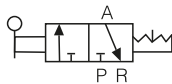




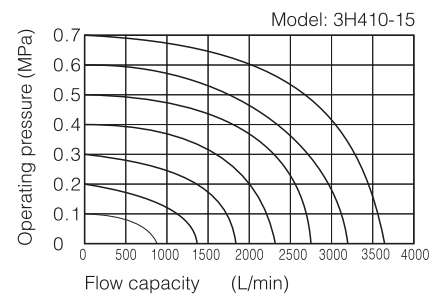
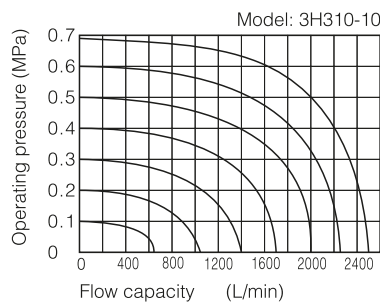
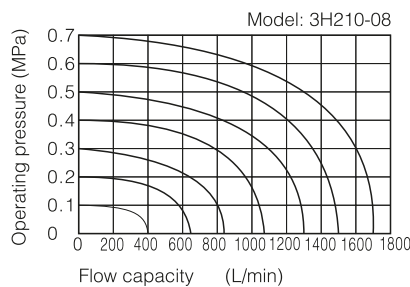
Symbol



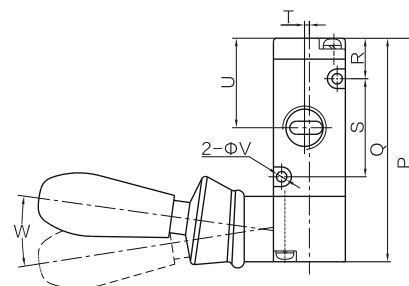
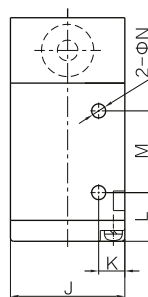
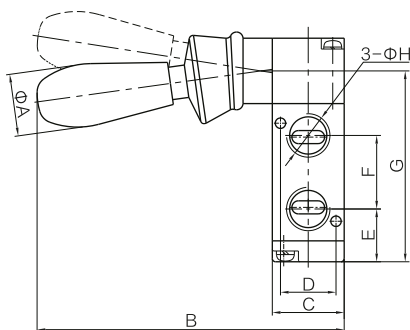
Product feature

1. Manual operation, smooth actuation, and exact and reliable orientation.
2. Sliding column structure has good tightness and light weight and is easy to install and dismount.
3. Internal hole adopts special processing technology which has little attrition friction, long service life.
4. No need to add oil for lubrication.
5. Panel-mounting makes it convenient to install and apply.

Flow chart



Dimensions



Model\Item	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W
3H210-06	19	94	22	17	16.2	22.5	58.4	1/8"	35	8	14.9	25	4.3	76.5	68.4	12.4	30	0	27.4	3.2	16.8
3H210-08	19	94	22	17	16.2	22.5	58.4	1/4"	35	8	14.9	25	4.3	76.5	68.4	12.4	30	15	27.4	3.2	16.8
3H310-08	19	98.4	27	20	20.3	24	67.3	1/4"	40	10	14.8	30	4.3	85.2	77.3	14.8	35	0	32.3	4.3	16.5
3H310-10	19	98.4	27	20	20.3	24	67.3	3/8"	40	10	14.8	30	4.3	85.2	77.3	14.8	35	2	32.3	4.3	16.5
3H410-15	19	105	34	27	23	36	84.5	1/2"	50	13.5	16	50	5.2	105	95.5	19.5	43	3	41	4.3	22.3

Specification

Model	3H210-06	3H210-08	3H310-08	3H310-10	3H410-15
Fluid	Air (to be filtered by 40μm filter element)				
Operating	Manual control direct acting tupe				
Port size ①	1/8"	1/4"	3/8"	1/2"	
Orifice size	14.0mm ² (Cv=0.78)	16.0mm ² (Cv=0.89)	25.0mm ² (Cv=1.39)	30.0mm ² (Cv=1.67)	50.0mm ² (Cv=2.79)
Valve type	3/2 Way				
Lubrication ②	Not required				
Pressure range	0~1.0MPa(0~145psi)				
Proof pressure	1.2MPa(170psi)				
Temperature	-20~70℃				
Material body	Aluminum alloy				

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

② Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 or the oil with the same grade.

