

Block manifold regulator

MNRB500 Series

Port size: push-in joint ϕ 4, ϕ 6, ϕ 8



/ others JIS symbol F.R.L.

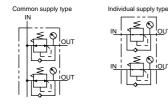
type dryer

Auto. drair

(Module unit

Compac F.R. Precise

F.R.L. (Separate



Specifications

Description	าร	MNRB500A	MNRB500B						
Working flui		Compressed air							
Max. working pr	essure Mpa	0.8							
Withstanding pr	essure Mpa	1.2							
Ambient temperatu	re range °C	5 to 60							
Set pressure	range Mpa	0.05 to 0.7 (Note 1)							
Relief		With relief r	mechanism						
	IN	Push-in joint ϕ 6, ϕ 8	Push-in joint $\phi 4$, $\phi 6$						
Port size	OUT	Push-in joi	nt: <i>φ</i> 4, <i>φ</i> 6						
	GAUGE	Rc1/8							

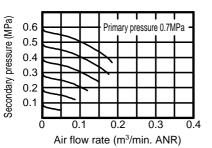
Note 1: Low pressure specifications are 0.05 to 0.35.

Ozone specifications (Ending 15) MNRB500*------P11

Flow characteristic

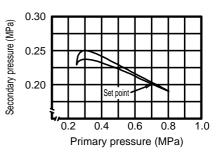
For use with 1 or 2 stations MNRB500A-SSC64

MNRB500B-SSC4

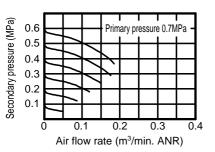


MNRB500A-SSC86 MNRB500B-SSC6 Secondary pressure (MPa) 0.6 Primary pressure 0.7MPa 0.5 0.4 0.3 0.2 0.1 Ō 0.1 0.2 0.3 0.4 Air flow rate (m3/min. ANR)

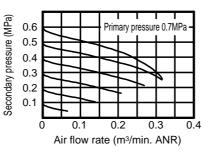
Pressure characteristic



For use with 3 stations MNRB500A-SSC64





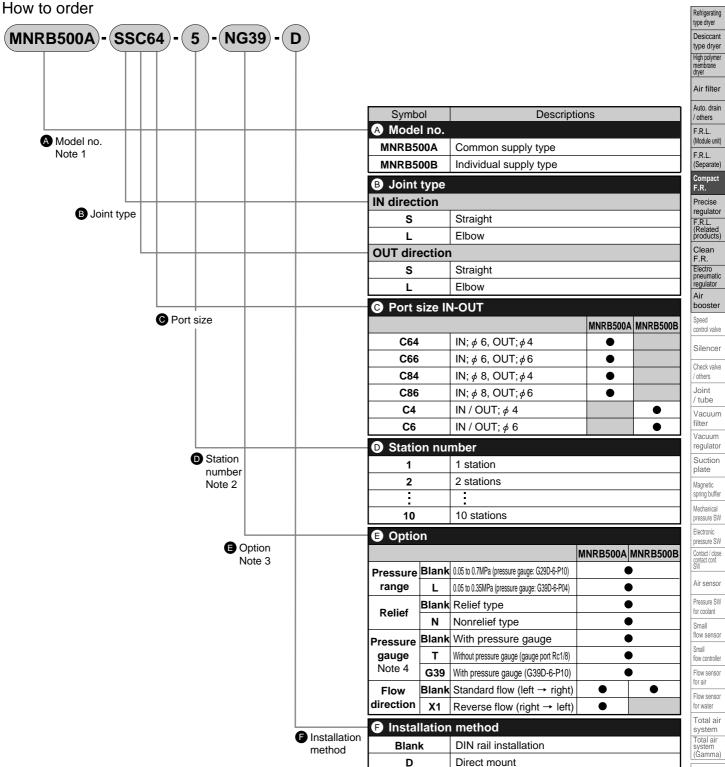


Note 1: For common supply type, if multiple stations work same time, the pressure could be short temporally. So, install air supply block per three stations. Use an air supply port larger than OUT port size. Note 2: If three stations are used at same time, the characteristic apply for the remaining station when con-

sumption of other two stations in three reaches 200 L/min.

