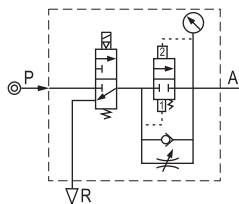


## GV Series soft-start valve



### Symbol

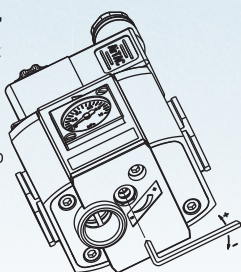


### Product feature

Soft start-up valve is used to input compressed air into pneumatic system slowly and has the effect of safety and protection. Air intake is connected with the input P of Soft start-up valve. If coil is energized, the 3/2 way valve opens. At this time, a little air comes to output A through throttle valve, which increases the pressure of the system gradually; when the output pressure is equal the half of the input pressure, Soft start-up valve completely opens and the flow at this time reaches the highest value of itself. When the coil is de-energized, air intake P closes, the air returns to R orifice through reflux valve and is quickly exhausted. The pressure of the system falls to zero, which protects the whole system.

### Attention

Manually adjust the "+" and "-" throttle screw at the bottom of the soft start-up valve as per the requirement of start speed. It shall go slowly, other wise sudden acting of the product or system shall be caused with a heavy impact.



### Specification

Model	GV200-06	GV200-08	GV300-08	GV300-10	GV300-15	GV400-10	GV400-15
Fluid	Air						
Port size	1/8"	1/4"	1/4"	3/8"	1/2"	3/8"	1/2"
Pressure range	0.25~0.9MPa(35~130psi)						
Proof pressure	1.5MPa(215psi)						
Temperature range	-20~70℃						
Acting type	Solenoid control						
Exhaust port size	1/4"		3/8"			1/2"	
Power connection	Terminal、Grommet						
Standard voltage	AC220V, 110V, 24V(50/60Hz); DC12V, 24V						
Voltage range	-15%~+10%						
Insulation	Class B						
Power consumption	AC: 3.5VA; DC: 2.5W						
Option pressure gauge	F: Square pressure gauge; C: Circular pressure gauge						
Suitable F.R.L type	GC200-06	GC200-08	GC300-08	GC300-10	GC300-15	GC400-10	GC400-15

① PT thread, NPT thread and G thread are available.

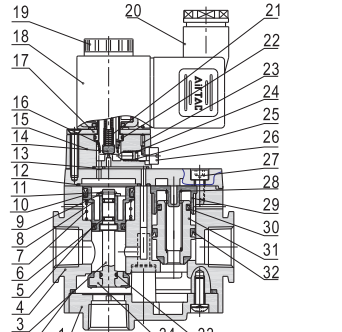
### Ordering code

GV300 10 □ □ F 1 A □ □

<div>Model</div> <div>GV200: 200 Series soft start-up valve</div> <div>GV300: 300 Series soft start-up valve</div> <div>GV400: 400 Series soft start-up valve</div>		<div>Thread type</div> <div>Blank: PT</div> <div>T: NPT</div> <div>G: G</div>													
<div>Port size</div> <table><tr><td>Model</td><td>Port size</td></tr><tr><td rowspan="2">200 Series</td><td>06: 1/8"</td></tr><tr><td>08: 1/4"</td></tr><tr><td rowspan="2">300 Series</td><td>08: 1/4"</td></tr><tr><td>10: 3/8"</td></tr><tr><td rowspan="2">400 Series</td><td>15: 1/2"</td></tr><tr><td>10: 3/8"</td></tr><tr><td></td><td>15: 1/2"</td></tr></table>		Model	Port size	200 Series	06: 1/8"	08: 1/4"	300 Series	08: 1/4"	10: 3/8"	400 Series	15: 1/2"	10: 3/8"		15: 1/2"	<div>Electrical entry</div> <div>Blank: Terminal</div> <div>I: Grommet</div>
Model	Port size														
200 Series	06: 1/8"														
	08: 1/4"														
300 Series	08: 1/4"														
	10: 3/8"														
400 Series	15: 1/2"														
	10: 3/8"														
	15: 1/2"														
<div>Accessories</div> <div>Blank: Bracket</div> <div>J: No bracket(standard configuration)</div>	<div>Pressure gauge</div> <div>Blank: Pressure gauge</div> <div>N: No pressure gauge</div>	<div>Voltage</div> <div>A: AC220V(50/60Hz)</div> <div>B: DC24V</div> <div>C: AC110V(50/60Hz)</div> <div>E: AC24V(50/60Hz)</div> <div>F: DC12V</div>													
	<div>Pressure gauge shape</div> <div>F: Square</div> <div>C: Circular</div>	<div>Scale</div> <div>1: MPa</div> <div>2: psi</div> <div>3: bar</div>													