Ordering code

3H	2	10	08	
Model	Code	Valve type	Port size	Thread type
3H Hand lever valve (3/2 way)	2 200 Series	10 3/2 Way	06 1/8"	Blank PT
	3 300 Series		08 1/4"	G G
	4 400 Series		10 3/8"	T NPT
			15 1/2"	

Valve

3V1
3V2
3V2M
3V3
3V100
3V200
3V300
4V100
4V200
4V300
4V400
HY-S1
HY-S2
HY-S3
HY-S4
4M
3V Manifold
4V Manifold
Coil
3A100
3A200
3A300
4A100
4A200
4A300
4A400
3A Manifold
4A Manifold
VF3000
VF5000
SY
SY Manifold
MVSD-180
MVSC-220
MVSC-260
MVSC-300
MVSC-460
HB10
3H
4H
TSV
3R
4R
HSV
4HV/4HVL
HV
K ²⁴ ₃₄
MOV
JM
MSV
XQ ²³ ₂₅
3F/3FM
4F
FV
K ²³ ₂₅
ASC
RE
QE
ST
KA
XQ
AQ

Valve

3V1
3V2
3V2M
3V3
3V100
3V200
3V300
4V100
4V200
4V300
4V400
HY-S1
HY-S2
HY-S3
HY-S4

4M

3V Manifold

4V Manifold

Coil

3A100

3A200

3A300

4A100

4A200

4A300

4A400

3A Manifold

4A Manifold

VF3000

VF5000

SY

SY Manifold

MVSD-180

MVSC-220

MVSC-260

MVSC-300

MVSC-460

HB10

3H

4H

TSV

3R

4R

HSV

4HV/4HVL

HV

K²⁴₃₄

MOV

JM

MSV

XQ²³₂₅

3F/3FM

4F

FV

K²³₂₅

ASC

RE

QE

ST

KA

XQ

AQ



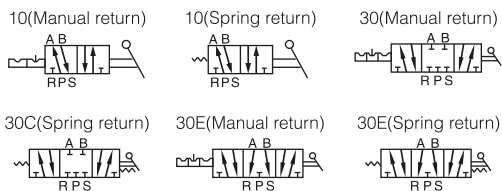
Specifications

Model	210-06	230-06	210-08	230-08	310-08	330-08	310-10	330-10
Fluid	Air (to be filtered by 40μm filter element)							
Operating	Manual control direct acting tupe							
Port size ①	In=Out =Exhaust=1/8"		In=Out=1/4" Exhaust=1/8"		In=Out =Exhaust=1/4"		In=Out=3/8" Exhaust=1/4"	
Orifice size	14.0mm ² (Cv=0.78)	12.0mm ² (Cv=0.67)	16.0mm ² (Cv=0.89)	12.0mm ² (Cv=0.67)	25.0mm ² (Cv=1.39)	18.0mm ² (Cv=1.00)	30.0mm ² (Cv=1.67)	18.0mm ² (Cv=1.00)
Valve type	5/2 Way	5/3 Way	5/2 Way	5/3 Way	5/2 Way	5/3 Way	5/2 Way	5/3 Way
Lubrication ②	Not required							
Pressure range	0~1.0MPa(0~145psi)							
Proof pressure	1.5MPa(215psi)							
Temperature	-20~70℃							
Material body	Aluminum alloy							
Operating angle	±15°	±8.5°	±15°	±8.5°	±18°	±10°	±18°	±10°

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

② Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 or the oil with the same grade.

