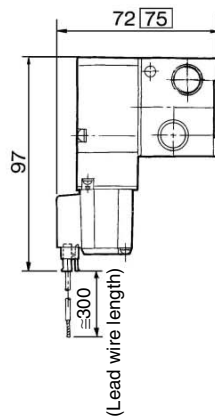


Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L <sub>2</sub>	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

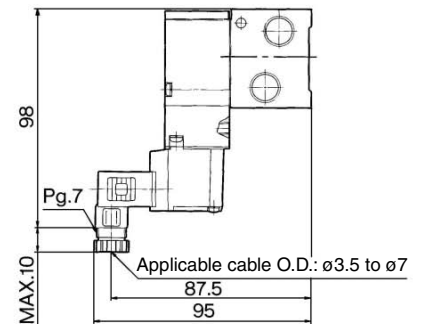
L plug connector (L)



M plug connector (M)



DIN terminal (D)

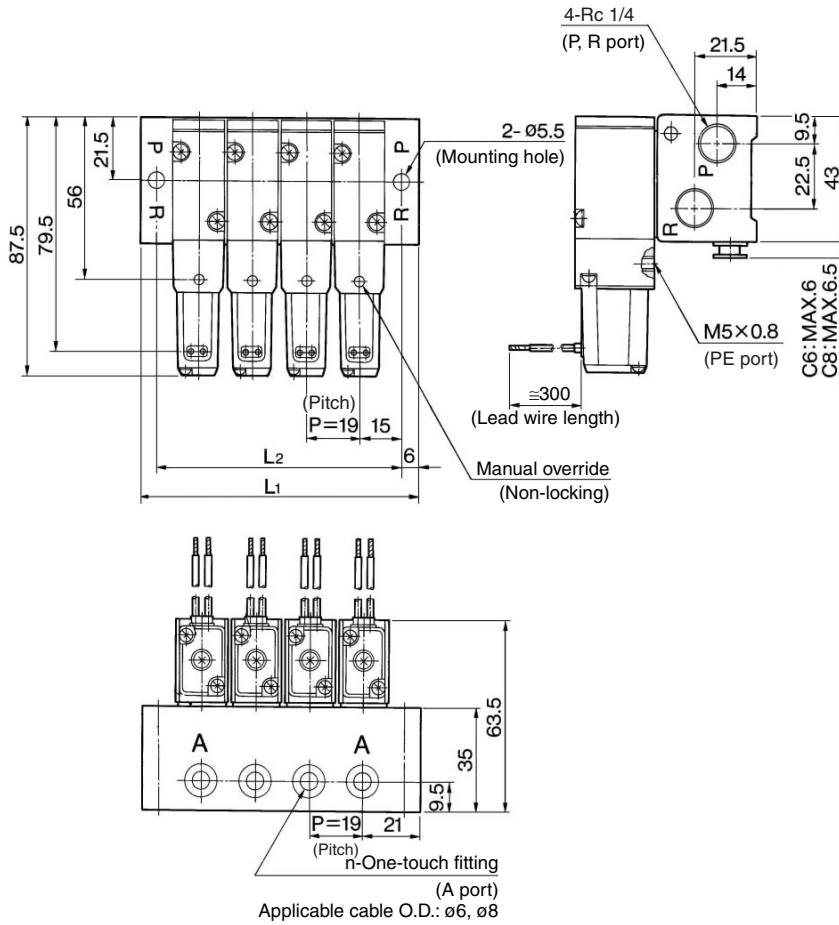


□: With light/surge voltage suppressor

# 3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ500**

**For Internal Pilot  
Type 41 Manifold: Side Ported**

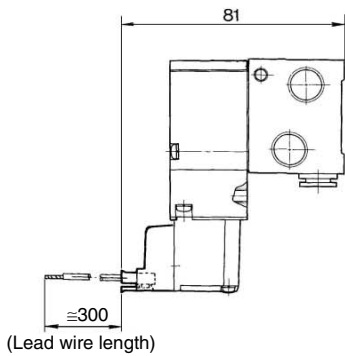
VV3Z5-41- Stations 1-C6, C8  
Grommet (G), (H)



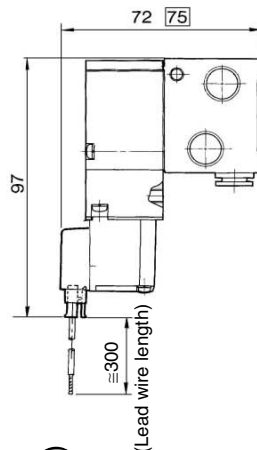
- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L <sub>2</sub>	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

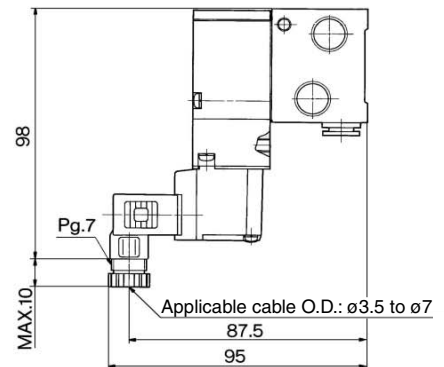
### L plug connector (L)



