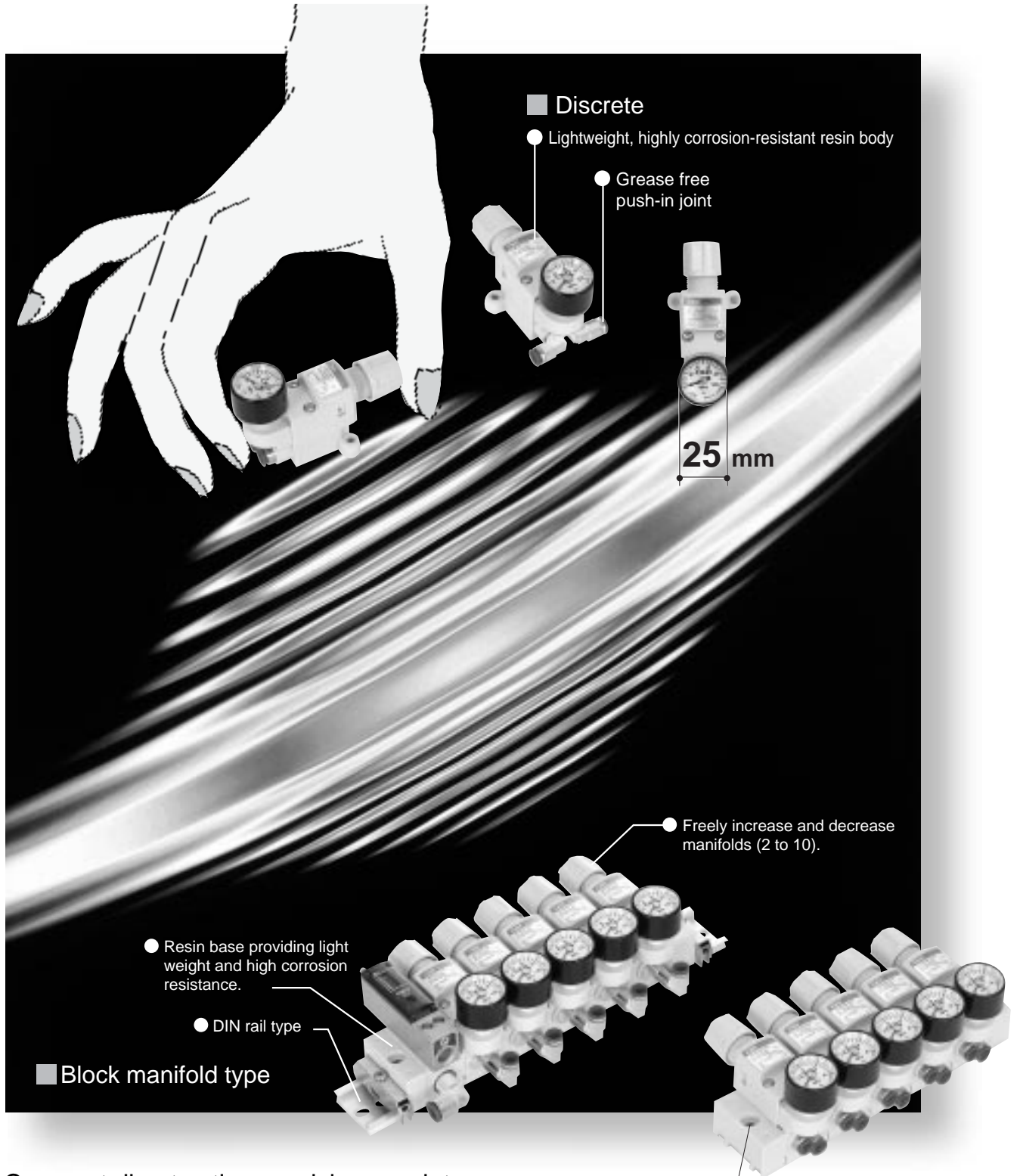


Precise control starting from

0.01MPa achieved with a miniature size.

This miniature direct-acting precision regulator realizes a minimum setting pressure of 0.01 MPa and sensitivity of 0.001 MPa even with compact 25 mm spacing.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending



Compact direct acting precision regulator

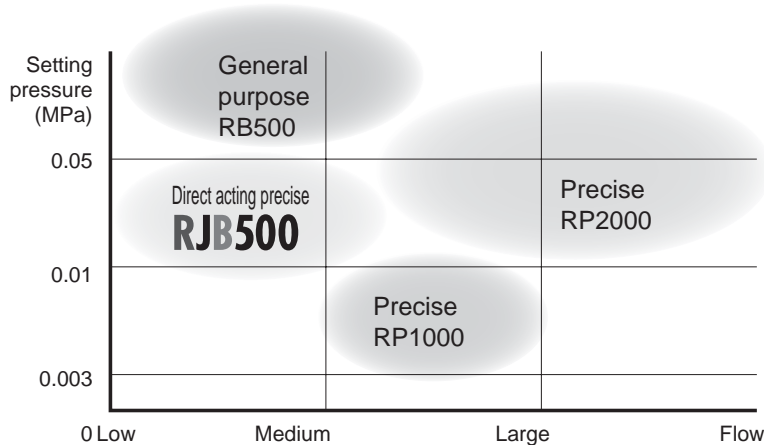
RJB500 Series

CKD

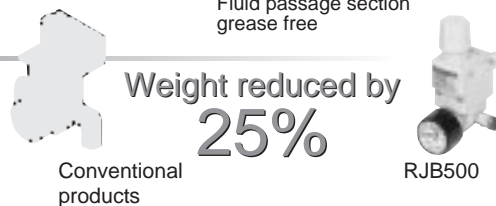
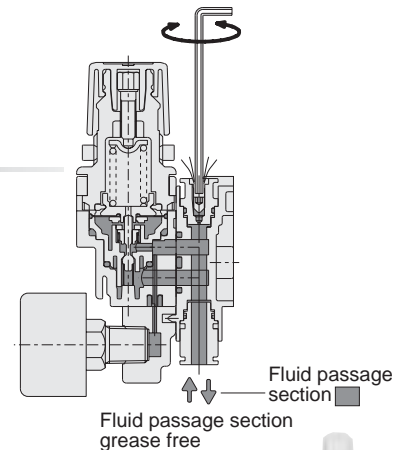
Ideal for semiconductor manufacturing post processes, IT applications, and compact assembly, etc., requiring space saving, precision, and grease-free products

High-sensitivity control in low pressure ranges

Pressure can be set from 0.01 to 0.2 MPa for low pressure and from 0.02 to 0.5 MPa for standard pressures. Sensitivity is 0.001 MPa for both applications. Highly sensitivity adjustment is realized in low-pressure ranges with a special diaphragm.



Energy is conserved with a variable constant-bleed mechanism



Grease-free specifications

Standard grease-free specifications are used for fluid passage areas and push-in joints, making this device ideal for applications susceptible to grease.

Energy saving

A variable constant-bleed mechanism is used. Minimum air consumption can be set to match the working pressure.

Compact

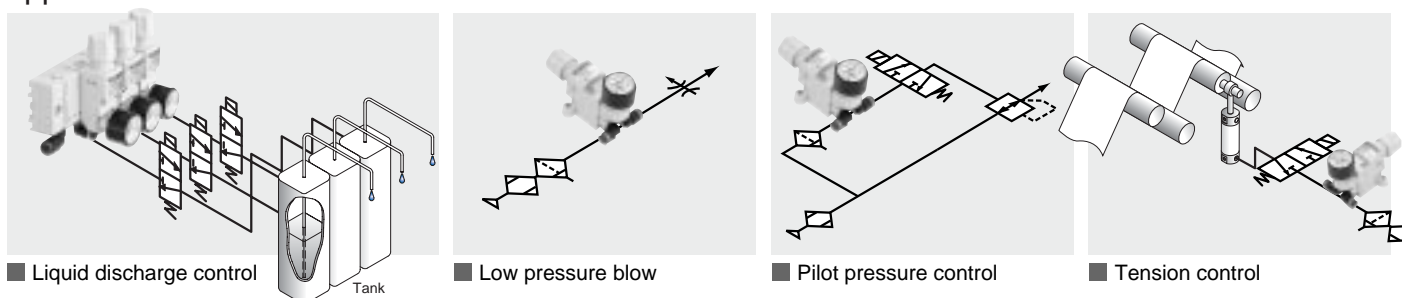
The push-in joint, mounting bracket, and pressure gauge are integrated, saving space and keeping things compact.

Improved workability

One-touch joints are standard. The piping direction can be selected for straight or elbow.