Symbol



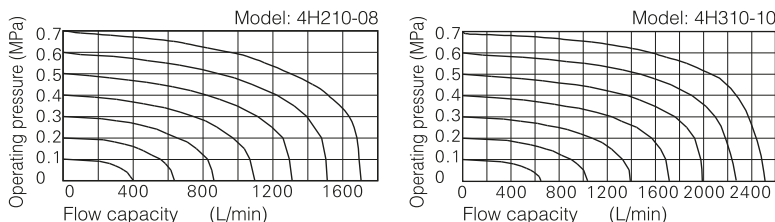
Ordering code

Model	Valve type	Port size	Thread type
4H Manual return	10 5/2 Way	Code Port size	Blank PT
4HA Spring return	30C 5/3 Way closed center	200 Series 06 1/8"	G G
	30E 5/3 Way exhaust center	08 1/4"	T NPT
		300 Series 08 1/4"	
		10 3/8"	

Product feature

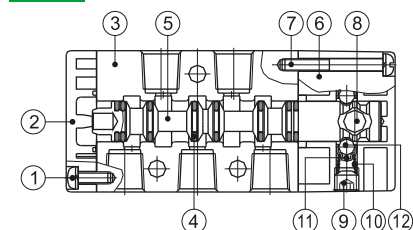
1. Manual operation, smooth actuation, and exact and reliable orientation.
2. Sliding column structure has good tightness and light weight and is easy to install and dismount.
3. Internal hole adopts special processing technology which has little attrition friction, long service life.
4. No need to add oil for lubrication.
5. Panel-mounting makes it convenient to install and apply.

Flow chart

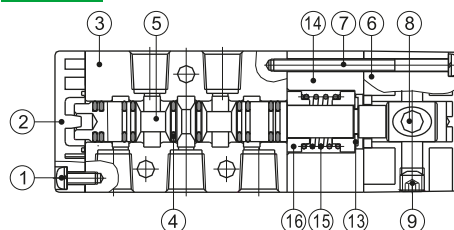


Inner structure

4H210



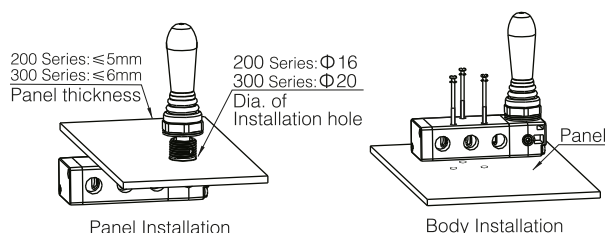
4HA230C



No.	Item	No.	Item
1	Round head screw	9	Stop screw
2	Bottom cover	10	Spring
3	Body	11	Steel ball jacket
4	O-ring	12	Steel ball
5	Spool	13	E clip
6	Top cover	14	Side cover
7	Round head cover	15	Spring
8	Axle	16	Spring holder

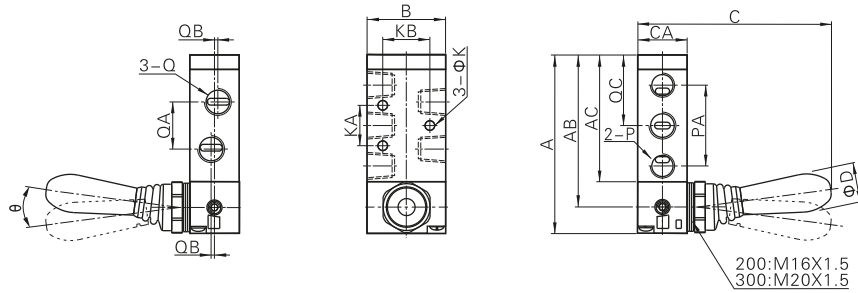
Installation

1. 5/3 way manual return hand lever valve is positioned by steel ball, which is convenient to switch. Please apply the proper force to avoid the position mismatch and misoperation.
 2. When installed by panel, disassemble the gasket according to the practical requirement.
 3. Below is the installation method for reference.
- Note: Please give your attention on the panel thickness and hole dimension when installed by panel.