### M plug connector (M)



### DIN terminal (D)

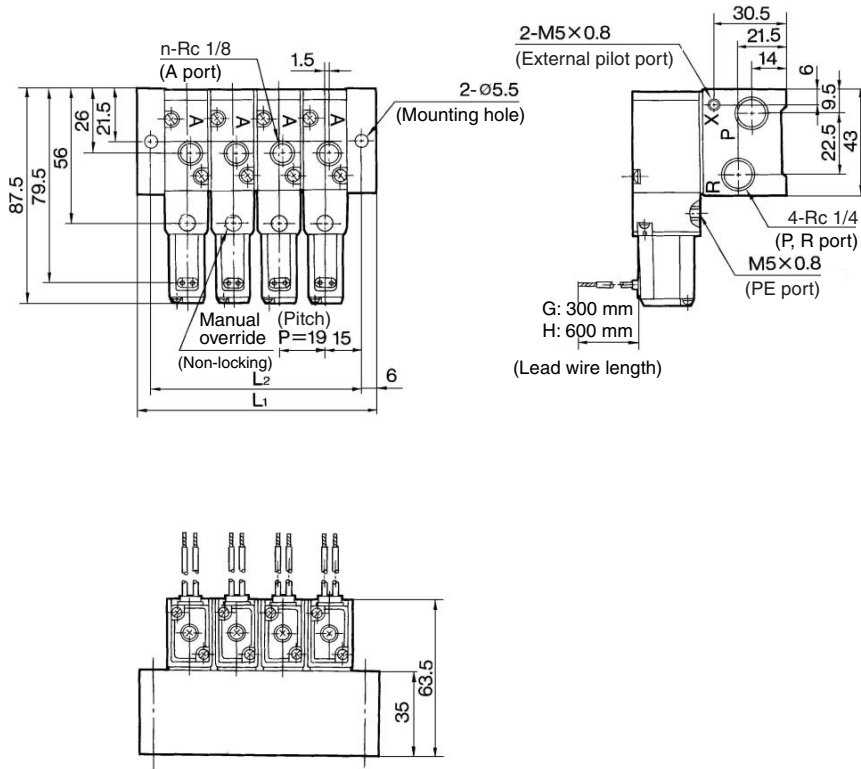


☐: With light/surge voltage suppressor

# Series VZ500

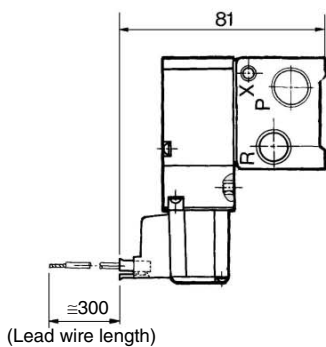
For Internal Pilot  
Type 21R Manifold: Top Ported

VV3Z5-21R- Stations 1  
Grommet (G), (H)

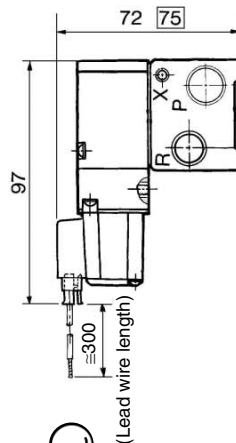


Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L <sub>2</sub>	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

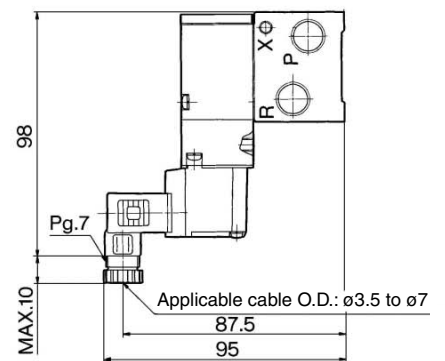
## L plug connector (L)