Applications



- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Auto. drain / others
- F.R.L. (Module unit)
- F.R.L. (Separate)
- Compact F.R.
- Precise regulator**
- F.R.L. (Related products)
- Clean F.R.
- Electro pneumatic regulator
- Air booster
- Speed control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum filter
- Vacuum regulator
- Suction plate
- Magnetic spring buffer
- Mechanical pressure SW
- Electronic pressure SW
- Contact / close contact cont. SW
- Air sensor
- Pressure SW for coolant
- Small flow sensor
- Small flow controller
- Flow sensor for air
- Flow sensor for water
- Total air system
- Total air system (Gamma)
- Ending

Compact direct acting precision regulator F.R.L. unit



Pneumatic components

Safety precautions

Always read this section before starting use.

Refer to Intro 67 for general precautions for pneumatic components.

Compact direct operating precision regulator RJB500 Series

Design & Selection

CAUTION

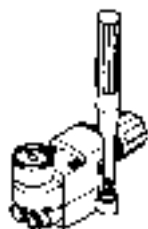
- Avoid using this product where strong pulsation of pressure or vibration is applied.
- Please consult with CKD for frequent operation.
- Set a $5\mu\text{m}$ or smaller air filter on the primary side of the regulator.
- Differential pressure between primary and secondary sides is to be 0.1 to 0.7 MPa.

- Even if primary and secondary pressure differ 0.7 MPa or less, secondary pressure may vibrate or make noise. In this case, lower primary pressure. If vibration or noise continues, contact CKD.
- On/Off using the direction switch valve on the regulator's primary side can cause set pressure to change greatly. The direction switch valve should be installed on the regulator's secondary side.
- When the set output pressure of regulator is exceeded, if damage and malfunction of devices at the secondary side could be caused, always provide a safety device.

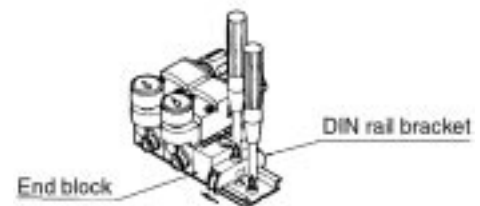
Installation & Adjustment

CAUTION

- When transporting or installing the product, do not apply impact such as falling, etc, or failure of indicator accuracy may be caused.
- Do not install the product where it is high temperature or humidity, or may cause a failure.
- When installing a pressure gauge, screw the gauge into using a wrench on across floats of square section. If another section is used on, air leakage or damage may be caused.
- When installing or piping, observe following matters.
 - Check the IN arrow showing air inlet before connecting. If connected reversely, malfunction may be caused.
 - Do not move and swing products with gripping adjustment knob.
 - When installing a compact regulator, use M4 plain washer attached screws, and fix them with tightening torque 1.4 to 2.0 N·m or less.



- When installing a block manifold with DIN rail, fix the DIN rail, while pinching the bracket by end blocks of manifold. Recommended tightening torque of DIN rail bracket is 1.4 to 2.0 N·m. Fix DIN rail bracket, while making no gaps between end blocks. Care must be taken when expanding, maintaining or disassembling regulator blocks.



- Avoid installation where vibration or impact is applied.
- Flash the pipe carefully before installation.
- When assembling a pressure gauge or extending joint to a pressure gauge port, fix the part with tightening torque 3.5N·m or less.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

Ending

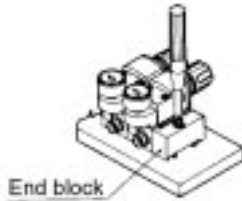
Compact direct acting precision regulator F.R.L. unit

Installation & Adjustment

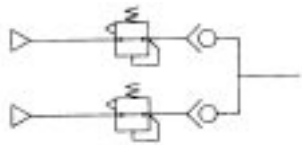
CAUTION

- When installing the product directly without using DIN rail (direct mount), fix end blocks on both sides with M4 set screws.

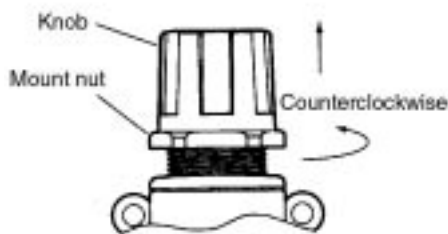
Recommended tightening torque is 1.4 to 2.0 N·m.
Install the product on fully flat plane. If the sheet plane is small, an external pressure from top may result in damaging manifold connection section. If flat sheet plane is not secured, use DIN rail mount type.



- When using in parallel as below, out side of circuit must not be closed. If closed circuit is required, install a check valve on each OUT side.



- When installing to a panel, loosening the mount nut, the nut function as a jack, so the knob is removed easily. Fix the product on a panel with a mount nut.



- Connecting a regulator, push-in joint is used. Tube coming off or air leakage could occur depending with outer diameter precision, wall thickness or hardness of piping tube. Use CKD specified tube. When mounting or dismounting a joint, press the release ring equally, while not twisting, then pull out the tube. When using a tube once used, cut the section having mark of chuck jaw.

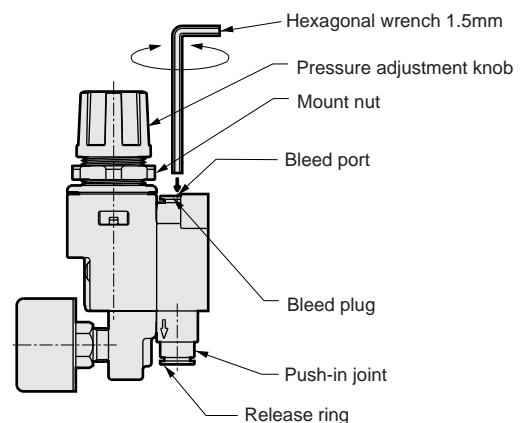
Tube	O.D. (mm)	O.D. tolerance (mm)	Bore size (mm)	Min. bending range (mm)
Soft nylon F-1500 series	φ 4	±0.1	φ 2.5	10
	φ 6		φ 4	20
	φ 8		φ 5.7	30
Urethane U-9500 series	φ 4	+0.1	φ 2	10
	φ 6	-0.15	φ 4	20
	φ 8	+0.1	φ 5	30
Urethane NU series	φ 4	±0.1	φ 2.5	8
	φ 6		φ 4.5	15
	φ 8		φ 6	24

- Insert piping tube into push-in joint certainly and check that tube does not dislocate before starting use.
- For tube used with push in joint, cut the tube to right angle by the dedicating tool.
- Adjusting constant bleed

Constant bleed is adjusted by turning the set screw in the constant bleed port, increasing it in proportion to the set pressure but if set pressure is 0.1 MPa or more to decrease it. In low pressure ranges, constant bleed should be increased to improve sensitivity.

Constant bleed is set to 1.5 ℓ/min (ANR) before the product is shipped from CKD. Insert a hexagon wrench into the constant bleed port and adjust the rate. After adjustment, confirm that set pressure does not increase.

When adjusting pressure constant bleed, do not turn the hexagon wrench fully closed. It will not be possible to adjust pressure and damage could occur.



During Use & Maintenance

⚠ CAUTION

■ Working air quality

- Use clean compressed air filtered with 5 μ m of air filter.
- Do not use the product with other than compressed air. Air containing corrosive gas, liquid and chemical may result in pressure adjustment failure, damage to body or rubber swelling.

■ Working environment

Avoid using the products in following environment.

- When ambient temperature exceeds range of 5 to 60°C.
- Where water drip and cutting lubricant contact to the product.
- Where it is humid, temperature fluctuates and dew condensates.
- Where splash of salt air or sea water contacts to the product.
- If there is atmosphere of corrosive gas and liquid and chemical material.
- Where the product is exposed to direct sun lay.

■ Pressure management

- Confirm primary pressure before setting.
- Pressure higher than the primary pressure can not be set.
- If pressure adjustment knob is rotated clockwise, the secondary pressure increases, while counterclockwise, the pressure decreases. When adjusting pressure pull up the knob to check that lock is not applied.
- Pressure is set in the depressurizing direction (high pressure → low pressure), so a highly precise setting can be made.
- Lock the pressure adjustment knob after setting pressure.
- Air constantly leaks from the bleed hole. This is necessary for precise pressure control, so do not plug the hole.
- When setting pressure, turn the secondary direction switch valve several times and confirm set pressure. Failure to confirm pressure could cause set pressure to change greatly.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
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Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

Ending

Compact direct acting precision regulator
F.R.L. unit

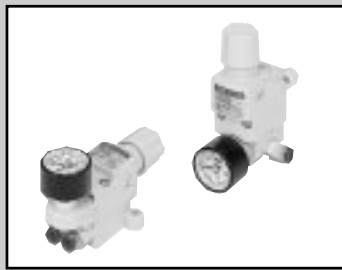
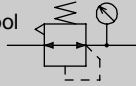
Compact direct operating precision regulator

RJB500 Series

Grease free specification, compact, space saving type.