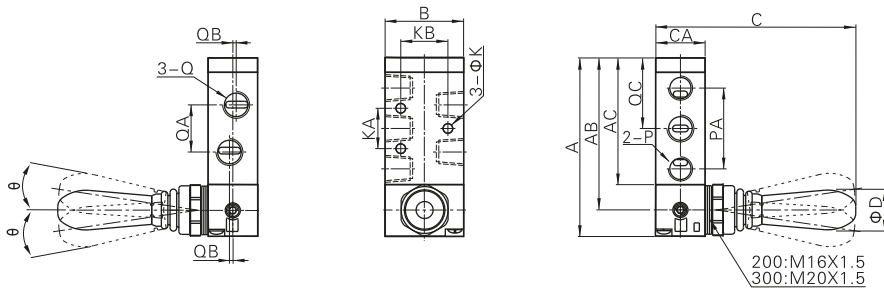
Dimensions

4H210/310, 4HA210/310



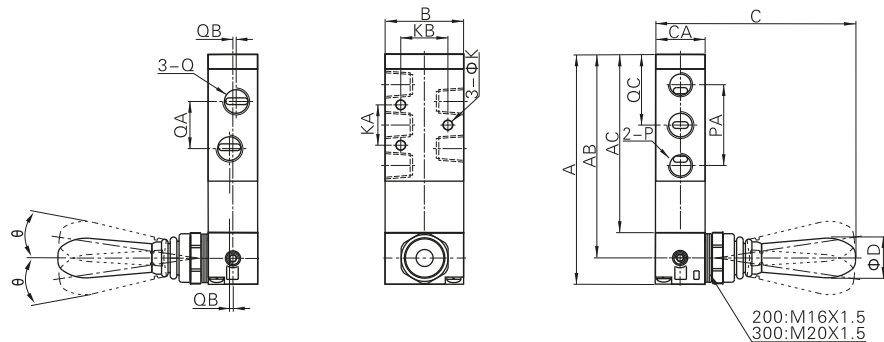
Model\Item	A	AB	AC	B	C	CA	D	K	KA	KB	P	PA	Q	QA	QB	QC	Θ
4H210-06	81.5	69.5	57.5	35	90	22	18	4.3	20	23.5	1/8"	36	1/8"	18	-	32.5	15
4HA210-06	81.5	69.5	57.5	35	90	22	18	4.3	20	23.5	1/8"	36	1/4"	21	1.5	32.5	15
4H210-08	81.5	69.5	57.5	35	90	22	18	4.3	20	23.5	1/8"	36	1/4"	21	1.5	32.5	15
4HA210-08	81.5	69.5	57.5	35	90	22	18	4.3	20	23.5	1/8"	36	1/4"	21	1.5	32.5	15
4H310-08	101	87	73	40	93.5	27	18	4.3	24	27.5	1/4"	45	1/4"	22	-	40.5	18
4HA310-08	101	87	73	40	93.5	27	18	4.3	24	27.5	1/4"	45	1/4"	22	-	40.5	18
4H310-10	101	87	73	40	93.5	27	18	4.3	24	27.5	1/4"	45	3/8"	24	2	40.5	18
4HA310-10	101	87	73	40	93.5	27	18	4.3	24	27.5	1/4"	45	3/8"	24	2	40.5	18

4H230, 4H330



Model\Item	A	AB	AC	B	C	CA	D	K	KA	KB	P	PA	Q	QA	QB	QC	Θ
4H230C-06	81.5	69.5	57.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/8"	18	-	32.5	8.5
4H230E-06	81.5	69.5	57.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/8"	18	-	32.5	8.5
4H230C-08	81.5	69.5	57.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/4"	21	1.5	32.5	8.5
4H230E-08	81.5	69.5	57.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/4"	21	1.5	32.5	8.5
4H330C-08	101	87	73	40	94	27	18	4.3	24	27.5	1/4"	45	1/4"	22	-	40.5	10
4H330E-08	101	87	73	40	94	27	18	4.3	24	27.5	1/4"	45	1/4"	22	-	40.5	10
4H330C-10	101	87	73	40	94	27	18	4.3	24	27.5	1/4"	45	3/8"	24	2	40.5	10
4H330E-10	101	87	73	40	94	27	18	4.3	24	27.5	1/4"	45	3/8"	24	2	40.5	10

