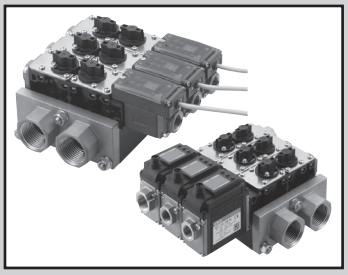


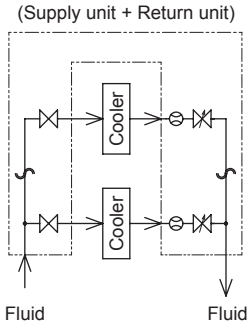
Integrated unit for water control　One-fluid control

WXU-H/HC Series

- Port size: Rc3/8, Rc1/2, Rc1
- Flow rate range: 0.5 to 32 ℓ/min

RoHS

[Application examples]



A single unit serves as supply and return units of cooling piping. Each circuit can be controlled separately. Adjust flow rate by using the valve at return side.

Common specifications

Descriptions			WXU-H/HC
Working fluid			Water/hot water
Working pressure		MPa	0 to 0.7
Proof pressure (water pressure)		MPa	1.4
Fluid temperature		°C	WXU-H:1 to 70/WXU-HC:1 to 85
Ambient temperature		°C	5 to 50
Atmosphere			Place free of corrosive gas and explosive gas
Flow rate adjusting range		%	0 to 100 (water) [with closing function]
Station No.			2 to 10 stations
Mounting orientation			Unrestricted
Sealant			Fluoro rubber
Port size	IN/OUT port		Rc1
	Branching ports		Rc3/8 or Rc1/2

Weight

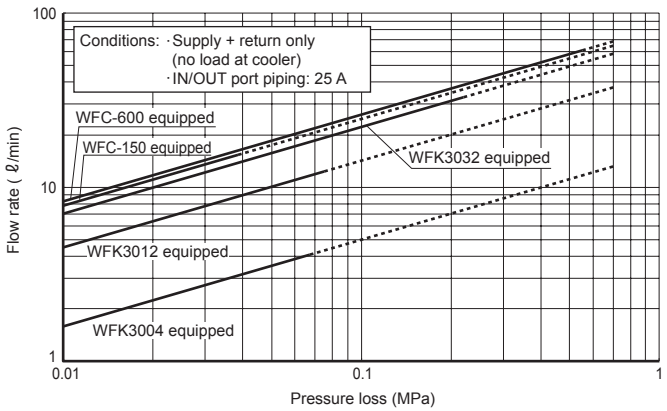
In-block	(kg)	0.67
End block	(kg)	0.63
One-station assembly	(kg)	0.76
One-station assembly (WFC equipped)	(kg)	1.00

Flow characteristics

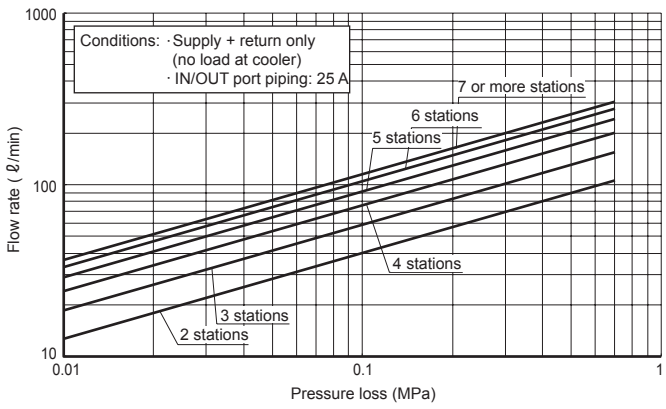
Supply/drain category	Configuration / Flow rate sensor	Cv
Supply side (one station)	-	3.00
Return side (one station)	WFK3004	0.35
	WFK3012	1.05
	WFK3032	1.80
	WFC-150	2.10
	WFC-600	2.30

Note: Make sure to check the flow rate of one station (each system) and overall unit.
(Refer to "Reading the Flow Properties Table" on page 24)

● One station



● Overall unit



When the configuration of all one-station assembly machines is identical, the entire unit can be displayed in the model number by selecting the codes.
When assembling a unit from different configurations of one-station assembly machines, specify the configuration in "Manifold specifications" (page 22).