Port size: Push-in joint $\phi 4$, $\phi 6$

JIS symbol



Specifications

Descriptions		RJB500
Working fluid		Compressed air
Max. working pressure Mpa		1.0
Withstanding pressure Mpa		1.5
Ambient temperature range °C		5 to 60
Set pressure range Mpa		0.02 to 0.5 (0.01 to 0.2) (Note 1)
Sensitivity Mpa		0.001 (lock sensitivity 0.004) (Note 2)
Air consumption ℓ /min		1.5 (Note 3)
Port size	IN-OUT	Push-in joint: $\phi 4$, $\phi 6$
	GAUGE	Rc1/8
Product weight g		90

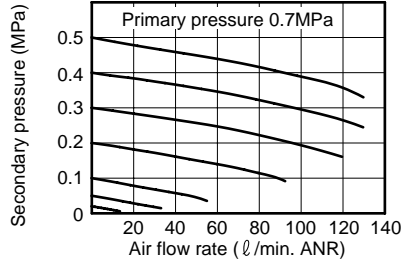
Note 1: Values in parentheses are for low pressure.

Note 2: Set pressure sensitivity for the pressure adjustment knob block's minimum spacing.

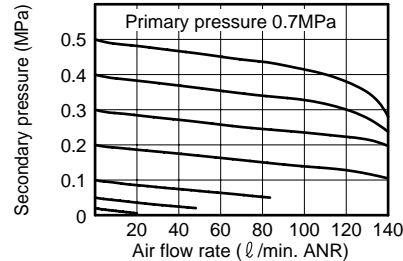
Note 3: Value for secondary side setting pressure 0.1 MPa.

Flow characteristic

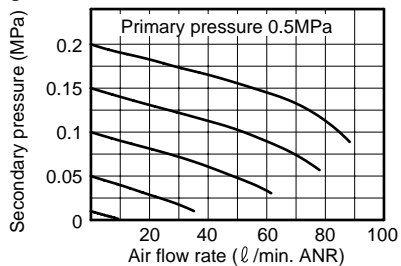
● RJB500-**C4



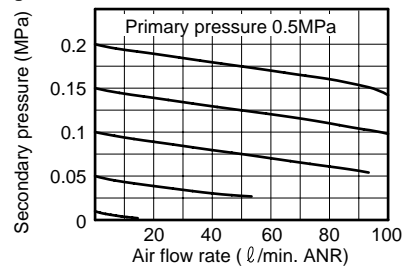
● RJB500-**C6



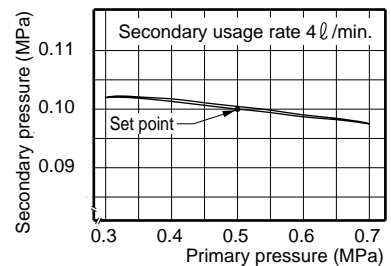
● RJB500-**C4-L



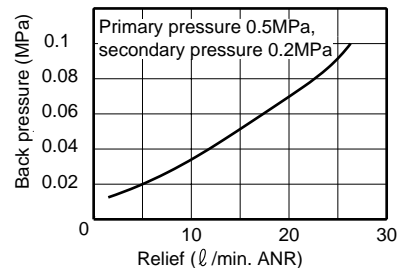
● RJB500-**C6-L



Pressure characteristic



Relief characteristic



How to order

RJB500 - SSC4 - P

Model no.

A Connection

B Option

Symbol		Descriptions	
A Connection			
Direction	IN	S	Straight
		L	Elbow
	OUT	S	Straight
		L	Elbow
Port size		C4	$\phi 4$
		C6	$\phi 6$
B Option			
Panel mount	Blank	Without nut	
	P	With nut	
Pressure range	Blank	0.02 to 0.5 MPa Note 1	
	L	0.01 to 0.2 MPa Note 2	
Pressure gauge	Blank	With pressure gauge	
	T	Without pressure gauge (gauge port Rc1/8)	

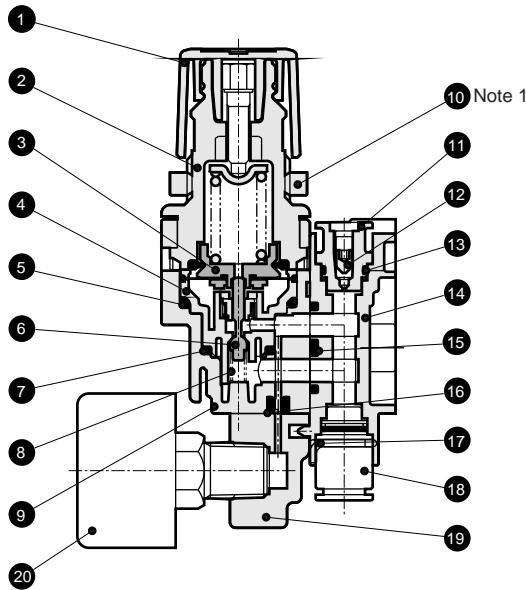
Note on model no. selection

Note 1: A 0 to 1.0 MPa pressure gauge is assembled.

Note 2: A 0 to 0.4 MPa pressure gauge is assembled.

Note 3: For panel installation, indicate option symbol "P".

Internal structure and parts list



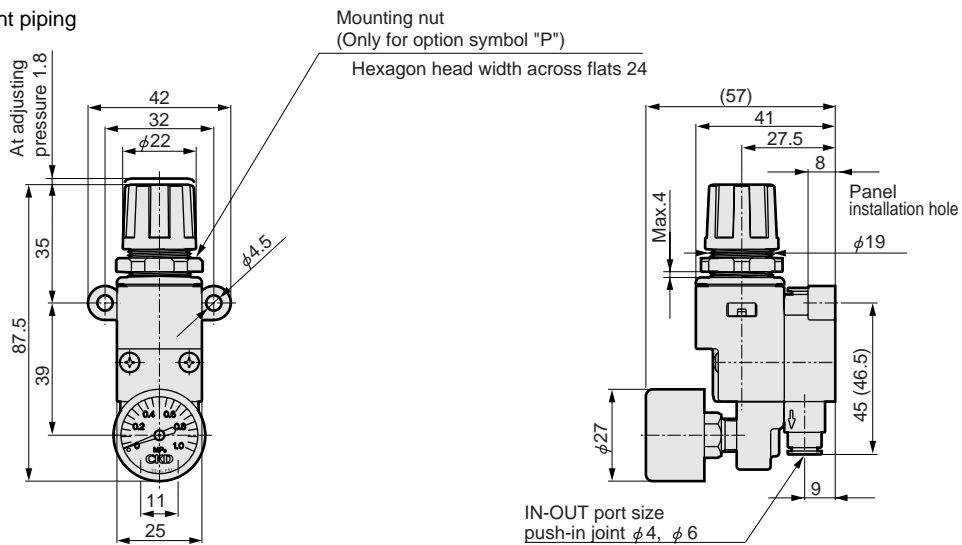
Note 1: A mounting nut is optional.
Nut is attached only for option symbol "P".

No.	Parts name	Material
1	Knob	Polyacetal resin
2	Guard	Polyamide resin
3	Diaphragm assembly	Polyacetal resin, nitrile rubber, chloroprene rubber
4	Valve guide assembly	Polyacetal resin, brass, stainless steel
5	O ring	Fluoro rubber
6	Valve	Stainless steel
7	O ring	Fluoro rubber
8	Spring	Stainless steel
9	Body	Polyamide resin
10	Mounting nut	Polyacetal resin
11	Bleeding plug	Polyamide resin
12	Hexagon socket head set screw	Stainless steel
13	O ring	Nitrile rubber
14	Piping block assembly	Polyamide resin, steel
15	Body packing seal	Hydrogen nitrile rubber
16	Packing seal	Nitrile rubber
17	Stop pin	Stainless steel
18	Cartridge joint	
19	Gauge plug	Polyamide resin
20	Pressure gauge	