4HA230, 4HA330



Model\Item	A	AB	AC	B	C	CA	D	K	KA	KB	P	PA	Q	QA	QB	QC	Θ
4HA230C-06	100.5	88.5	76.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/8"	18	-	32.5	8.5
4HA230E-06	100.5	88.5	76.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/8"	18	-	32.5	8.5
4HA230C-08	100.5	88.5	76.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/4"	21	1.5	32.5	8.5
4HA230E-08	100.5	88.5	76.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/4"	21	1.5	32.5	8.5
4HA330C-08	120	106	92	40	94	27	18	4.3	24	27.5	1/4"	45	1/4"	22	-	40.5	10
4HA330E-08	120	106	92	40	94	27	18	4.3	24	27.5	1/4"	45	1/4"	22	-	40.5	10
4HA330C-10	120	106	92	40	94	27	18	4.3	24	27.5	1/4"	45	3/8"	24	2	40.5	10
4HA330E-10	120	106	92	40	94	27	18	4.3	24	27.5	1/4"	45	3/8"	24	2	40.5	10

Valve

3V1
3V2
3V2M
3V3
3V100
3V200
3V300
4V100
4V200
4V300
4V400
HY-S1
HY-S2
HY-S3
HY-S4
4M
3V Manifold
4V Manifold
Coil
3A100
3A200
3A300
4A100
4A200
4A300
4A400
3A Manifold
4A Manifold
VF3000
VF5000
SY
SY Manifold
MVSD-180
MVSC-220
MVSC-260
MVSC-300
MVSC-460
HB10
3H
4H
TSV
3R
4R
HSV
4HV/4HVL
HV
K ²⁴ ₃₄
MOV
JM
MSV
XQ ²³ ₂₅
3F/3FM
4F
FV
K ²³ ₂₅
ASC
RE
QE
ST
KA
XQ
AQ

Valve

3V1
3V2
3V2M
3V3
3V100
3V200
3V300
4V100
4V200
4V300
4V400
HY-S1
HY-S2
HY-S3
HY-S4

4M

3V Manifold

4V Manifold

Coil

3A100

3A200

3A300

4A100

4A200

4A300

4A400

3A Manifold

4A Manifold

VF3000

VF5000

SY

SY Manifold

MVSD-180

MVSC-220

MVSC-260

MVSC-300

MVSC-460

HB10

3H

4H

TSV

3R

4R

HSV

4HV/4HVL

HV

K²⁴₃₄

MOV

JM

MSV

XQ²³₂₅

3F/3FM

4F

FV

K²³₂₅

ASC

RE

QE

ST

KA

XQ

AQ



Specification

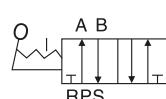
Model	TSV86522	TSV98322
Fluid	Air (to be filtered by 40µm filter element)	
Operating	Manual control direct acting tupe	
Port size ①	1/4"	
Orifice size	18mm ² (Cv=1.00)	
Valve type	5/2 Way	3/2 Way
Lubrication ②	Not required	
Pressure range	0~1.0MPa(0~145psi)	
Proof pressure	1.5MPa(215psi)	
Temperature	-20~70℃	
Material body	Aluminum alloy	

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

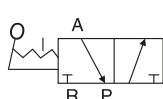
② Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 or the oil with the same grade.

Symbol

TSV86522



TSV98322



Ordering code

TSV86

52

2

M

Model

TSV86

TSV98

Valve type

52 5/2 Way

32 3/2 Way

Code

M Mechanical locking type

S Spring automatic reset type

Port size

1 1/8"

2 1/4"