## M plug connector (M)



## DIN terminal (D)

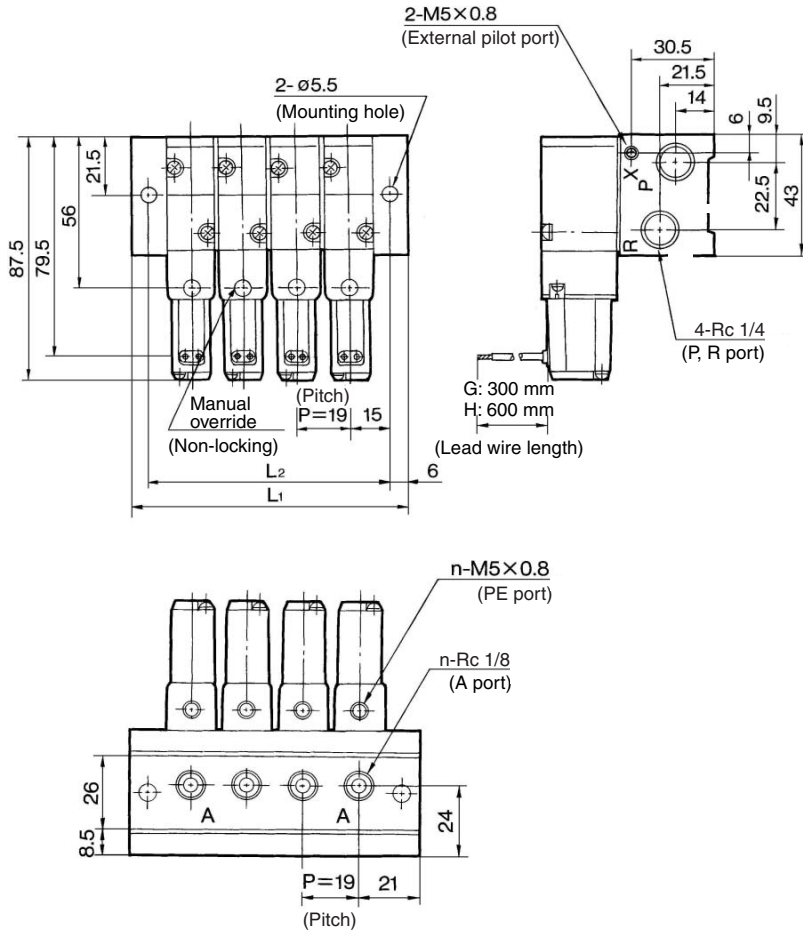


□: With light/surge voltage suppressor

# 3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ500**

**For Internal Pilot  
Type 41R Manifold: Bottom Ported**

**VV3Z5-41R- Stations 2-01  
Grommet (G), (H)**

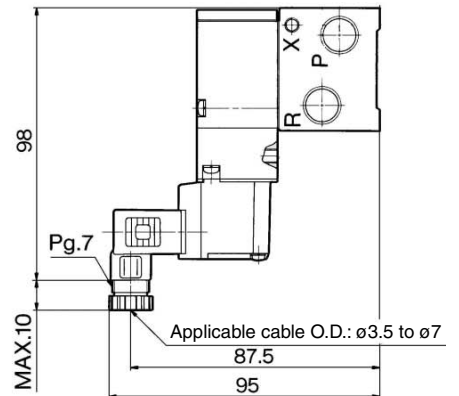
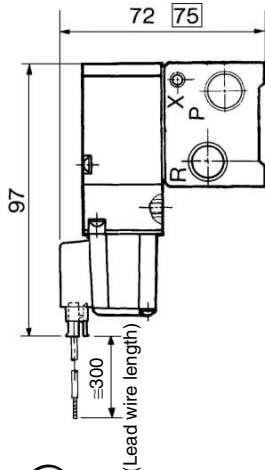
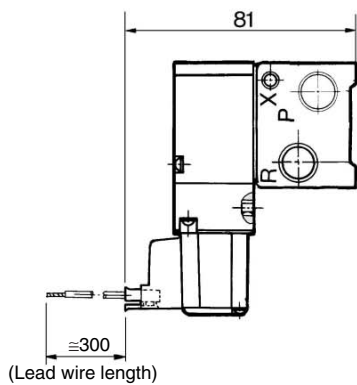


Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L <sub>2</sub>	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

**L plug connector (L)**

**M plug connector (M)**

**DIN terminal (D)**



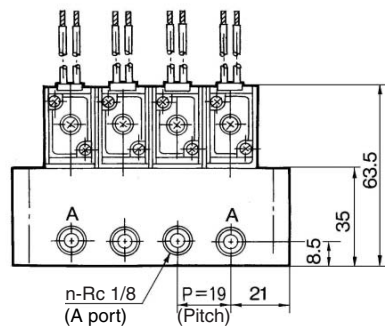
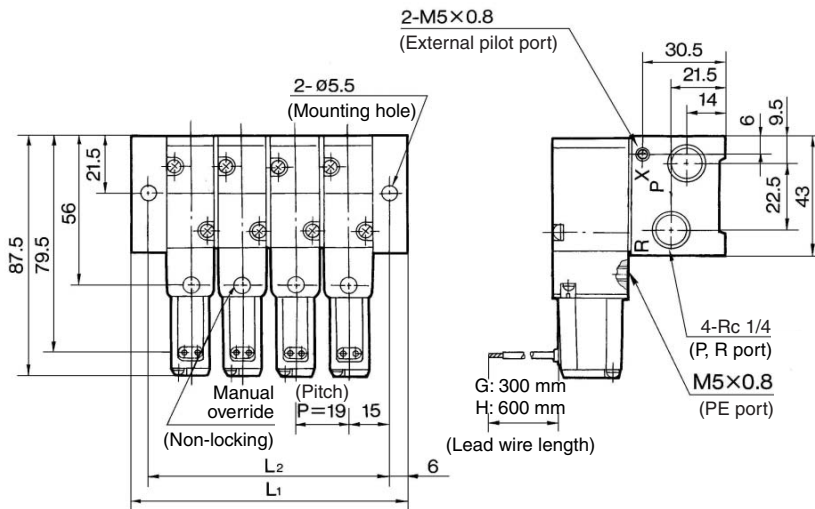
□: With light/surge voltage suppressor

- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

# Series VZ500

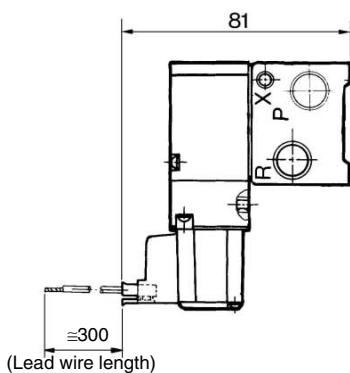
For Internal Pilot  
Type 41R Manifold: Side Ported

VV3Z5-41R- Stations 1-01  
Grommet (G), (H)

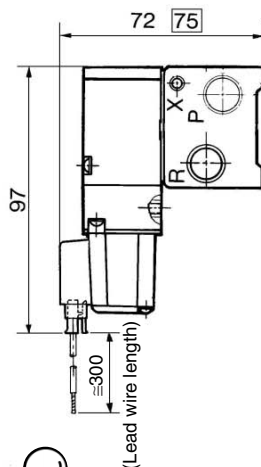


Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L <sub>2</sub>	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

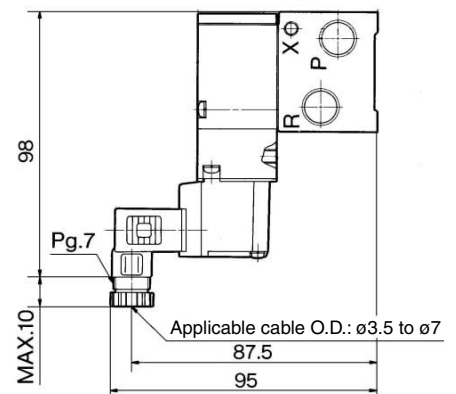
## L plug connector (L)



## M plug connector (M)



## DIN terminal (D)



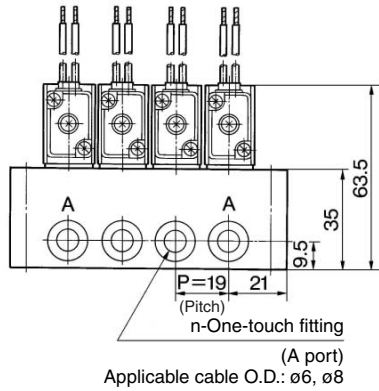
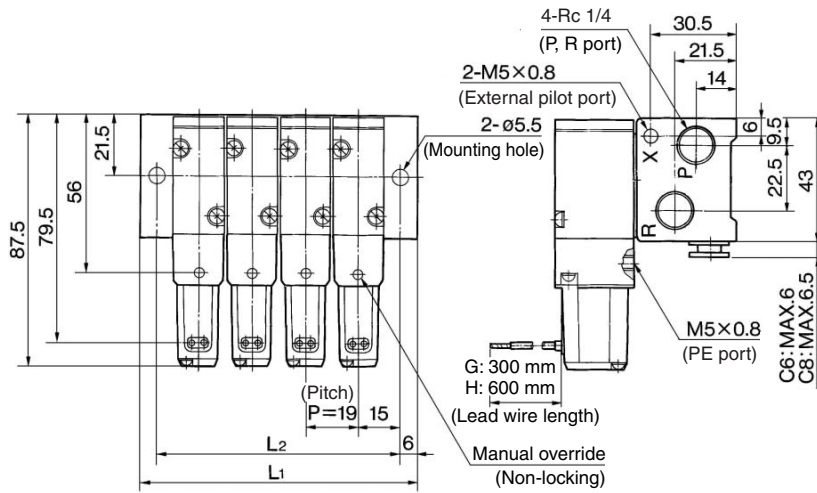
□: With light/surge voltage suppressor



# 3 Port Solenoid Valve Rubber Seal, Body Ported/Base Mounted **Series VZ500**

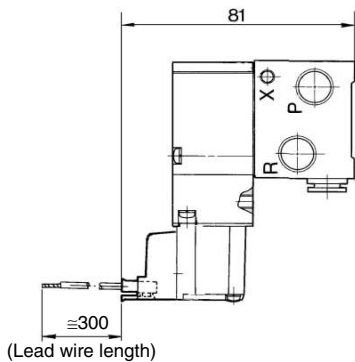
**For Internal Pilot  
Type 41R Manifold: Side Ported**

**VV3Z5-41R- Stations 1-C6/C8  
Grommet (G), (H)**

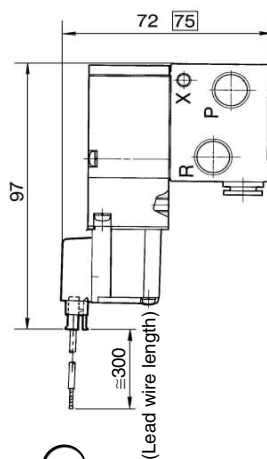


Stations n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L <sub>2</sub>	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

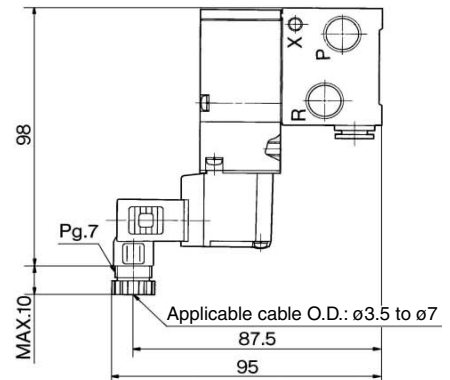
**L plug connector (L)**



**M plug connector (M)**



**DIN terminal (D)**



□: With light/surge voltage suppressor

- V100
- SY
- SYJ
- VK
- VZ**
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS
- VFN

# Series VZ

# Made to Order Specifications:

## 1. Solenoid Valve: Opposite Mounting of Solenoid Assembly

### Applicable solenoid valve series

VZ100/300/500

### Model no.

VZ1  0 -    (-  ) - X1

VZ<sub>5</sub><sup>3</sup>   -    (-  ) - X1

• Entry is the same as standard products.