Dimensions

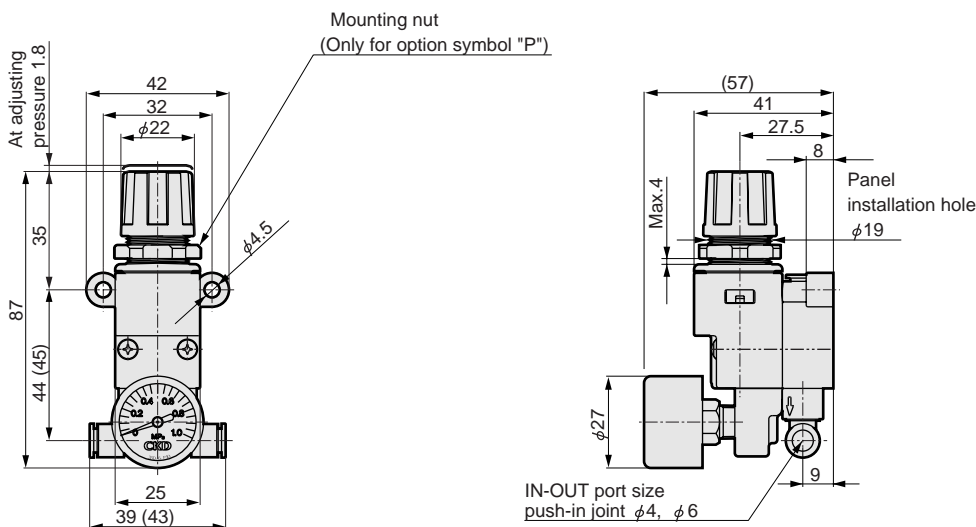


● RJB500 straight piping



Dimensions shown in () are for push-in joint φ6

● RJB500 elbow piping

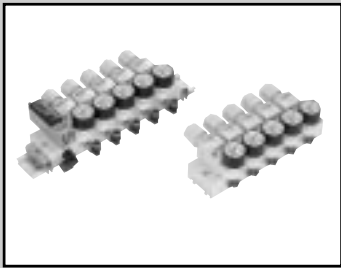


Dimensions shown in () are for push-in joint φ6

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
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Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

Ending

Compact direct acting precision regulator
F.R.L. unit



Block manifold compact direct operating precision regulator

MNRJB500 Series

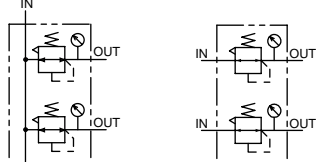
Mix manifold of RJB500/RB500 Series

Port size: push-in joint $\phi 4$, $\phi 6$, $\phi 8$



JIS symbol

Common supply type Individual supply type



Specifications

Descriptions		MNRJB500A	MNRJB500B
Working fluid		Compressed air	
Max. working pressure Mpa		0.8	
Withstanding pressure Mpa		1.2	
Ambient temperature range °C		5 to 60	
Set pressure range Mpa		0.02 to 0.5 (0.01 to 0.2) (Note 1)	
Sensitivity Mpa		0.001 (lock sensitivity 0.004) (Note 2)	
Air consumption ℓ /min		1.5 (Note 3)	
Port size	IN	Push-in joint $\phi 6$, $\phi 8$	Push-in joint $\phi 4$, $\phi 6$
	OUT	Push-in joint: $\phi 4$, $\phi 6$	
	GAUGE	Rc1/8	

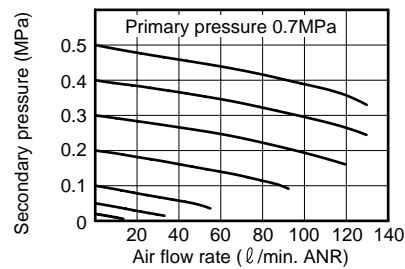
Note 1: Values in parentheses are for low pressure.

Note 2: Set pressure sensitivity for the pressure adjustment knob block's minimum spacing.

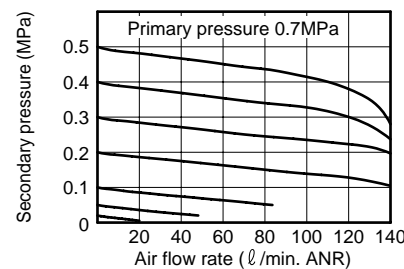
Note 3: Value for secondary side setting pressure 0.1 MPa.

Flow characteristic

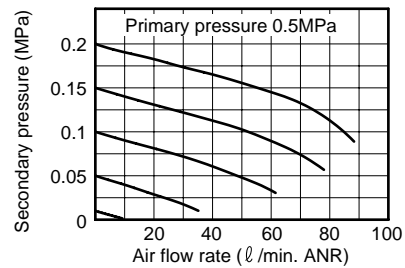
- MNRJB500A-**C64
- MNRJB500B-**C4



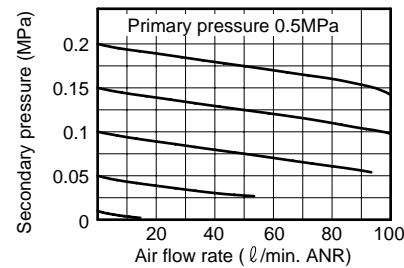
- MNRJB500A-**C86
- MNRJB500B-**C6



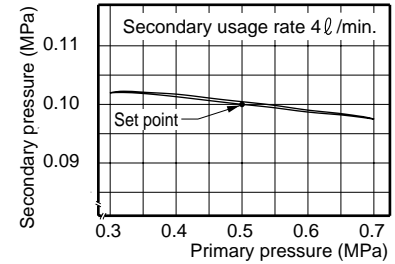
- MNRJB500A-**C64-L
- MNRJB500B-**C4-L



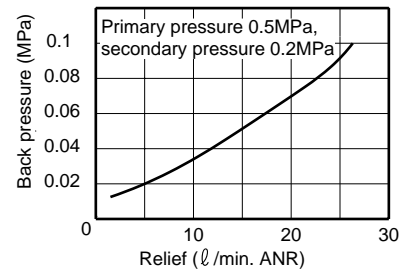
- MNRJB500A-**C86-L
- MNRJB500B-**C6-L



Pressure characteristic

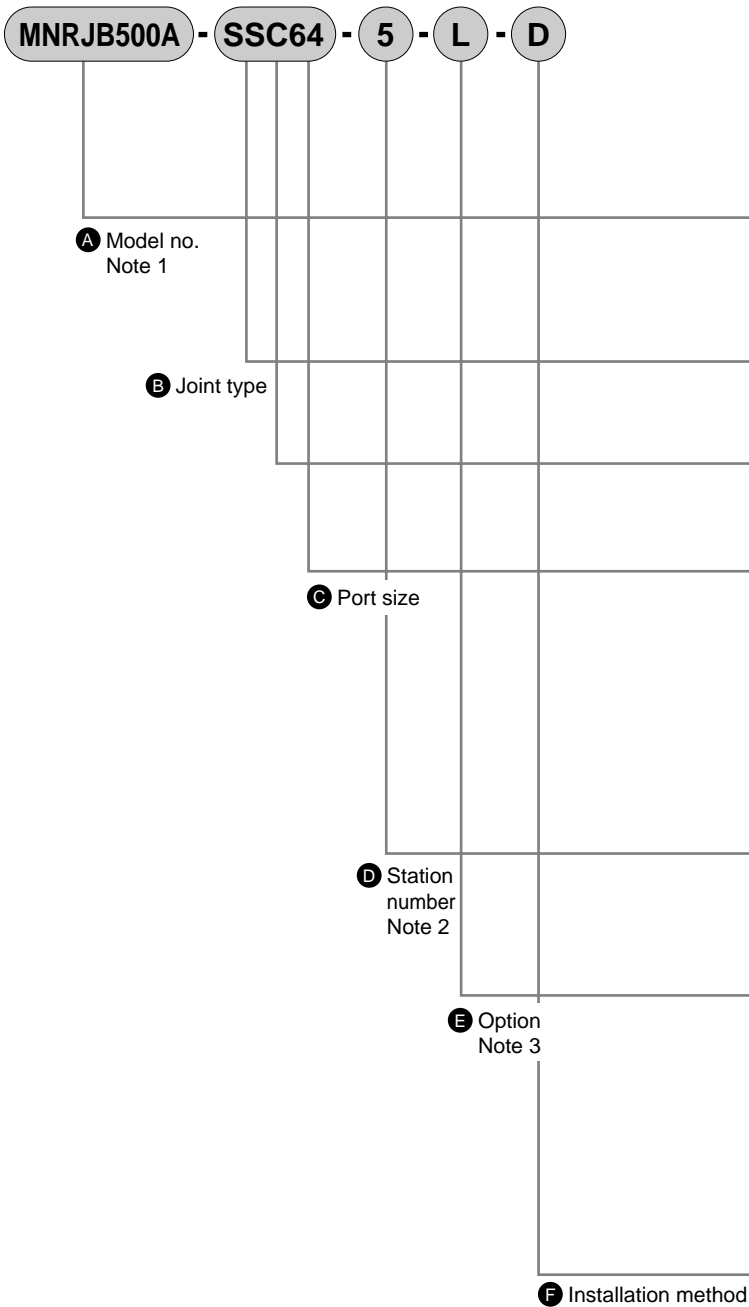


Relief characteristic



Note 1: With common exhaust, primary pressure is insufficient when using multiple manifolds simultaneously. So, install air supply block per three stations. Use an air supply port larger than OUT port size.