Ending

How to order



D

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: ϕ 21; 0 to 1.0MPa pressure gauge is provided as standard. For low pressure specifications, ϕ 27: 0 to 0.4MPa range is provided.
- Note 5: When other than basic model specifications, issue the mix manifold specification sheet on page 641.

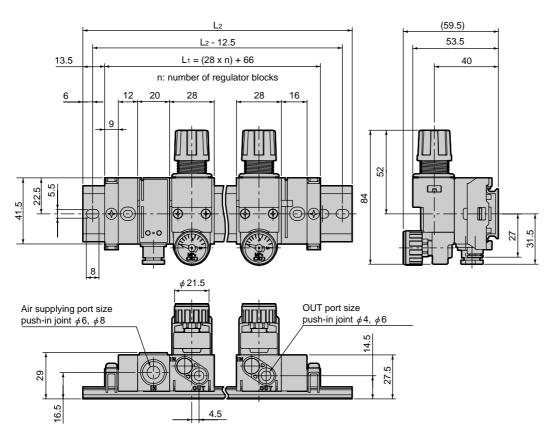
Ending Block manifold regulator F.R.L. unit

Dimensions

• Common supply type DIN rail mount type

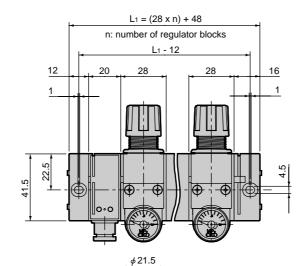
CAD

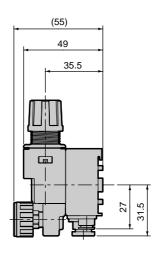
MNRB500A-**C**-*

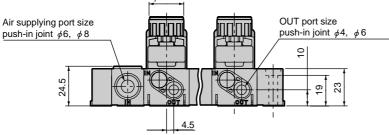


Station number	L2 dimension
1	125
2	150
3	175
4	212.5
5	237.5
6	262.5
7	287.5
8	325
9	350
10	375

Common supply type direct mount type MNRB500A-**C**-*-D







CKD

Refrigerating type dryer Desiccant type dryer High polymer membrane dryer Air filte 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 valv Silence Check valv / others Joint / tube Vacuum filter Vacuum regulato Suction plate Magnetic spring buffe Mechanical pressure SW Electronic pressure SV Contact / close contact conf. SW Air senso Pressure SV for coolant Small flow sense Small flow controlle Flow senso for air Flow senso for water Total air Total air system (Gamma) Ending

Dimensions

Refrigerating type dryer

Desiccant type dryer

High polymer membrane dryer

Air filter

Auto. drain / others

F.R.L.

(Module unit

(Separate)

Compact F.R. Precise regulator F.R.L. (Related products)

Clean F.R.

Electro pneumatic regulator

Air booster

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 senso

Small

flow controller Flow sensor for air Flow sensor for water Total air

Total air system (Gamma)

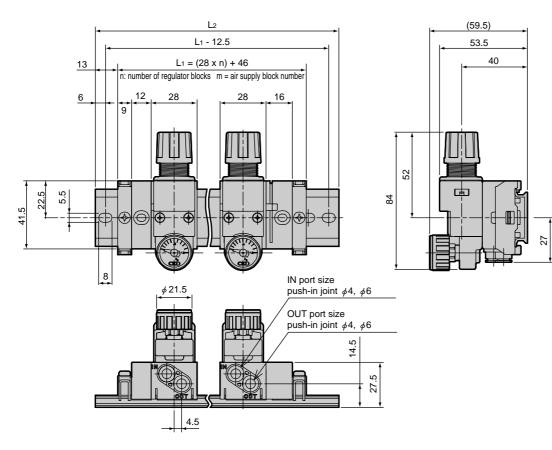
Ending

Speed control valve

Dimensions

 Individual supply type DIN rail mount type MNRB500B-**C*-*

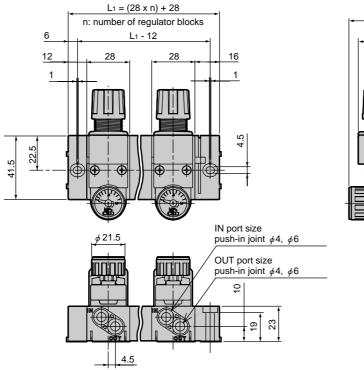
CAD



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

Individual direct mount type

MNRB500B-**C*-*-D



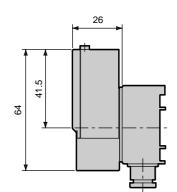
Block manifold regulator F.R.L. unit

Refrigerating type dryer Desiccant type drye High polymer membrane dryer Air filte 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 valv Silence Check valv / others Joint / tube Vacuum filter Vacuum regulator Suction plate Magnetic spring buffe Mechanical pressure SW Electronic pressure SV Contact / close contact conf. SW Air senso Pressure SV for coolant Small flow sense Small flow controlle Flow senso for air Flow senso 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.