## 2. Solenoid Valve: External Pilot Specifications

● Applicable for individual use of body ported external pilot type

### Applicable solenoid valve series

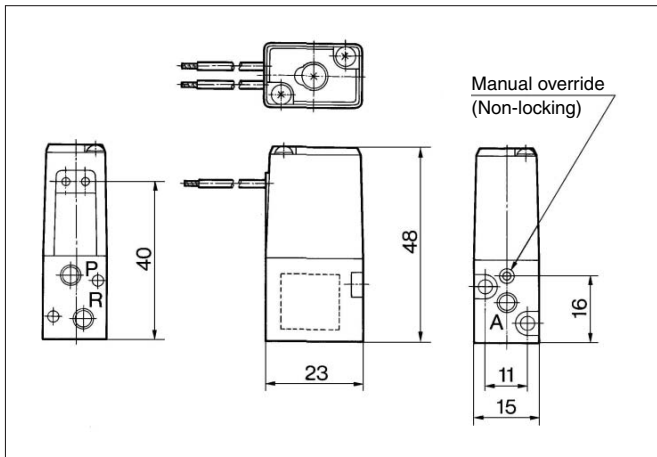
VZ300/500

### Model no.

VZ<sub>5</sub><sup>3</sup>  2R -     (-  ) - X20

• Entry is the same as standard products.

### Dimensions: VZ110-□G-M5-X1



### Specifications

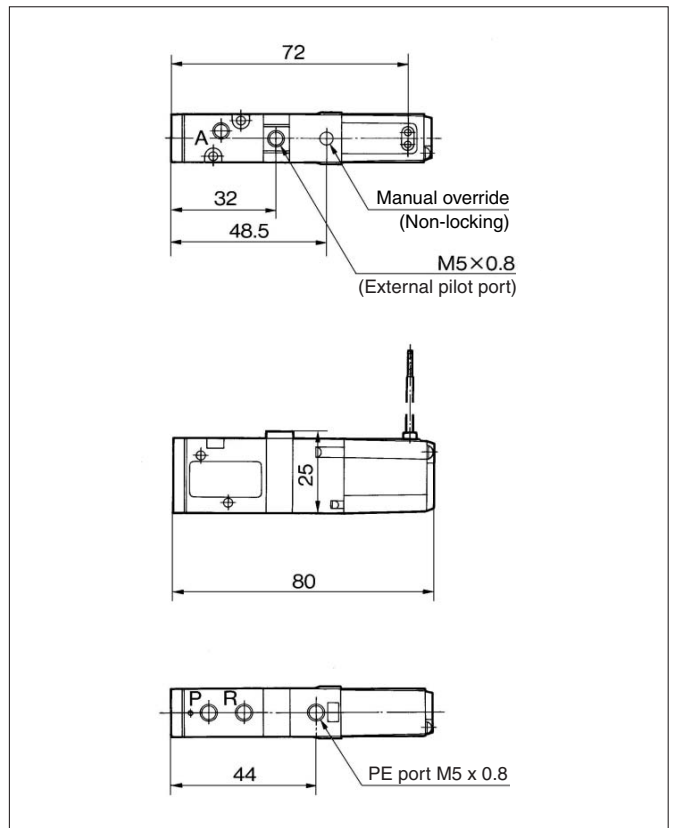
Operating pressure range (MPa)	Main pressure	-100 kPa to 0.7
	External pilot pressure	0.15 to 0.7
Pilot exhaust method	Pilot valve individual exhaust	

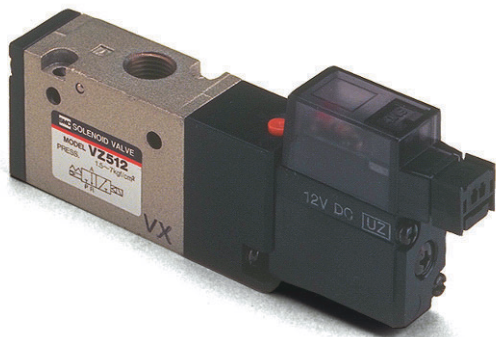
### Dimensions

VZ300: 8 mm longer in total length

VZ500: 8 mm longer in total length

### Dimensions: VZ312R-□G-M5-X20





## 3/2 PILOT OPERATED SOLENOID / SPRING VALVE

- ✓ N/O or N/C Option
- ✓ 1/8 Body Ported, Sub Base or Manifold Mounted (1 to 10 Stations)
- ✓ Cv 0.5
- ✓ Optional Lamp and Surge Voltage Suppressor
- ✗ Solenoid Coils are integral and must not be removed
- ✗ These valves are supplied without leads which must be ordered separately (see Accessories Section)