How to order



Symbol	Descriptions		
A Model no.			
MNRJB500A	Common supply type		
MNRJB500B	Individual supply type		
B Joint type			
IN direction			
S	Straight		
L	Elbow		
OUT direction			
S	Straight		
L	Elbow		
C Port size IN-OUT			
		MNRJB500A	MNRJB500B
C64	IN; ϕ 6, OUT; ϕ 4		
C66	IN; ϕ 6, OUT; ϕ 6		
C84	IN; ϕ 8, OUT; ϕ 4		
C86	IN; ϕ 8, OUT; ϕ 6		
C4	IN / OUT; ϕ 4		
C6	IN / OUT; ϕ 6		
D Station number			
1	1 station		
to	to		
10	10 stations		
E Option			
		MNRJB500A	MNRJB500B
Pressure range	Blank	0.02 to 0.5MPa Note 4	
	L	0.01 to 0.2MPa Note 5	
Pressure gauge	Blank	With pressure gauge	
	T	W/o pressure gauge (gauge port Rc1/8)	
Flow direction	Blank	Standard flow (left → right)	
	X1	Reverse flow (right → left)	
F Installation method			
Blank	DIN rail installation		
D	Direct mount		

⚠ Note on model no. selection

- Note 1: Air supply block is to be 1 station.
When using three or more stations simultaneously with the common supply, increase one supply block station for every three stations.
In this case, indicate specifications in the mix manifold specification sheet.
- Note 2: Maximum installation number of direct mount type is 5 stations.
- Note 3: Same options and pressure gauge apply for each regulator block.
- Note 4: A 0 to 1.0 MPa pressure gauge is assembled.
- Note 5: A 0 to 0.4 MPa pressure gauge is assembled.
- Note 6: When other than basic model specifications, issue the mix manifold specification sheet on page 667.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
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Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

Ending

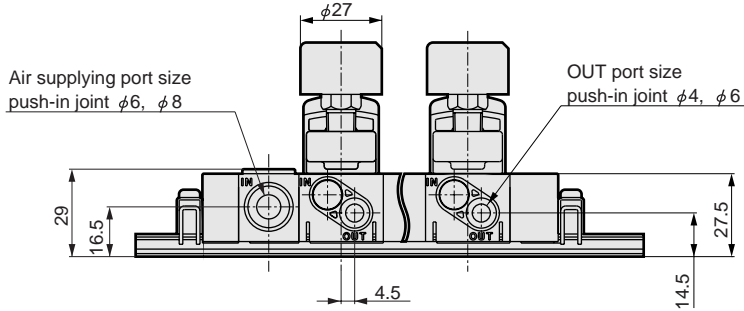
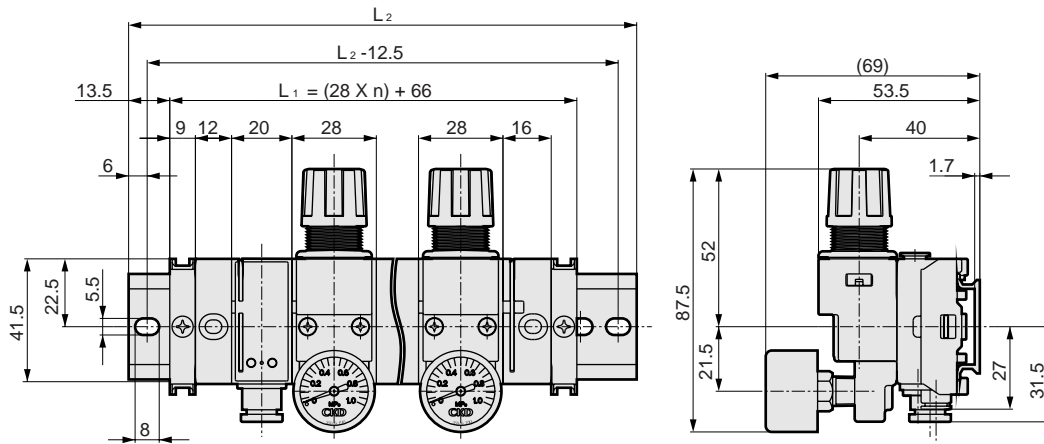
Compact direct acting precision regulator block manifold
F.R.L. unit

Dimensions



Common supply type DIN rail mount type

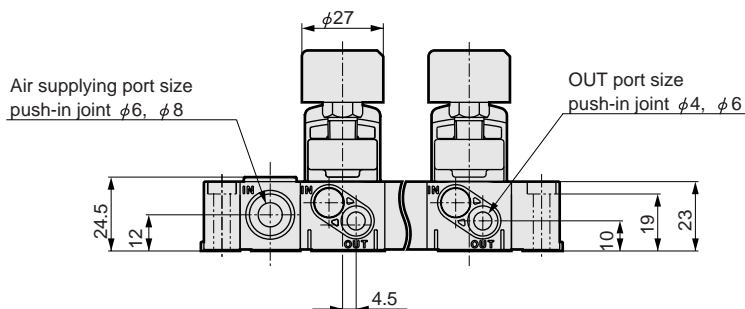
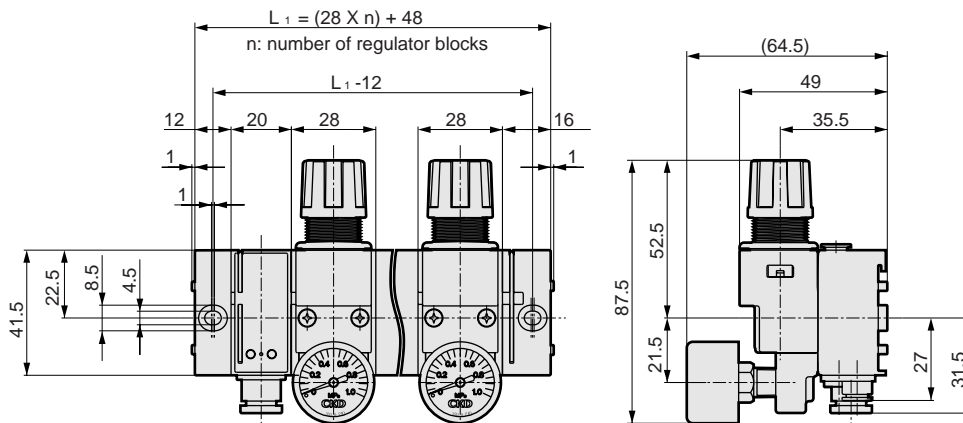
MNRJB500A-**C**.*



Station number	L ₂ dimension
1	125
2	150
3	175
4	212.5
5	237.5
6	262.5
7	287.5
8	325
9	350
10	375

Common supply type direct mount type

MNRJB500A-**C**.*-D

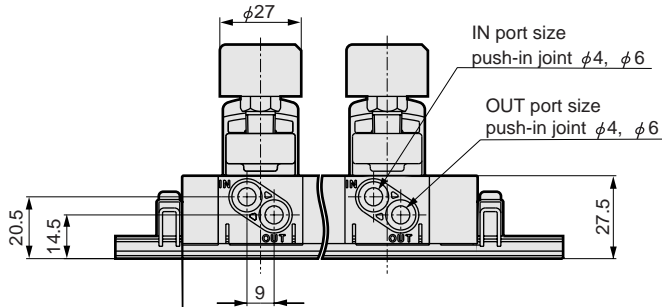
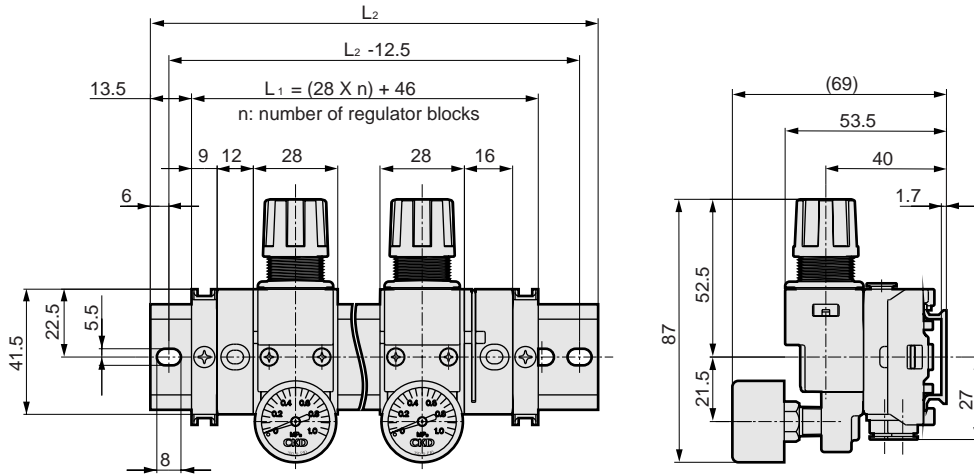