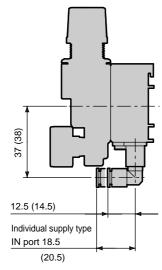


Regulator block

Push-in joint elbow type

NRB500*-**C*

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

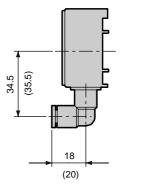


Dimension in () is for C6

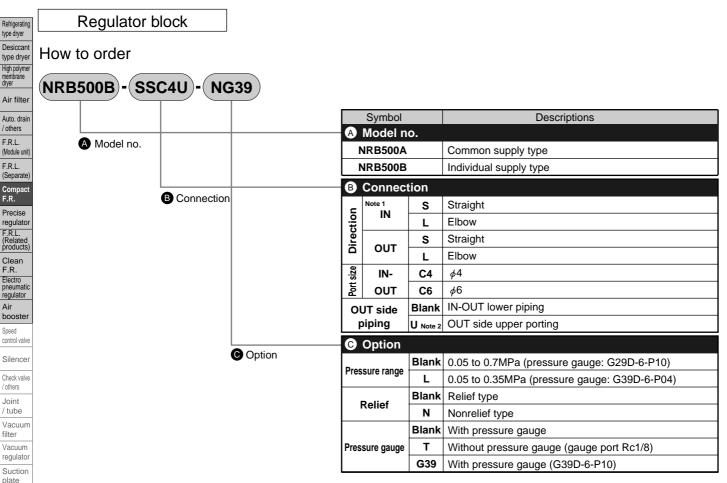
Air supply block

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



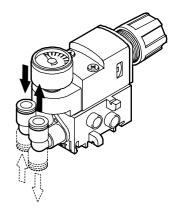
ANote on model no. selection

Ø

Note 1: For common supply, IN port connection type is not required Note 2: Only straight is applicable.

Note 3: ϕ 21 0 to 1.0MPa pressure gauge is provided as standard. For low pressure, ϕ 27 0 to 0.4 MPa low pressure gauge is provided.

- Common supply straight type Downward piping in 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 enables with IN and OUT ports with straight joint.
- 例 Ē
- Individual supply elbow type Front or rear piping is enabled with IN and OUT ports with elbow joint.



/ others

F.R.L.

F.R.L.