Thread type

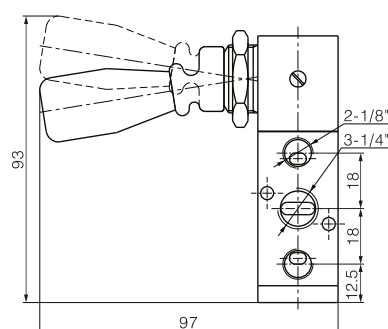
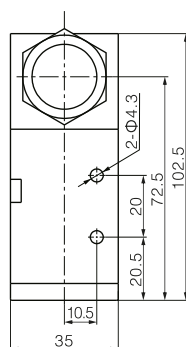
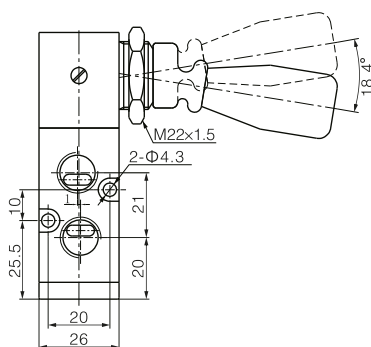
Blank PT

G G

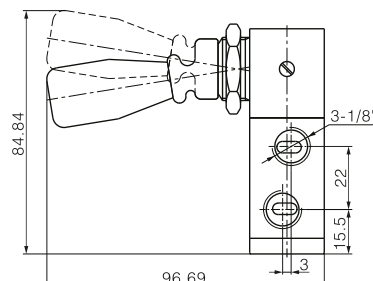
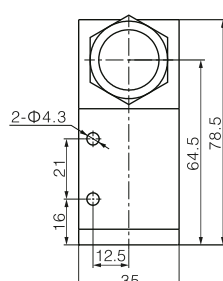
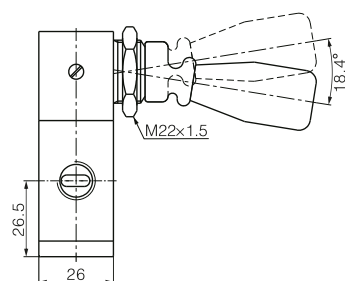
T NPT

Dimensions

TSV86522

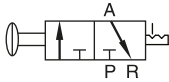


TSV98322





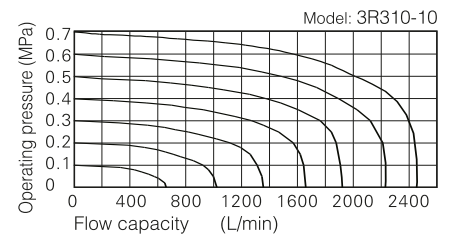
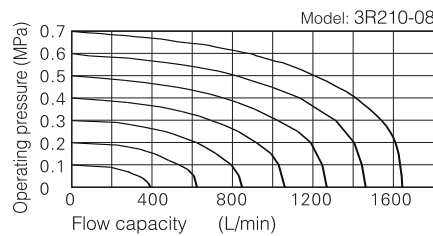
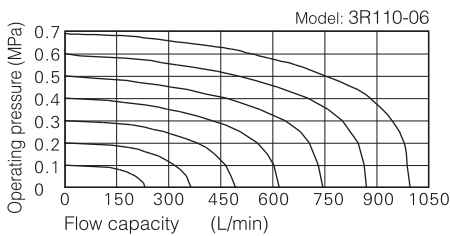
Symbol



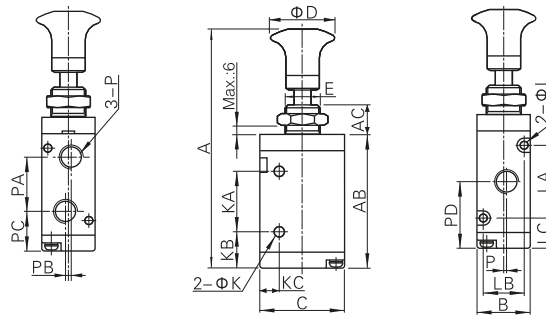
Ordering code

Model		Valve type		Port size		Thread type	
3R	3 port 2 position push-pull valve	10	2 position	06	1/8"	Blank	PT
Code							
1	100 Series						
2	200 Series						
3	300 Series						