How to order

● Karman vortex flow rate sensor

WXU-H - 6 - L - 15 - 12 - A0N0

Ⓐ Station No.

Code	Content
Ⓐ Station No.	
2	2 stations
to	to
10	10 stations

Ⓑ In-block position

Code	Content
Ⓑ In-block position	
L	Left
R	Right
W	Both sides

Ⓒ Port size (branching port)

Code	Content
Ⓒ Port size (branching port)	
10	Rc3/8
15	Rc1/2 ("T" with water temperature measuring function cannot be selected.)

Ⓓ Flow rate range for flow sensor

Code	Content
Ⓓ Flow rate range for flow sensor	
04	0.5 to 4.0 L/min
12	1.5 to 12 L/min
32	4.0 to 32 L/min

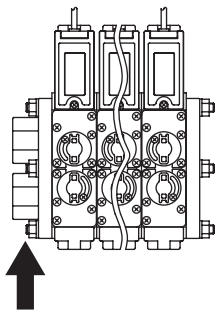
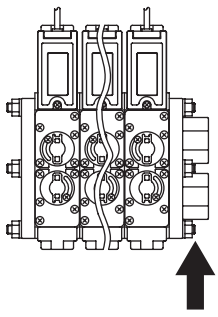
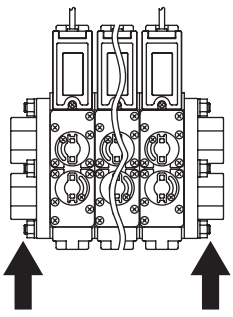
Ⓔ Flow rate sensor output (1)

Ⓕ Flow rate sensor output (2)

Ⓔ Flow rate sensor output (1)		Ⓕ Flow rate sensor output (2)					
		Blank	**N0**	**N1**	**P0**	**P1**	**T**
		Not required	Transistor output 1 point				Water temperature measuring function
			NPN a contact	NPN b contact	PNP a contact	PNP b contact	
A0	0 to 5 VDC	●	●	●	●	●	●
A1	4 to 20 mADC	●	●	●	●	●	
A2	1 to 5 VDC	●	●	●	●	●	●
A3	0 to 10 VDC	●	●	●	●	●	●
N0	NPN transistor output, 2 points (a contact)	●					
N1	NPN transistor output, 2 points (b contact)	●					
P0	PNP transistor output, 2 points (a contact)	●					
P1	PNP transistor output, 2 points (b contact)	●					

[Example of model No.]
WXU-H-6-L-15-12-A0N0
Model name: Integrated unit for water control
One-fluid control
Ⓐ Station No. : 6 stations
Ⓑ In-block position : Left
Ⓒ Port size : Rc1/2
Ⓓ Flow rate range for flow sensor : 1.5 to 12 L/min
Ⓔ Flow rate sensor output (1) : 0 to 5 VDC
Ⓕ Flow rate sensor output (2) : NPN transistor output, 1 points (a contact)

Ⓑ In-block position

Code	L	R	W
Content	Left	Right	Both sides
Layout			

How to order

When the configuration of all one-station assembly machines is identical, the entire unit can be displayed in the model number by selecting the codes.
When assembling a unit from different configurations of one-station assembly machines, specify the configuration in "Manifold specifications" (page 23).

How to order

● Electromagnetic flow sensor

WXU-HC - 6 - L - 10 - 150 - N V - C3

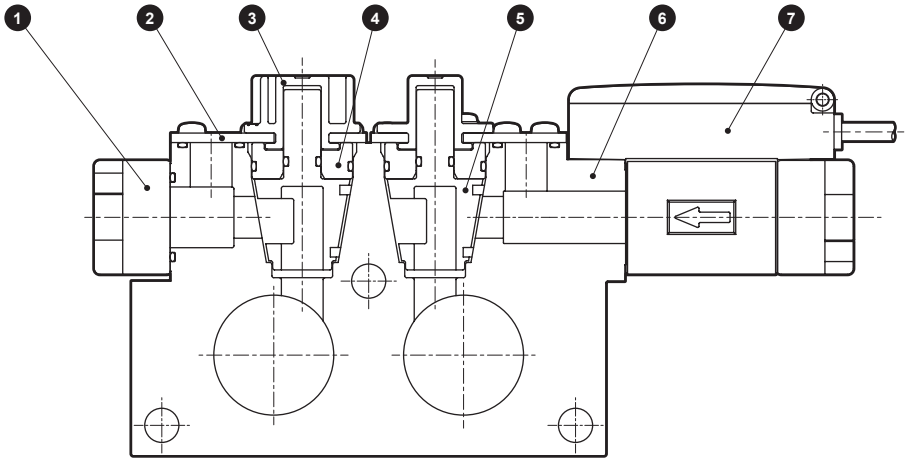
- Ⓐ Station No.
- Ⓑ In-block position
- Ⓒ Port size (branching port)
- Ⓓ Flow rate range for flow sensor
- Ⓔ Switch output
- Ⓕ Analog output
- Ⓖ Cable