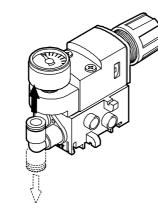
Air

Speed

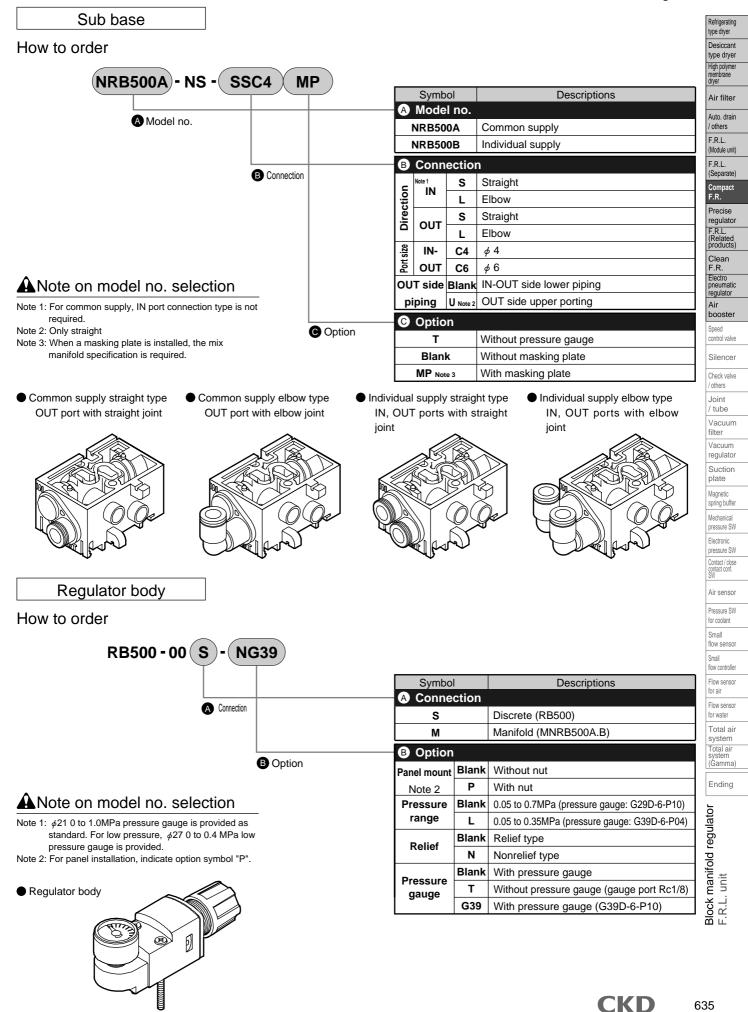
/ others

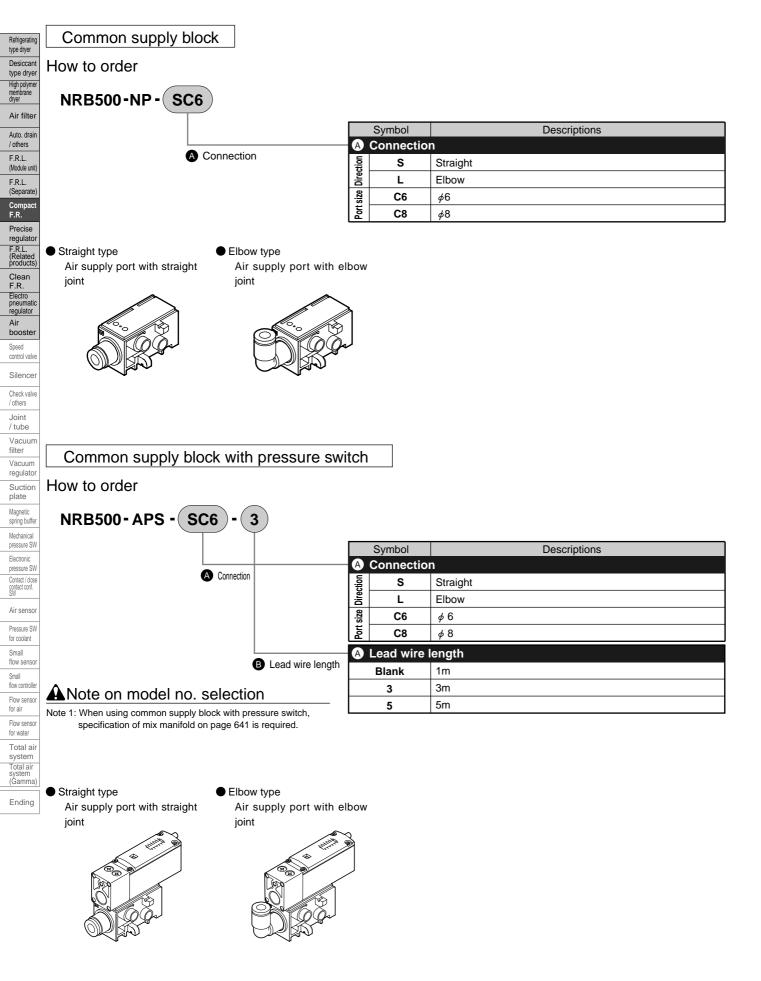
Joint

/ tube

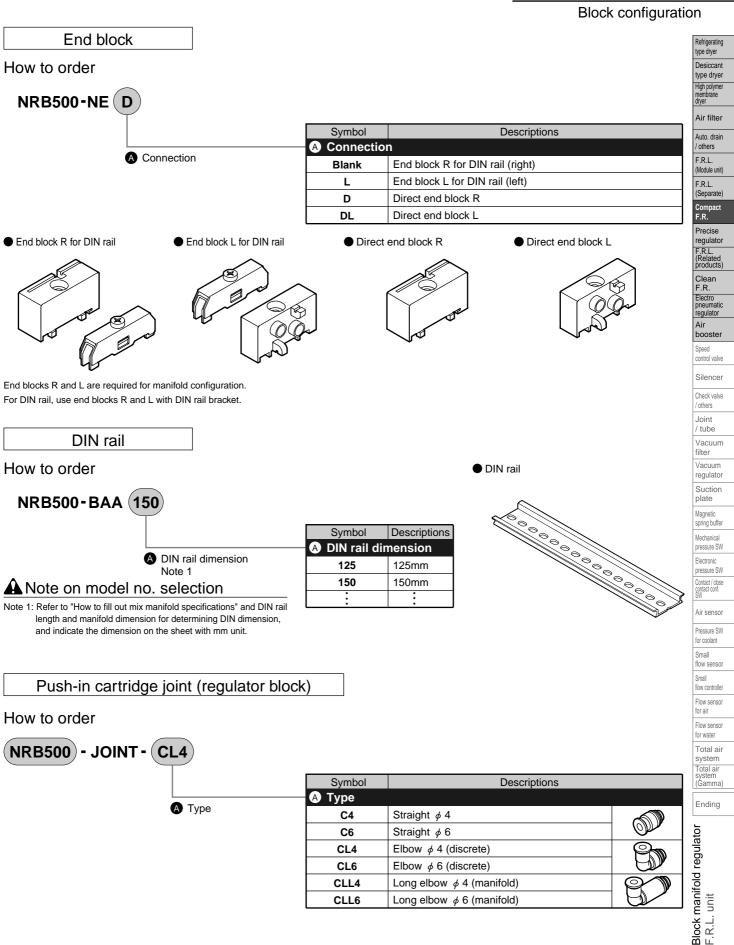


Block configuration





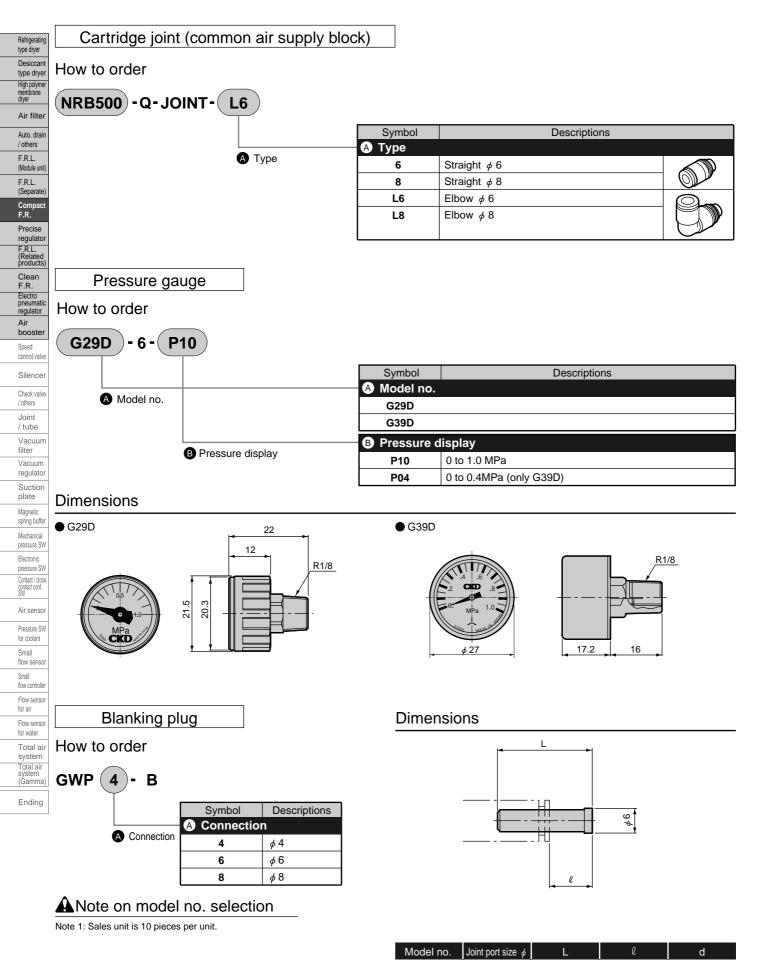
636 **CKD**



CLL6

Long elbow ϕ 6 (manifold)

MNRB500 Series



GWP 4-B

GWP 6-B

GWP 8-B

11.5

Technical data

Refrigerating type dryer

Desiccant type dryer High polymer

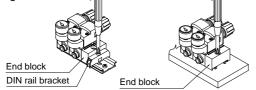
Disassembling and assembling the block manifold, and replacing the cartridge joint

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.