### TECHNICAL SPECIFICATIONS

Fluid	Air
Operating Pressure Range	20 ~ 100PSI (1.5-7kgf/cm <sup>2</sup> )
Ambient and Fluid Temperature	Max 50°C / 122°F
Response Time	20ms or less
Max Operating Frequency	50 Cycles per Second
Manual Override	Non-Locking Push Type
Pilot Exhaust	Individual, Common
Lubrication	Not Required; If Lubrication is provided, use SMC Lubricant
Enclosure	Dust Proof

Model		Type of Actuation	Effective Orifice mm <sup>2</sup> (Cv Factor)
Body Ported Type	(N)VZ512	NC	9.0 (0.5)
	(N)VZ522	NO	
Base Mounted Type (with Subplate)	(N)VZ514	NC	9.0 (0.5)
	(N)VZ524	NO	

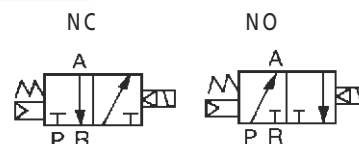
### SOLENOID SPECIFICATIONS

Electrical Entry	Grommet (G), Plug Connector (M)	
Voltages	AC	240Hz, 110V50/60Hz, 24V50/60Hz
	DC	12V, 24V
Allowable Voltage	-15~+10% of rated voltage	
Coil Insulation	Class E or equivalent (120°C)	
Temperature Rise	45°C or less / 115°F or less	
Power Consumption DC	1.8W/2.1W (W/LED)	
Apparent Power AC	Inrush	4.5VA/50Hz, 4.2VA/60Hz
	Holding	3.5VA/50Hz, 3VA/60Hz
Surge Voltage Suppressor	DC: Diode, AC: ZNR	
Indicator Light	DC: LED (Red), AC: Neon lamp	



Observe operating pressure ranges - see technical specifications for details

### SYMBOLS



### ACCESSORIES

#### (N)VZ500 SOLENOID VALVE

- DXT170-123-A-30 ..... Plug with 3m lead
- DXT201-19-1A ..... Bracket

### HOW TO ORDER

#### (N)VZ500 SOLENOID VALVE



#### BODY OPTION

- 12 ...3/2 NC Body Ported
- 22 ...3/2 NO Body Ported
- 14 ...3/2 NC Base Mounted
- 24 ...3/2 NO Base Mounted

#### BODY OPTION

- .....Individual Pilot Exhaust
- M .....Common Exhaust for Main and Pilot Valve
- R .....External Pilot

#### PORTING

- .....Without Sub Plate
- 01T ...1/8" Sub Plate
- 02T ...1/4" Sub Plate
- 01T ...1/8 (Body Ported)

#### OPTIONS

- .....Without Bracket
- F .....Foot Bracket

#### ELECTRICAL ENTRY

- D .....DIN Connector
- G .....Grommet (300mm lead)
- H .....Grommet (600mm Lead)
- L .....L Type Plug Connector with Lead Wire (300mm)
- M ..... M Type Plug Connector with Lead Wire (300mm)
- LO ...L Type Plug Connector w/o Connector
- MO ...M Type Plug Connector w/o Connector

#### VOLTAGE

- 1 .....100V AC
- 3 .....110V AC
- 4 .....220V AC
- 5 .....24V DC
- 6 .....12V DC

#### LAMP & SURGE VOLTAGE SUPPRESSOR

- .....Without
- Z .....With (Except Grommet Type & 24V AC)
- S .....With Surge Suppressor

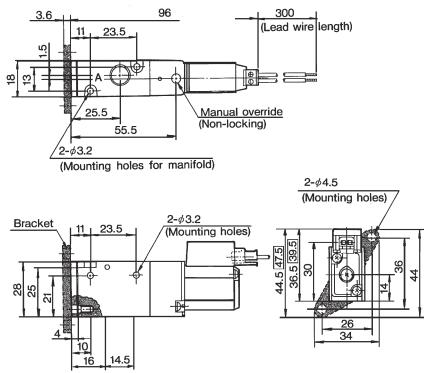
DIMENSIONS  
SEE NEXT PAGE



FOR FURTHER TECHNICAL  
DETAILS ON THIS  
PRODUCT, REQUEST  
CATALOG REFERENCE  
E120

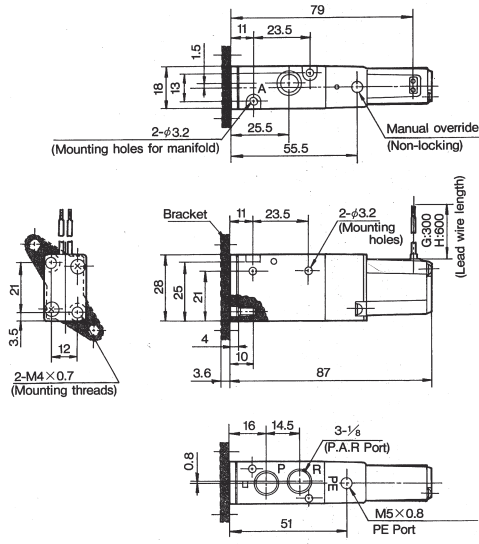
DIMENSIONS

SERIES (N)VZ500 BODY PORTED MN PLUG TYPE



DIMENSIONS

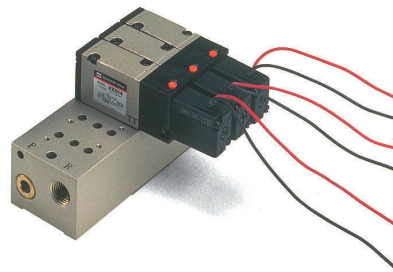
SERIES (N)VZ500 BODY PORTED GROMMET TYPE