Code	Content
Ⓐ Station No.	
2	2 stations
to	to
10	10 stations
Ⓑ In-block position	
L	Left
R	Right
W	Both sides
Ⓒ Port size (branching port)	
Flow rate range for flow sensor	150 / 600
10 Rc3/8	● /
15 Rc1/2	/ ●
Ⓓ Flow rate range for flow sensor	
150	0.5 to 15 L/min
600	2.0 to 60 L/min
Ⓔ Switch output	
N	NPN transistor output
P	PNP transistor output
Ⓕ Analog output	
V	1 to 5 VDC
A	4 to 20 mADC
Ⓖ Cable	
Blank	None
C3	Cable (M12/4-conductor/3 m attached)
L3	L-type cable (M12/4-conductor/3 m attached)

[Example of model No.]
WXU-HC-6-L-10-150-NV-C3
Model name: Integrated unit for water control One-fluid control
Ⓐ Station No. : 6 stations
Ⓑ In-block position : Left
Ⓒ Port size : Rc3/8
Ⓓ Flow rate range : 0.5 to 15 L/min
Ⓔ Switch output : NPN transistor output
Ⓕ Analog output : 1 to 5 VDC
Ⓖ Cable : Attached

Internal structure and parts list

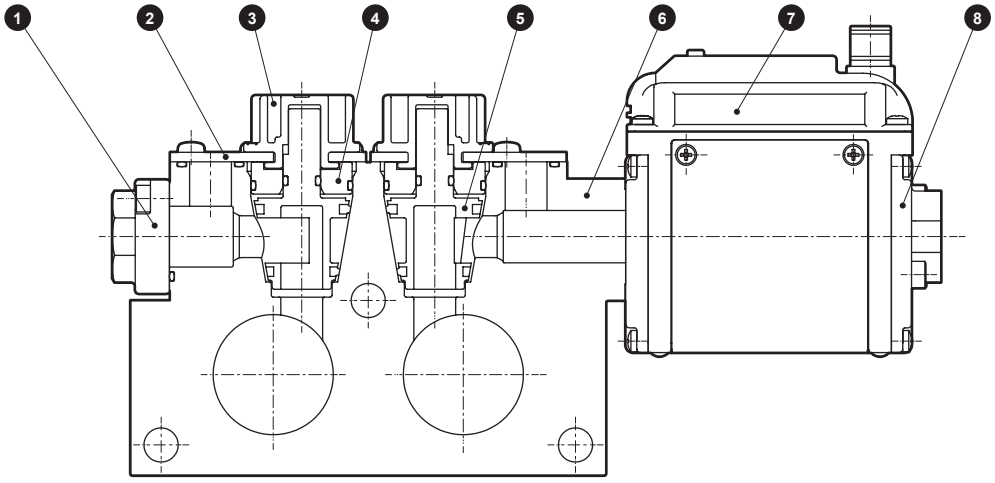
● Karman vortex flow rate sensor



[Valve is fully opened at shipment.]