Flow chart



Dimensions



Model\Item	A	AB	AC	B	C	D	E	K	KA	KB	KC	L	LA	LB	LC	P	PA	PB	PC	PD	PE
3R110-06	87	47.8	10	18	27	25	M12×0.75	3.1	21	13	7.7	3.3	19	13	14	1/8"	16	2	15.5	24.5	1
3R210-06	98	57.8	10	22	35	25	M14×1.0	4.3	25	16	8	3.3	30	17	13.5	1/8"	22.5	0	17.5	28.5	0
3R210-08	98	57.8	10	22	35	25	M14×1.0	4.3	25	16	8	3.3	30	17	13.5	1/4"	22.5	0	17.5	28.5	1.5
3R310-08	106.5	66.5	10	27	40	25	M16×1.0	4.3	30	18	10	4.3	35	20	15.5	1/4"	24	0	21	33	0
3R310-10	106.5	66.5	10	27	40	25	M16×1.0	4.3	30	18	10	4.3	35	20	15.5	3/8"	24	0	21	33	2

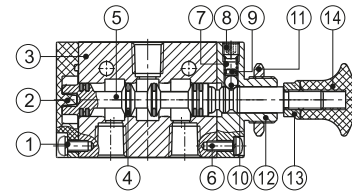
Specification

Model	3R110-06	3R210-06	3R210-08	3R310-08	3R310-10
Fluid	Air (to be filtered by 40μm filter element)				
Operating	Manual control direct acting type				
Port size ①	1/8"		1/4"		3/8"
Orifice size	12.0mm ² (Cv=0.67)	14.0mm ² (Cv=0.78)	16.0mm ² (Cv=0.89)	25.0mm ² (Cv=1.39)	30.0mm ² (Cv=1.67)
Valve type	3/2 Way				
Lubrication ②	Not required				
Pressure range	0~1.0MPa(0~145psi)				
Proof pressure	1.5MPa(215psi)				
Temperature	-20~70℃				
Material body	Aluminum alloy				

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

② Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

Inner structure



No.	Item	No.	Item	No.	Item
1	Round head screw	6	Round head cover	11	Hexagon nut
2	Bottom cover	7	Spring	12	Top cover
3	Body	8	Stop screw	13	Safety nut
4	O-ring	9	Spring base	14	Hand grip
5	Spool	10	Steel ball		

Valve

3V1
3V2
3V2M
3V3
3V100
3V200
3V300
4V100
4V200
4V300
4V400
HY-S1
HY-S2
HY-S3
HY-S4
4M
3V Manifold
4V Manifold
Coil
3A100
3A200
3A300
4A100
4A200
4A300
4A400
3A Manifold
4A Manifold
VF3000
VF5000
SY
SY Manifold
MVSD-180
MVSC-220
MVSC-260
MVSC-300
MVSC-460
HB10
3H
4H
TSV
3R
4R
HSV
4HV/4HVL
HV
K ²⁴ ₃₄
MOV
JM
MSV
XQ ²³ ₂₅
3F/3FM
4F
FV
K ²³ ₂₅
ASC
RE
QE
ST
KA
XQ
AQ

Valve

3V1
3V2
3V2M
3V3
3V100
3V200
3V300
4V100
4V200
4V300
4V400
HY-S1
HY-S2
HY-S3
HY-S4

4M

3V Manifold

4V Manifold

Coil

3A100

3A200

3A300

4A100

4A200

4A300

4A400

3A Manifold

4A Manifold

VF3000

VF5000

SY

SY Manifold

MVSD-180

MVSC-220

MVSC-260

MVSC-300

MVSC-460

HB10

3H

4H

TSV

3R

4R

HSV

4HV/4HVL

HV

K²⁴₃₄

MOV

JM

MSV

XQ²³₂₅

3F/3FM

4F

FV

K²³₂₅

ASC

RE

QE

ST

KA

XQ

AQ



Symbol



Ordering code

Model	Valve type
4R 5 port 2 position push-pull valve	10 2 position
Code	
1 100 Series	
2 200 Series	
3 300 Series	

Port size	Thread type
Code Port size	Blank PT
100 Series 06 1/8"	G G
200 Series 08 1/4"	T NPT
300 Series 10 3/8"	