Note: When it is used with F.R.L. combination, extra mounting bracket is need. Please refer to P148 for order detail.

### Inner structure

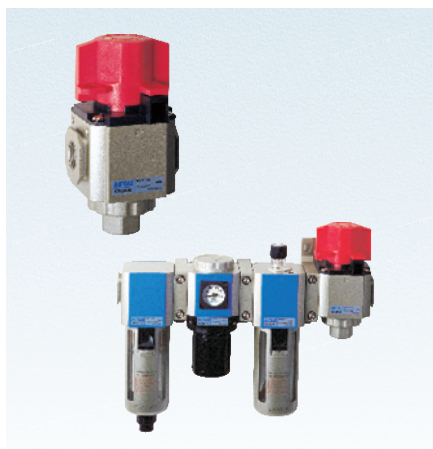
19	18	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
																																	

No.	Item	No.	Item	No.	Item
1	Bottom cover	13	Gasket	25	Spring
2	Gasket	14	Gasket	26	Manual override
3	Spool	15	Pilot kit	27	Fixed screw
4	Body	16	spring	28	Spring
5	O-ring	17	Fixed Ipate	29	Valve spool
6	O-ring	18	Coil set	30	O-ring
7	Spring	19	Nut	31	Valve spool
8	Inlet piston	20	Connector	32	O-ring
9	Piston gasket	21	Spring	33	O-ring
10	O-ring	22	O-ring	34	Inlet plug
11	Snap ring	23	Manual override block		
12	Gasket	24	O-ring		

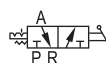
### Dimensions

Item\Model	GV200		GV300			GV400	
	06	08	08	10	15	10	15
A	80		95			120	
AB	59		74			90	
B	57		62.2			80	
BA	24.5		31.5			40.5	
C	123.5		131			142.5	
K	5.5		6.5			8.5	
KA	67		82			102	
KB	8		8			11	
KC	30.5		34.5			39	
P	1/8"	1/4"	1/4"	3/8"	1/2"	3/8"	1/2"
PA	30		34			40.5	
Q	1/4"		3/8"			1/2"	

## GZ Series safe on-off valve

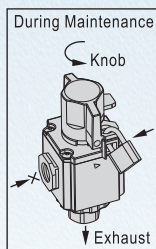


### Symbol



### Product feature

1. It is module design and can be used with G series F.R.L. combination by bracket.
2. This valve can be used as manual 3/2 way valve.
3. Visual indication marked EXH/SUP.
4. This valve meets the standard on installation conducted by operator specified by OSHA (Occupational Safety & Health Administration). When the machinery is maintained and serviced, the purge valve (Safe on-off valve) for remaining pressure shall be used to eliminate the remaining pressure when the air source is cut off. Valve must be locked to prevent accidental operation by a third party during maintenance. This prevents accidental system pressurization & cylinder actuation which can result in injuries to the machine operator.



### Specification

Model	GZ200-06	GZ200-08	GZ300-08	GZ300-10	GZ300-15	GZ400-10	GZ400-15
Fluid	Air						
Port size	1/8"	1/4"	1/4"	3/8"	1/2"	3/8"	1/2"
Exhaust port size	1/4"		3/8"			1/2"	
Acting type	Manual						
Valve type	3 port 2 way						
Pressure range	0~0.9MPa(0~130psi)						
Proof pressure	1.5MPa(215psi)						
Temperature range	-20~70°C						
Operation angle	90°						
Suitable F.R.L type	GC200-06	GC200-08	GC300-08	GC300-10	GC300-15	GC400-10	GC400-15

① PT thread, NPT thread and G thread are available.