SERIES (N)VZ500 MANIFOLDS

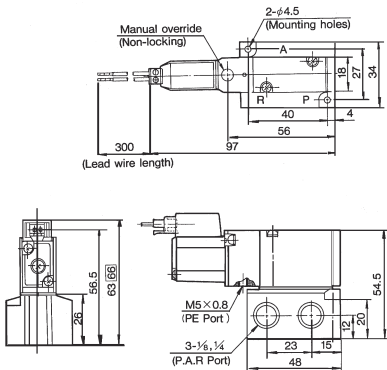
A Single Sub Base and 3 Different Manifold Design.

- (i) Side Entry Single Sub-base for use with the Base Mounted Valve (Type 40).
- (ii) 2-10 Station Type 21 Manifold for use with the Body Ported Valve (Type 20).
- (iii) 2-10 Station Type 41 Side Entry Manifold for use with the Base Mounted Valve (Type 40).
- (iv) 2 - 10 Station Type 41 Bottom Entry Manifold for use with the Base Mounted Valve (Type 40).



DIMENSIONS

SINGLE SUB-BASE SIDE PORTED TYPE M



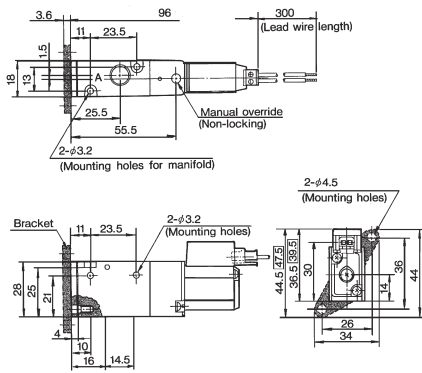
SEE INSIDE FRONT COVER FOR  
DETAILS OF YOUR LOCAL SALES OFFICE



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E120

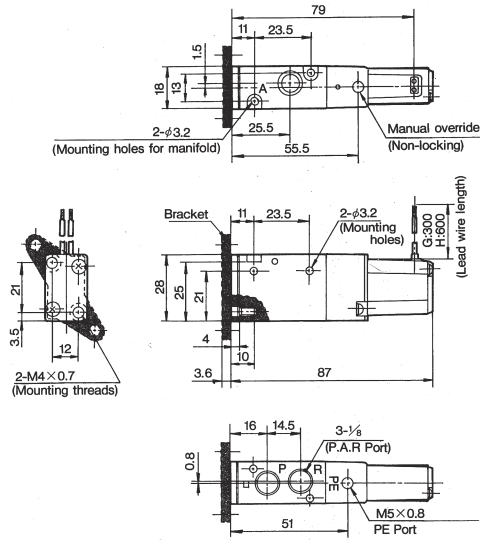
DIMENSIONS

SERIES (N)VZ500 BODY PORTED MN PLUG TYPE



DIMENSIONS

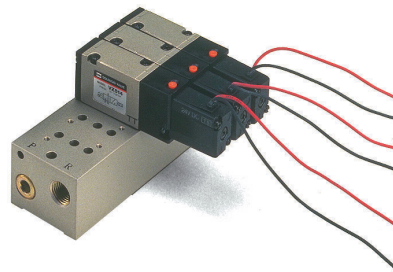
SERIES (N)VZ500 BODY PORTED GROMMET TYPE



## SERIES (N)VZ500 MANIFOLDS

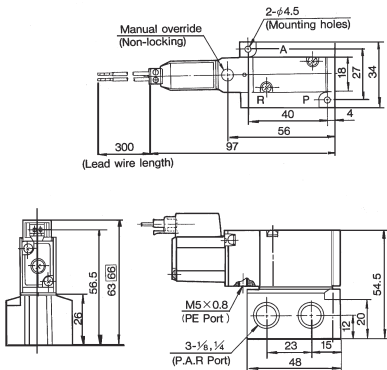
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DIMENSIONS

SINGLE SUB-BASE SIDE PORTED TYPE M



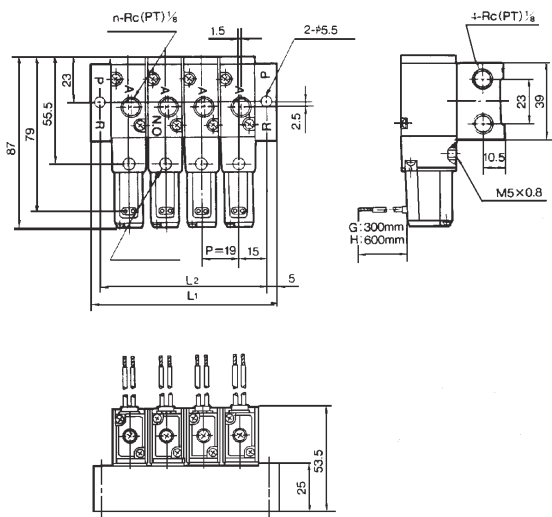
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E120