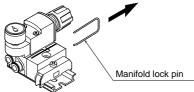
Replacing the regulator block and air supply block

(1) When using the DIN rail installing, loosen the DIN rail bracket set screw.

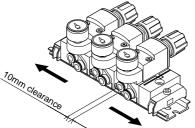
When directly installing without a DIN rail, remove the end block fixing screw. ζ_{fin}



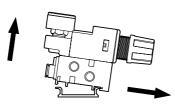
(2) Using a tip thin screwdriver, pull out the manifold lock pin coupling the regulator block and air supply block to be replaced.



(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

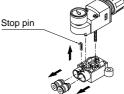
- (1) If blocks may be increased, order the DIN rail with a length providing for the increase. If the DIN rail is too short when blocks are increased, replace with a DIN rail that accommodates the increase.
- (2) When installing with DIN rails, fix DIN rail brackets. When directly installing without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

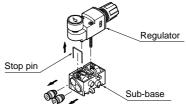
Tighten the regulator body tightening screw with a torque of 0.5 to 0.8 N·m.



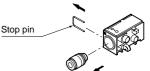
Replacing the block manifold

- (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.



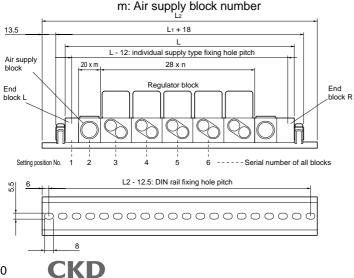
To replace the air supply block cartridge joint, remove the lock pin inserted on the air supply block side with a minus driver, etc. Then, replace the cartridge joint.



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

Refrigerating		How to fill ou	f n	niv	z n	nar	hif	ole	d e	sn	er	if	ica	ati	or	he
type dryer						liai				۶P			166			13
Desiccant type dryer	Mix manifold	d model No.														
High polymer membrane dryer	Refer to page	634 to 638 for model No. per com	por	ent												
Air filter	MNRB500A	- MX- (3)-														
Auto. drain / others		- $+$ $+$		_					_		_	_	_	_	_	
F.R.L.				- (A		Sym /Iod										
(Module unit) F.R.L.	A Mode	el no.				IRB:			С	om	imc	n s	upp	blv [.]	tvp	e
(Separate)						IRB			113 51							
Compact F.R.				B		lum	be	r of								
Precise regulator		B Number of regulator blocks				1			1 station							
F.R.L. (Related						2			2 stations							
products) Clean						:				:	_					_
F.R. Electro		O Installation me	ethoo			nsta		tio								
pneumatic regulator		-				Blar			-	IN						
Air booster	ANote on mo	del no. selection		L		D Not	e 1			ore	n tc	nou	nt	_		
Speed		of direct mount block is to be within 6 blocks	incl	udin	g re	egula	r an	d ai	r su	pply	/ blc	ocks	.			
control valve Silencer	, 0	lar block is to be 5 stations or less. y and individual supply types are combined	, ple	ase	cor	sult v	vith	СКІ	D.							
Check valve		Installation position												Т		ntity
/ others Joint	Configurations	Model no.	1	2	3	4 5	6	7	8	9	10	11	12	13	14	Quantity
/ tube	End block L	NRB500 - NE L	0													1
Vacuum filter	Common air supply block	NRB500 - NP -														
Vacuum regulator	Common air supply block with APS	NRB500 - APS - SC6 - 3		0												1
Suction		NRB500 A - SC6			0	00)									3
plate		NRB500														
Magnetic spring buffer																
Mechanical pressure SW	Regulator block												\square	\square	_	
Electronic	-													_		
pressure SW Contact / close			-		_		-	-			-			\rightarrow	_	
contact conf. SW			-		_	_	-	-			-			+	_	
Air sensor	Sub-base with masking plate	NRB500					-							+	_	
Pressure SW for coolant			-				+	+		-	-			+	-	
Small	End block R	NRB500 - NE					0									1
flow sensor	DIN rail	L ₂ = 175 mm			cessories GWP4-I nking plug GWP6-I					Piece	-	VP8-	·B		Pie	ece
Small flow controller			-	-				0		11000						
Flow sensor for air	-	oth and manifold dimension	ns	5												
Flow sensor	0	L2: Refer to below table. 28*n) + (20*m) + 28								`~~	nm	on	sup	امد	v +	Vnr
for water Total air	L = (2	n: Regulator block number											_2 d			
System Total air		m: Air supply block number											0		511	5.0
(Gamma)	13.5	L2 L1 + 18							Statio iumb	n Di	mensi	on of n	n = 1	Dime	nsion c	of m –
Ending		L L - 12: individual supply type fixing hole pitch	-1					Û	umb 1		12		الكمر 	-2nmUl	NOR OF T	1000
-	Air supply block	28 x n	† †					-	2	╈	15		+			
	End	Regulator block			F	nd		-	3	╈	17		+	2	200	
	block L					ock R		_	4		21	2.5	;	2	225	