### Ordering code

#### GZ300 10 □

#### Model

GZ200: 200 Series soft on-off valve  
GZ300: 300 Series soft on-off valve  
GZ400: 400 Series soft on-off valve

#### Thread type

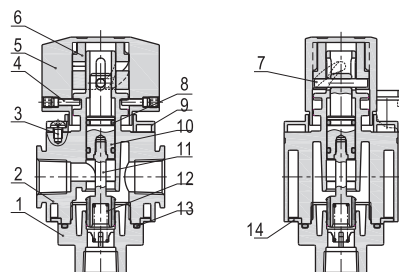
Blank: PT  
T: NPT  
G: G

#### Port size

Model	Port size
200 Series	06: 1/8"
	08: 1/4"
	08: 1/4"
300 Series	10: 3/8"
	15: 1/2"
	15: 1/2"
400 Series	10: 3/8"
	15: 1/2"

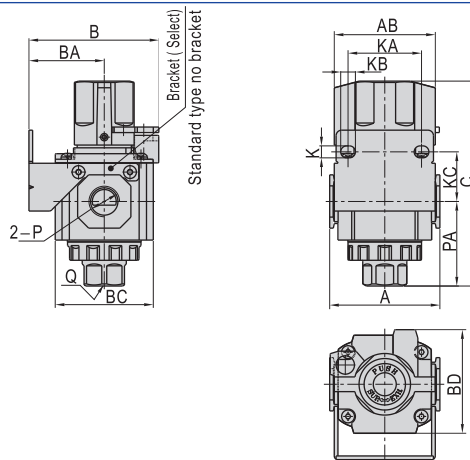
Note : When it is used with F.R.L. combination, extra mounting bracket needed. Please refer to P148 for order detail.

### Inner structure



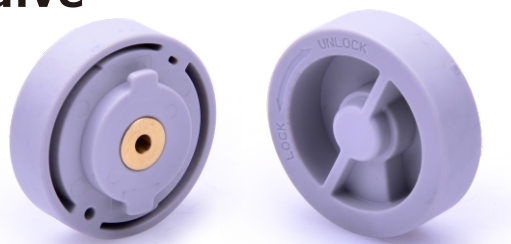
No.	Item	No.	Item
1	Valve cap	8	O-ring
2	Body	9	Cover
3	Screw	10	Spool
4	Operating screw	11	Plug
5	Adjusting screw	12	Spring
6	Special screw	13	O-ring
7	Fixing plate	14	Cover

### Dimensions



Item\Model	GZ200	GZ300	GZ400
	06 08	08 10 15	10 15
A	47	60	75
AB	42	55	65
B	52.6	70.7	83.9
BA	30	41	50
BC	40	53.5	64
BD	42.5	56.5	66
C	89	112.5	134
K	5.5	6.5	8.5
KA	27	40	55
KB	8.5	8	11
KC	23	27	33.5
P	1/8" 1/4"	1/4" 3/8" 1/2"	3/8" 1/2"
PA	36.5	46	58.5
Q	1/4"	3/8"	1/2"

## GA Series Reflux valve



### Ordering code

When GA series regulator is assembled with the reflux valve, the valve can be ordered together with the standard product.

What needs to do is to add "-K" to the end of the ordering code of the standard product. Please refer to relevant content for more detailed order method.

### Product feature

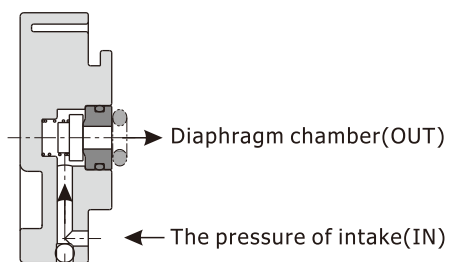
1. This reflux valve can be used with GA series regulator but can not be ordered individually.
2. When it is used with GA series regulator, one only needs to change the seal board in the back of regulator for the reflux valve. It is convenient to install and won't change the external dimension of regulator.