Dimensions



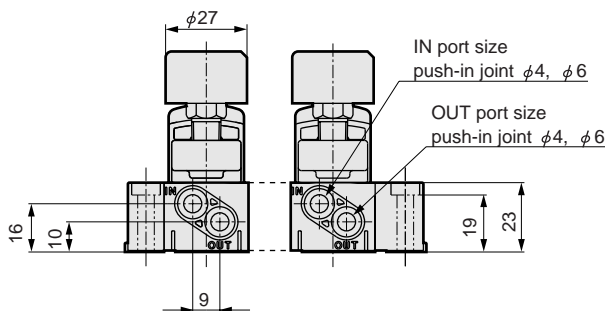
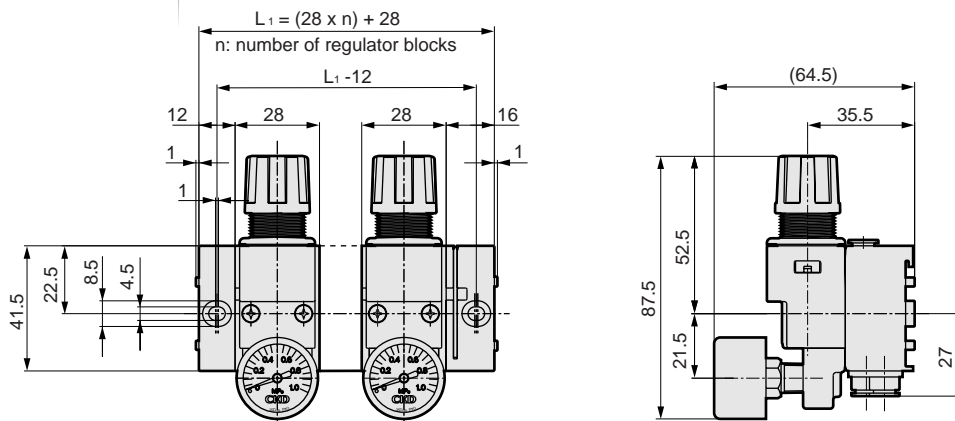
● Individual supply type DIN rail mount type

MNRJB500B-**C*-*



● Individual direct mount type

MNRJB500B-**C*-*D



Station number	L2 dimension
1	100
2	137.5
3	162.5
4	187.5
5	212.5
6	250
7	275
8	300
9	325
10	362.5

- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Auto. drain / others
- F.R.L. (Module unit)
- F.R.L. (Separate)
- Compact F.R.
- Precise regulator
- F.R.L. (Related products)
- Clean F.R.
- Electro pneumatic regulator
- Air booster
- Speed control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum filter
- Vacuum regulator
- Suction plate
- Magnetic spring buffer
- Mechanical pressure SW
- Electronic pressure SW
- Contact / close contact cont. SW
- Air sensor
- Pressure SW for coolant
- Small flow sensor
- Small flow controller
- Flow sensor for air
- Flow sensor for water
- Total air system
- Total air system (Gamma)

Ending

Compact direct acting precision regulator block manifold
F.R.L. unit

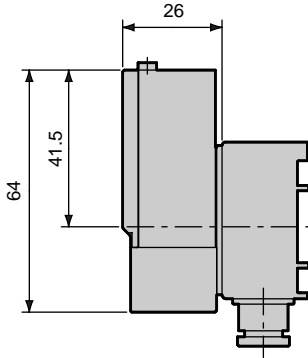
Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Pressure switch / push-in joint elbow type dimensions

● Air supply block with pressure gauge

NRB500-APS-*C*

Pressure switch APS is integrated into air supply block to control primary pressure.

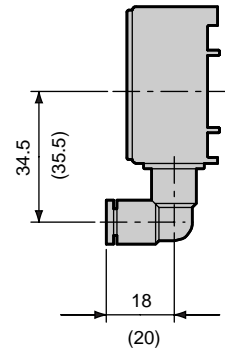


● Air supply block

Push-in joint elbow type

NRB500-NP-LC*

Front or rear piping is enabled with air supply port with elbow joint.



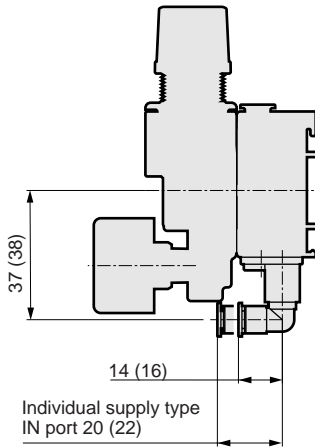
Dimension in () is for C8

● Regulator block

Push-in joint elbow type

NRJB500*-*C*

Front or rear piping is enabled with IN and OUT ports with elbow joint.



Dimension in () is for C6

MNRJB500 Series

Regulator block

How to order

NRJB500B - **SSC4** - **L**

A Model no.

B Connection

C Option

Symbol	Descriptions	
A Model no.		
NRJB500A	Common supply type	
NRJB500B	Individual supply type	
B Connection		
Direction	Note 1 IN	S Straight
		L Elbow
OUT	S Straight	
	L Elbow	
Port size	IN-	C4 $\phi 4$
	OUT	C6 $\phi 6$
C Option		
Pressure range	Blank	0.02 to 0.5MPa Note 2
	L	0.01 to 0.2MPa Note 3
Pressure gauge	Blank	With pressure gauge
	T	Without pressure gauge (gauge port Rc1/8)

⚠ Note on model no. selection

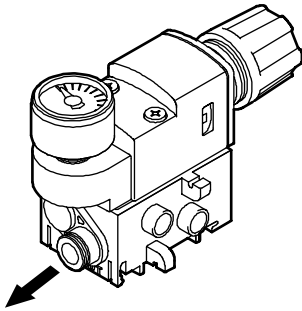
Note 1: For common supply, IN port connection type is not required

Note 2: A 0 to 1.0 MPa pressure gauge is assembled.

Note 3: A 0 to 0.4 MPa pressure gauge is assembled.

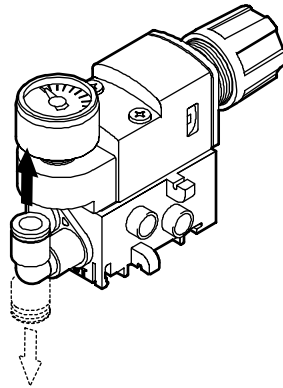
● Common supply straight type

Downward piping is enabled with OUT port with straight joint.



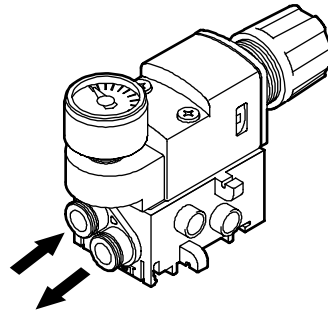
● Common supply elbow type

Front or rear piping is enabled with OUT port with elbow joint.



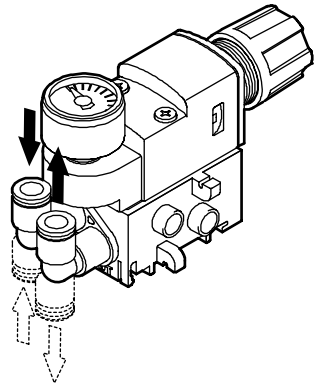
● Individual supply straight type

Front or rear piping is enabled with IN and OUT ports with straight joint.



● Individual supply elbow type

Front or rear piping is enabled with IN and OUT ports with elbow joint.



Sub base

How to order

NRJB500B - NS - SSC4 MP

A Model no.

B Connection

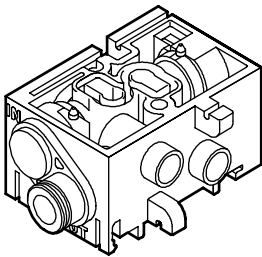
C Option

Symbol	Descriptions		
A Model no.			
NRJB500A	Common supply		
NRJB500B	Individual supply		
B Connection			
Direction	Note 1 IN	S	Straight
		L	Elbow
	OUT	S	Straight
		L	Elbow
Port size	IN-	C4	φ4
	OUT	C6	φ6
C Option			
Blank	Without masking plate		
MP Note 2	With masking plate		

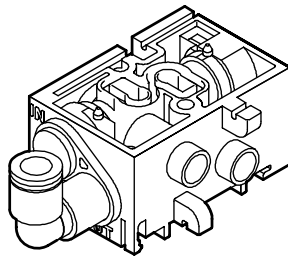
⚠ Note on model no. selection

Note 1: For common supply, IN port connection type is not required.