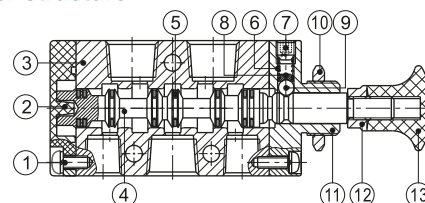
Specifications

Model	4R110-06	4R210-06	4R210-08	4R310-08	4R310-10
Fluid	Air (to be filtered by 40µm filter element)				
Operating	Manual control direct acting tupe				
Port size ①	1/8"		1/4"		3/8"
Orifice size	12.0mm ² (Cv=0.67)	14.0mm ² (Cv=0.78)	16.0mm ² (Cv=0.89)	25.0mm ² (Cv=1.39)	30.0mm ² (Cv=1.67)
Valve type	5/2 Way				
Lubrication ②	Not required				
Pressure range	0~1.0MPa(0~145psi)				
Proof pressure	1.5MPa(215psi)				
Temperature	-20~70℃				
Material body	Aluminum alloy				

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

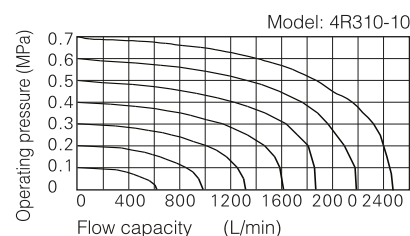
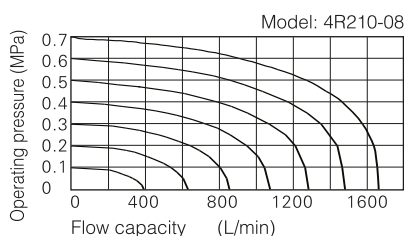
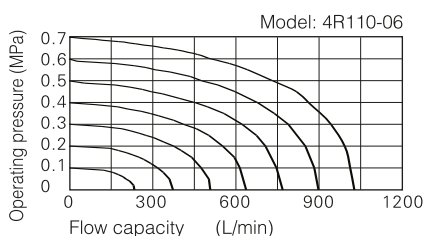
② Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

Inner structure

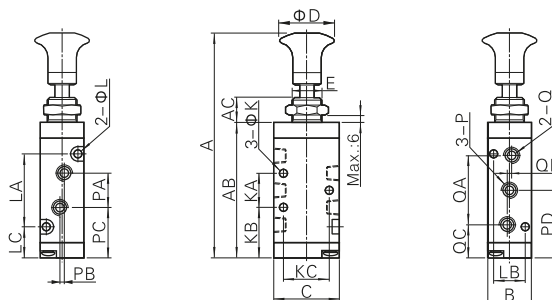


No.	Item	No.	Item	No.	Item
1	Round head screw	6	Spring	11	Top cover
2	Bottom cover	7	Stop screw	12	Safety nut
3	Body	8	Spring base	13	Hand grip
4	Spool	9	Steel ball	14	
5	O-ring	10	Hexagon nut		

Flow chart



Dimensions



Model\Item	A	AB	AC	B	C	D	E	K	KA	KB	KC	L	LA	LB	LC	P	PA	PB	PC	PD	Q	QA	QB	QC
4R110-06	98	58.8	10	18	27	25	M12×0.75	3.3	14	22	19	3.3	30	13	14	1/8"	16	3	21	29	1/8"	28	2	15
4R210-06	106	65.8	10	22	35	25	M14×1	4.3	20	22.5	23.5	3.3	38	17	13.5	1/8"	18	0	23.5	32.5	1/8"	36	0	14.5
4R210-08	106	65.8	10	22	35	25	M14×1	4.3	20	22.5	23.5	3.3	38	17	13.5	1/8"	21	3	22	32.5	1/4"	36	0	14.5
4R310-08	121.5	81	10	27	40	25	M16×1	4.3	24	28.5	27.5	4.3	50	20	15.5	1/4"	22	0	29.5	40.5	1/4"	45	0	18
4R310-10	121.5	81	10	27	40	25	M16×1	4.3	24	28.5	27.5	4.3	50	20	15.5	1/4"	24	4	28.5	40.5	3/8"	45	0	18