### Applicable products

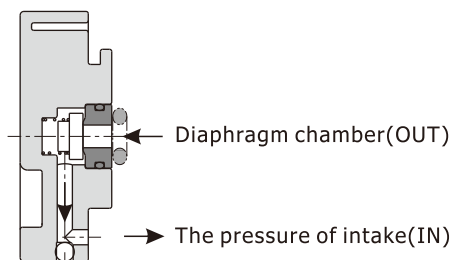
Reflux valve type\Applicable products's type	GA F.R.L Comtination	GA FR.L Comtination	GA Filter & regulator	GA Regulator
GAR200-P1	GAC200	GAFC200	GAFR200	GAR200
GAR300-P1	GAC300、400、600	GAFC300、400、600	GAFR300、400、600	GAR300、400、600

### Working principle

#### Normally



#### Exhaust



Normally, as the pressure of intake (IN) is higher than the set valve (pressure of outlet), the reflux valve closed; if the pressure of intake(IN) is cut off and starts exhaust, reflux valve opens.

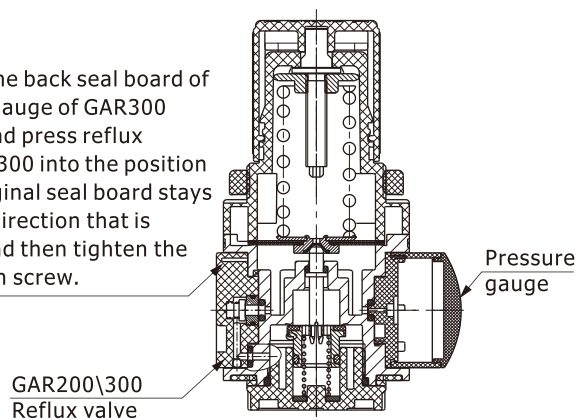
The pressure of diaphragm chamber is exhausted from IN orifice.

At this moment, the pressure of diaphragm chamber decreases and the diaphragm is pressed down by the force from adjusting spring to open valve. The pressure from outlet is exhausted from IN port.

### Example for assemble the reflux valve

Take GAR300 for example, it is in the same way to use products of other series.

Take out the back seal board of pressure gauge of GAR300 product and press reflux valve GAR300 into the position where original seal board stays upon the direction that is showed and then tighten the connection screw.



# Preparation unit——GA Series

## GA series of gas-distribution block



### Ordering code

**GA200 08 T**

1

2

3

① Model	② Port size		③ Thread type
GA200: 200 Series gas-distribution block	06: 1/8"	08: 1/4"	T: NPT
GA300: 300 Series gas-distribution block	08: 1/4"	10: 3/8"	
GA400: 400 Series gas-distribution block	10: 3/8"	15: 1/2"	
GA600: 600 Series gas-distribution block	20: 3/4"	25: 1"	

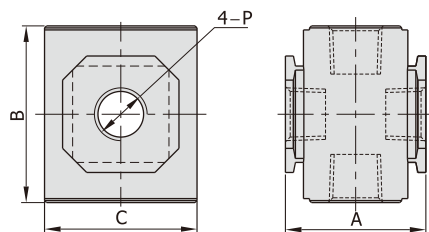
Note : When it is used with F.R.L. combination, extra mounting bracket needed.  
Please refer to P143 for order detail.

### Specification

Model	GA200-06	GA200-08	GA300-08	GA300-10	GA400-10	GA400-15	GA600-20	GA600-25
Fluid	Air							
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
Way number	Four							
Pressure range	0~145psi(0~1.0MPa)							
Proof pressure	215psi(1.5MPa)							
Temperature range	-20~70°C							

[Note1] NPT thread is available.