### DIMENSIONS

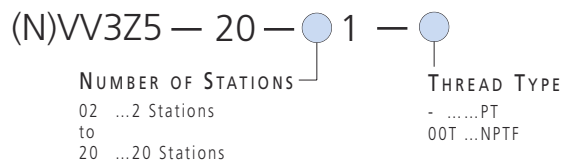
#### MANIFOLD TYPE 20 TOP PORTED GROMMET TYPE



Stations (n)	2	3	4	5	6	7	8	9	10
L <sub>1</sub>	59	78	97	116	135	154	173	192	211
L <sub>2</sub>	49	68	87	106	125	144	163	182	201

### How To ORDER

#### MANIFOLD TYPE 20 TOP PORTED



FOR FURTHER TECHNICAL INFORMATION ON THIS SERIES, REQUEST CAT:E120

### ACCESSORIES

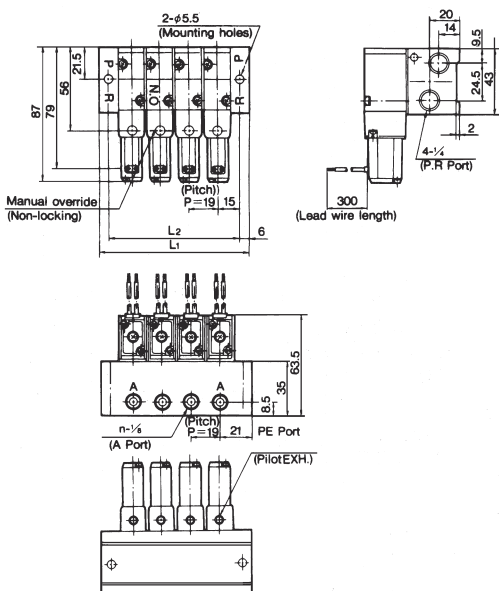
#### MANIFOLD TYPE 20 TOP PORTED

DXT201-15-1A .....Blanking Plate Kit

FOR FURTHER TECHNICAL INFORMATION ON THIS SERIES, REQUEST CAT:E120

### DIMENSIONS

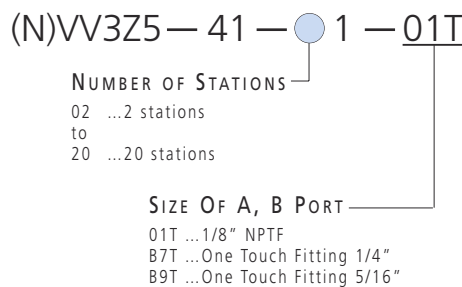
#### MANIFOLD TYPE 41 SIDE PORTED GROMMET TYPE



Stations (n)	2	3	4	5	6	7	8	9	10
L <sub>1</sub>	61	80	99	118	137	156	175	194	213
L <sub>2</sub>	49	68	87	106	125	144	163	182	201

### How To ORDER

#### MANIFOLD TYPE 41 SIDE PORTED



### ACCESSORIES

#### MANIFOLD TYPE 41 SIDE PORTED

DXT201-15-1A .....Blanking Plate Pit

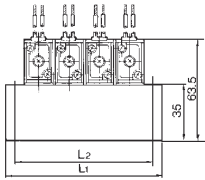
FOR FURTHER TECHNICAL INFORMATION ON THIS SERIES, REQUEST CAT:E120



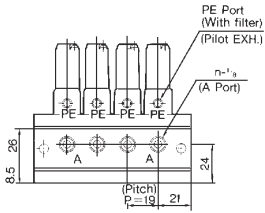
FOR FURTHER TECHNICAL DETAILS ON THIS PRODUCT, REQUEST CATALOG REFERENCE E120

## DIMENSIONS

### MANIFOLD TYPE 41 BOTTOM PORTED GROMMET TYPE



FOR ALL OTHER  
DETAILS, REFER TO  
TYPE 41 SIDE PORTED  
MANIFOLD.



Stations (n)	2	3	4	5	6	7	8	9	10
L <sub>1</sub>	61	80	99	118	137	156	175	194	213
L <sub>2</sub>	49	68	87	106	125	144	163	182	201

## HOW TO ORDER

### MANIFOLD TYPE 41 BOTTOM PORTED

(N)VZ500-41-2-01T

NUMBER OF STATIONS

02 ...2 Stations  
to  
20 ...20 Stations

THREAD TYPE

- .....PT  
T .....NPTF

## ACCESSORIES

### MANIFOLD TYPE 41 BOTTOM PORTED

DXT201-15-1A .....Blanking Plate Kit

FOR FURTHER TECHNICAL INFORMATION  
ON THIS SERIES, REQUEST CAT:E120