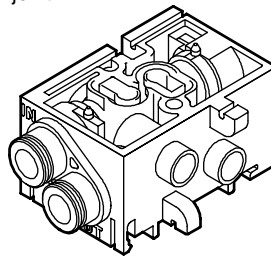
- Common supply straight type
OUT port with straight joint



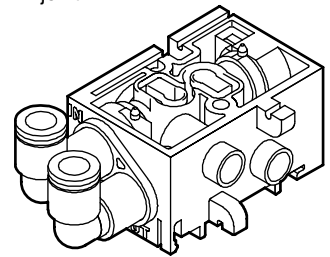
- Common supply elbow type
OUT port with elbow joint



- Individual supply straight type
IN, OUT ports with straight joint



- Individual supply elbow type
IN, OUT ports with elbow joint



Regulator body

How to order

RJB500 - 00 S - L

A Connection

B Option

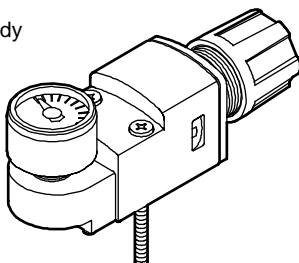
Symbol	Descriptions	
A Connection		
S	Discrete (RJB500)	
M	Manifold (MNRJB500A.B)	
B Option		
Panel mount	Blank	Without nut
	P	With nut
Pressure range	Blank	0.02 to 0.5MPa Note 1
	L	0.01 to 0.2MPa Note 2
Pressure gauge	Blank	With pressure gauge
	T	Without pressure gauge (gauge port Rc1/8)

⚠ Note on model no. selection

Note 1: A 0 to 1.0 MPa pressure gauge is assembled.

Note 2: A 0 to 0.4 MPa pressure gauge is assembled.

- Regulator body



Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Compact direct acting precision regulator block manifold
F.R.L. unit

MNRJB500 Series

- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Auto. drain / others
- F.R.L. (Module unit)
- F.R.L. (Separate)
- Compact F.R.
- Precise regulator
- F.R.L. (Related products)
- Clean F.R.
- Electro pneumatic regulator
- Air booster
- Speed control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum filter
- Vacuum regulator
- Suction plate
- Magnetic spring buffer
- Mechanical pressure SW
- Electronic pressure SW
- Contact / close contact conf. SW
- Air sensor
- Pressure SW for coolant
- Small flow sensor
- Small flow controller
- Flow sensor for air
- Flow sensor for water
- Total air system
- Total air system (Gamma)
- Ending

Common supply block

How to order

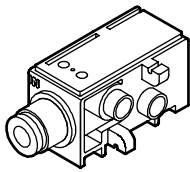
NRJB500-NP - SC6

A Connection

Symbol		Descriptions
A Connection	Port Direction	S Straight
		L Elbow
	Port size	C6 $\phi 6$
		C8 $\phi 8$

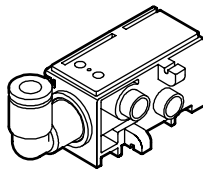
● Straight type

Air supply port with straight joint



● Elbow type

Air supply port with elbow joint



Common supply block with pressure switch

How to order

NRB500-APS - SC6 - 3

Note 1

A Connection

B Lead wire length

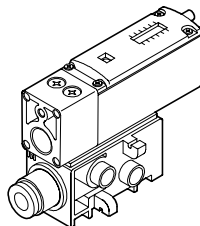
Symbol		Descriptions
A Connection	Port Direction	S Straight
		L Elbow
	Port size	C6 $\phi 6$
		C8 $\phi 8$
A Lead wire length	Blank	1m
	3	3m
	5	5m

⚠ Note on model no. selection

Note 1: Grease is applied to the APS before assembly.
This part is not compatible with grease-free specifications.

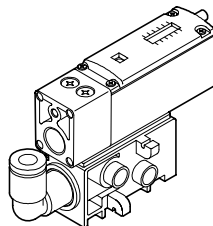
● Straight type

Air supply port with straight joint



● Elbow type

Air supply port with elbow joint



End block

How to order

NRJB500-NE **D**

D

A Connection

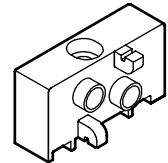
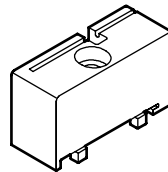
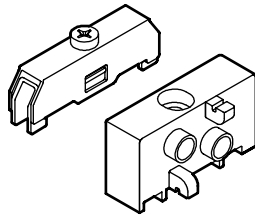
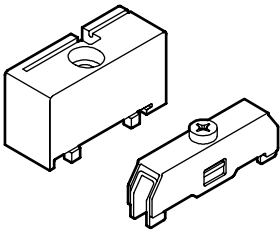
Symbol	Descriptions
A Connection	
Blank	End block R for DIN rail (right)
L	End block L for DIN rail (left)
D	Direct end block R
DL	Direct end block L

● End block R for DIN rail

● End block L for DIN rail

● Direct end block R

● Direct end block L



End blocks R and L are required for manifold configuration.
For DIN rail, use end blocks R and L with DIN rail bracket.

DIN rail

How to order

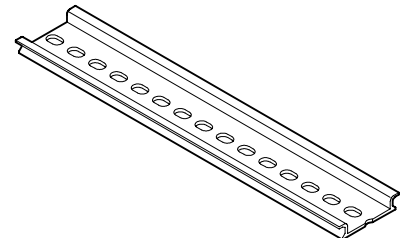
NRB500-BAA **150**

150

A DIN rail dimension
Note 1

● DIN rail

Symbol	Descriptions
A DIN rail dimension	
125	125mm
150	150mm
⋮	⋮



Note on model no. selection

Note 1: Refer to "How to fill out mix manifold specifications" and DIN rail length and manifold dimension for determining DIN dimension, and indicate the dimension on the sheet with mm unit.

Push-in cartridge joint (regulator block)

How to order

NRJB500 - JOINT - **CL4**

CL4

A Type

Symbol	Descriptions	
A Type		
C4	Straight $\phi 4$	
C6	Straight $\phi 6$	
CL4	Elbow $\phi 4$ (discrete)	
CL6	Elbow $\phi 6$ (discrete)	
CLL4	Long elbow $\phi 4$ (manifold)	
CLL6	Long elbow $\phi 6$ (manifold)	

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

Ending

Compact direct acting precision regulator block manifold
F.R.L. unit

MNRJB500 Series

Cartridge joint (common air supply block)

How to order

NRJB500 - Q - JOINT - L6

A Type

Symbol	Descriptions	
A Type		
6	Straight $\phi 6$	
8	Straight $\phi 8$	
L6	Elbow $\phi 6$	
L8	Elbow $\phi 8$	

Pressure gauge

How to order

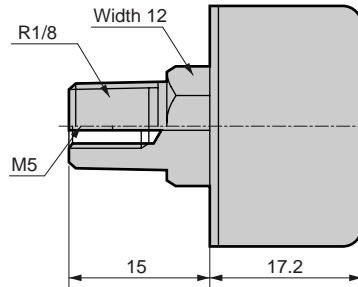
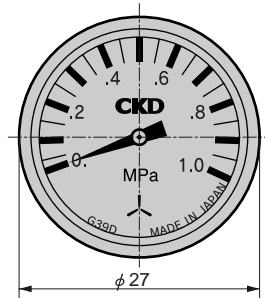
G39D - 6 - P10

A Pressure display

Symbol	Descriptions
A Pressure display	
P10	0 to 1.0 MPa
P04	0 to 0.4 MPa

Dimensions

● G39D



Blanking plug

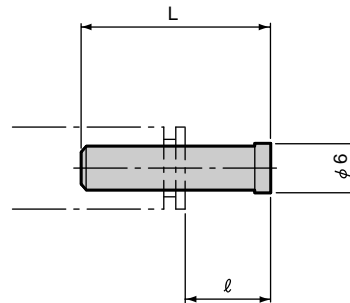
How to order

GWP 4 - B

A Connection

Symbol	Descriptions
A Connection	
4	$\phi 4$
6	$\phi 6$
8	$\phi 8$

Dimensions



⚠ Note on model no. selection

Note 1: Sales unit is 10 pieces per unit.