sions



Common supply type Manifold L₂ dimensions

Descriptions

Station number	Dimension of m = 1	Dimension of m = 2	Dimension of m = 3	
1	125			
2	150			
3	175	200		
4	212.5	225		
5	237.5	262.5	275	
6	262.5	287.5	300	
7	287.5	312.5	337.5	
8	325	337.5	362.5	
9	350	375	387.5	
10	375	400	412.5	

Individual supply type Manifold L2 dimensions

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

Manifold specifications

MNRB500m	<u>ix manifold speci</u>	fication s	she	<u>ee</u>	<u>et</u>				ls	sue	e da	ate			/	/		Refrigerating type dryer	
Contact									You	ur com	pany r	name						Desiccant type dryer	
	-								C	ont	act							High polymer membrane	
<u>Slip No.</u>	Quantity Set	Delivery		/		_			dryer Air filter										
									<u>0</u>	rde	er N	0.						Auto. drain	
																		/ others F.R.L.	
																		(Module unit) F.R.L.	
Mix manifold m	odel No.																	(Separate)	
MNRB500 -	MX																	Compact F.R.	
																		Precise regulator	
		Symbol							Des	scrip	tions	S						F.R.L. (Related products)	
A Model no.		A Model no																Clean F.R.	
-		MNRB500A MNRB500B														Electro			
			of regulator blocks														regulator		
	B Regulator block station number	1		1 station												booster Speed			
		2	2	2 stations												control valve			
				:														Silencer	
	O Installation meth	C Installation		neti DIN r														Check valve / others	
	1 <i>C</i>	D Note 1	_	Direc	-	ount												Joint / tube	
A Note on model																		Vacuum	
	ct mount block is to be within 6 blocks ir ock is to be 5 stations or less.	icluding regular and a	air su	ірріу	DIOC	KS.												filter Vacuum	
Note 2: If common supply and	individual supply types are combined, p	lease consult with Ch	۲D.															regulator Suction	
																		plate	
Mix manifold sp	ecifications																	Magnetic spring buffer	
	<u> </u>	stallation position															₹	Mechanical pressure SW	
Configurations			1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	Quantity	Electronic pressure SW
	Model no.																ā	Contact / close contact conf. SW	
End block L	NRB500 - NE																	Air sensor	
Common air supply block	NRB500 - NP -																	Pressure SW for coolant	
Common air supply block with APS	NRB500 - APS																	Small	
	NRB500 -																	flow sensor Small	
	NRB500 -																	flow controller Flow sensor	
	NRB500 -																	for air	
	NRB500 [] - [] []				-						-				-		-	Flow sensor for water	
Regulator block							-											Total air system	
	NRB500 -																	Total air system (Gamma)	
	NRB500 -																	Ending	
	NRB500 -																		
	NRB500 -																	llato	
Sub-base with masking plate	NRB500 - NS MI	 P																l regu	
End block R	NRB500 - NE																	Block manifold regulator F.R.L. unit	
					Accessories GWP4					1	Piece	GWP8-B Piece						sck n S.L. (
DIN rail	L2 = mm	Blanking plug GWP6					/P6-	В		Piece					BIG H.F.				