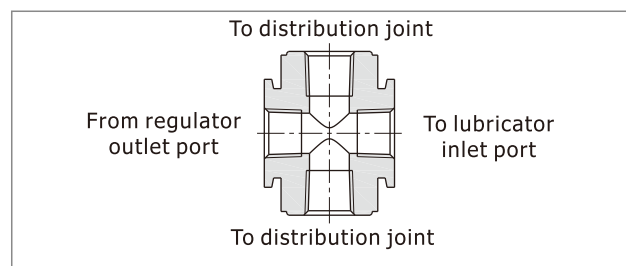
### Dimensions



[Unit: mm]

Model\Item		A	B	C	P
GA200	06	28.5	36	30	1/8"
	08	28.5	36	30	1/4"
GA300	08	35	44	38	1/4"
	10	35	44	38	3/8"
GA400	10	42	52	52	3/8"
	15	42	52	52	1/2"
GA600	20	60	76	68	3/4"
	25	60	76	68	1"

### Inner structure



### Product feature

1. It is installed between G series regulator (or filter & regulator) and GA series Lubricator. The air flow is divided by the device that one enters Lubricator to supply oil for lubrication and the other (the second way) directly enters the equipment.
2. Several kinds of bracket can be selected to connect regulator and lubricator. Optional brackets are type T, type L and type U.

## Joint accessories——Bracket

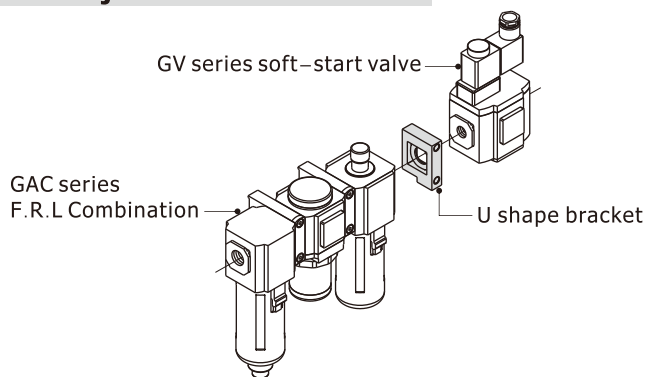


### How to select the bracket

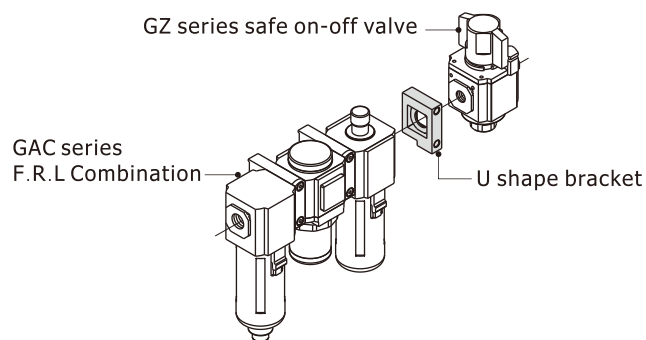
Bracket name	Code	Photo	Adapt accessories model		
T shape bracket	GA200T-P1		GV200	GZ200	GA200
	GA300T-P1		GV300	GZ300	GA300
	GA400T-P1		GV400	GZ400	GA400
	GA600T-P1		-	-	Ga600
L shape bracket	GA200L-P1		GV200	GZ200	GA200
	GA300L-P1		GV300	GZ300	GA300
	GA400L-P1		GV400	GZ400	GA400
	GA600L-P1		-	-	GA600
U shape bracket	GA200U-P1		GV200	GZ200	GA200
	GA300U-P1		GV300	GZ300	GA300
	GA400U-P1		GV400	GZ400	GA400
	GA600U-P1		-	-	GA600

### How to use the bracket

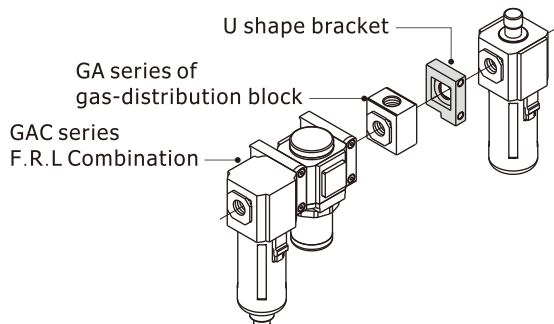
#### Use to joint GV and GC series



#### Use to joint GZ and GC series



#### Use to joint GA and GC series



#### Use to joint GZ, GV and GC series