Model no.	Joint port size ϕ	L	l	d
GWP 4-B	4	27	11	6
GWP 6-B	6	29	11.5	8
GWP 8-B	8	33	14	10

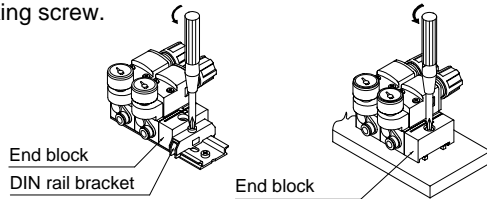
⚠ CAUTION

Disassembling and assembling the block manifold, and replacing the cartridge joint

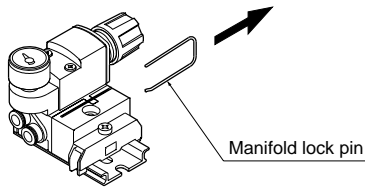
To change the regulator block when the regulator body or regulator block specifications change or when life has been reached, or when adding an air supply block, use the following procedures to expand, disassemble, and assemble parts. Refer to the separate instruction manual for details. Stop the air pressure source supply and release residual pressure before starting disassembly work. After assembling parts, confirm that the lock pin is accurately inserted in the coupling groove between blocks before use. When using DIN rail installing, confirm that the DIN rail bracket is securely fixed onto the end block with no gaps. When directly installing without a DIN rail, check that the end block is fixed with screw before starting use. Air could leak between blocks if the end block is not securely fixed.

Replacing the regulator block and air supply block

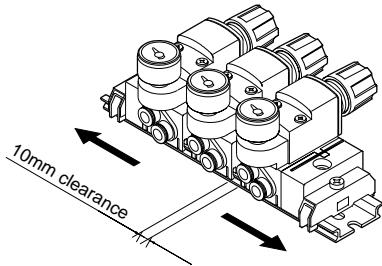
- (1) When using the DIN rail installing, loosen the DIN rail bracket set screw. When directly installing without a DIN rail, remove the end block fixing screw.



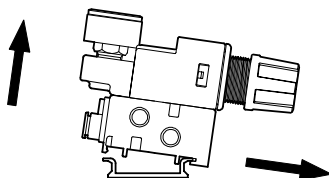
- (2) Using a tip thin screwdriver, pull out the manifold lock pin coupling the regulator block and air supply block to be replaced.



- (3) Slide the block toward the end block, and make an approximately 10mm opening at both ends of the block to be replaced. When installed directly, pull out blocks on both sides.



- (4) Remove the pressure gauge up by pulling it up and toward the pressure adjustment knob. When DIN rail brackets on both sides are slid 2mm or more from the end block, the entire manifold block can be removed.



- (5) Replace with a new block.
- (6) Check that there is no gap between blocks, and then insert the manifold lock pin until it contacts the bottom of the groove.
- (7) Refer to the safety precautions and installation methods, and fix the manifold block.

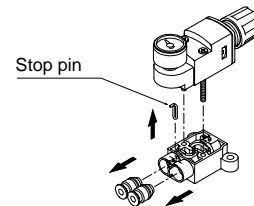
Increasing the regulator and air supply block rows

- (1) If blocks may be increased, order the DIN rail with a length providing for the increase. If the DIN rail is too short when blocks are increased, replace with a DIN rail that accommodates the increase.
- (2) When installing with DIN rails, fix DIN rail brackets. When directly installing without a DIN rail, fix the end block.

Replacing the cartridge joint

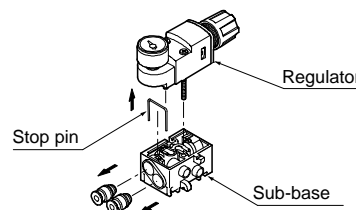
Replacing the compact regulator

- (1) Loosen the screw on the regulator body, and disassemble the piping block.
- (2) Using a minus screwdriver, etc., remove the lock pin inserted onto the top of the sub base. Replace the cartridge joint. Confirm that there is no dirt, etc., on the joint's O-ring, and then assemble it in the original position. Tighten the regulator body tightening screw with a torque of 0.5 to 0.8 N·m.

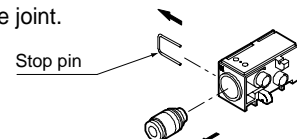


Replacing the block manifold

- (1) Disassemble the block following the regulator block and air supply block replacement procedures.
- (2) To replace the regulator block's cartridge joint, loosen the screw on the regulator body, and disassemble the sub base. Using a minus screwdriver, etc., remove the lock pin inserted onto the top of the sub-base. Replace the cartridge. Confirm that there is no dirt, etc., on the joint's O-ring, and then assemble it in the original position. Tighten the regulator body tightening screw with a torque of 0.5 to 0.8 N·m.



- To replace the air supply block cartridge joint, remove the lock pin inserted on the air supply block side with a minus driver, etc. Then, replace the cartridge joint.



- (3) Check that the cartridge joint is fixed with the lock pin and will not move.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

Ending

Compact direct acting precision regulator block manifold
F.R.L. unit

MNRJB500 mix manifold specifications

Contact _____

Slip No. _____ Quantity _____ Set _____ Delivery _____ / _____

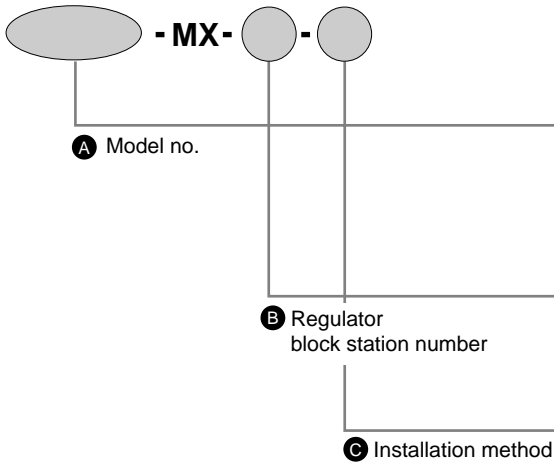
Issue date _____ / _____ / _____

Your company name _____

Contact _____

Order No. _____

● Mix manifold model No.



Symbol	Descriptions
A Model no.	
MNRJB500A	Common supply type (only compact direct acting precision regulator selected)
MNRB500A	Common supply type (compact direct acting precision regulator, general regulator mixed)
MNRJB500B	Individual supply type (only compact direct acting precision regulator selected)
MNRB500B	Individual supply type (compact direct acting precision regulator, general regulator mixed)
B Number of regulator blocks	
1	1 station
2	2 stations
⋮	⋮
C Installation method	
Blank	DIN rail
D Note 1	Direct mount

⚠ Note on model no. selection

Note 1: Station number of direct mount block is to be within 6 blocks including regular and air supply blocks. However, a regular block is to be 5 stations or less.

Note 2: Grease-free specifications are not available when the NRB500* and common exhaust block with APS are used. Grease is applied before these are assembled.

Note 3: Consult with CKD if match the common supply and the individual supply type.

● Mix manifold specifications

Configurations	Model no.	Installation position														Quantity	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
End block L	N <input type="text"/> 500 - NE																
Common air supply block	N <input type="text"/> 500 - NP - <input type="text"/>																
Common air supply block with APS	NRB500 - APS - <input type="text"/> - <input type="text"/>																
Regulator block	N <input type="text"/> 500 <input type="text"/> - <input type="text"/> - <input type="text"/>																
	N <input type="text"/> 500 <input type="text"/> - <input type="text"/> - <input type="text"/>																
	N <input type="text"/> 500 <input type="text"/> - <input type="text"/> - <input type="text"/>																
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	N <input type="text"/> 500 <input type="text"/> - <input type="text"/> - <input type="text"/>																
Sub-base with masking plate	N <input type="text"/> 500 <input type="text"/> - NS- <input type="text"/> -MP																
End block R	N <input type="text"/> 500 - NE																
DIN rail	L ₂ = mm	Accessories		GWP4-B		Piece		GWP8-B		Piece							
		Blanking plug		GWP6-B		Piece											

- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Auto. drain / others
- F.R.L. (Module unit)
- F.R.L. (Separate)
- Compact F.R.
- Precise regulator
- F.R.L. (Related products)
- Clean F.R.
- Electro pneumatic regulator
- Air booster
- Speed control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum filter
- Vacuum regulator
- Suction plate
- Magnetic spring buffer
- Mechanical pressure SW
- Electronic pressure SW
- Contact / close contact cont. SW
- Air sensor
- Pressure SW for coolant
- Small flow sensor
- Small flow controller
- Flow sensor for air
- Flow sensor for water
- Total air system
- Total air system (Gamma)
- Ending

Compact direct acting precision regulator block manifold
F.R.L. unit