No.	Part name	Material	
1	Attachment	SCS13	Stainless steel casting
2	Plate	SUS304	Stainless steel
3	Knob	PBT	Polybutylene terephthalate
4	Spacer	PPS	Polyphenylene sulfide
5	Cock	PPS FKM	Polyphenylene sulfide Fluoro rubber
6	Base	PPS	Polyphenylene sulfide
7	Flow rate sensor [WFK3000 Series]		

● Electromagnetic flow sensor

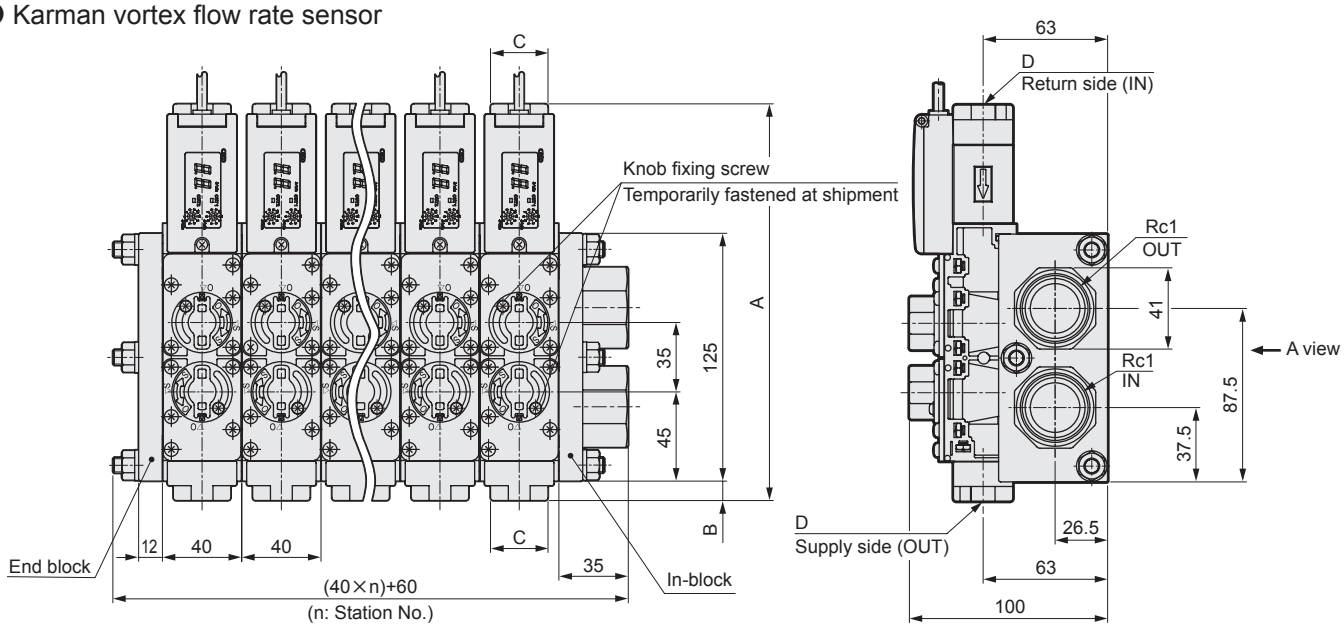


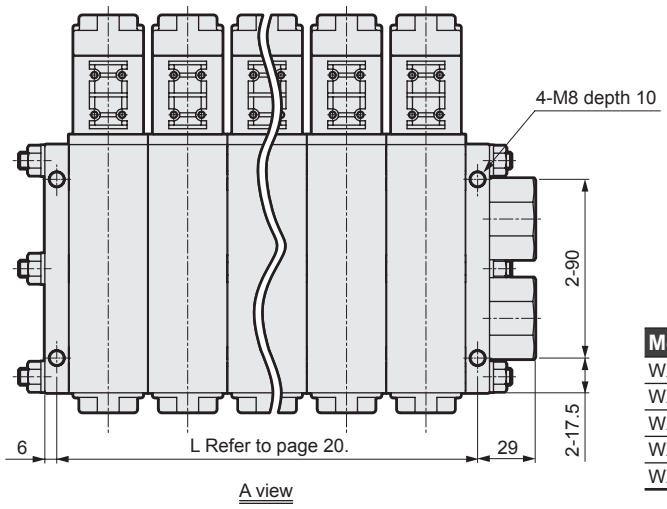
[Valve is fully opened at shipment.]

No.	Part name	Material	
1	Attachment	SCS13	Stainless steel casting
2	Plate	SUS304	Stainless steel
3	Knob	PBT	Polybutylene terephthalate
4	Spacer	PPS	Polyphenylene sulfide
5	Cock	PPS FFM	Polyphenylene sulfide Fluoro rubber
6	Base	PPS	Polyphenylene sulfide
7	Flow rate sensor [WFC Series]		
8	Socket	CAC804	Copper alloy

Dimensions

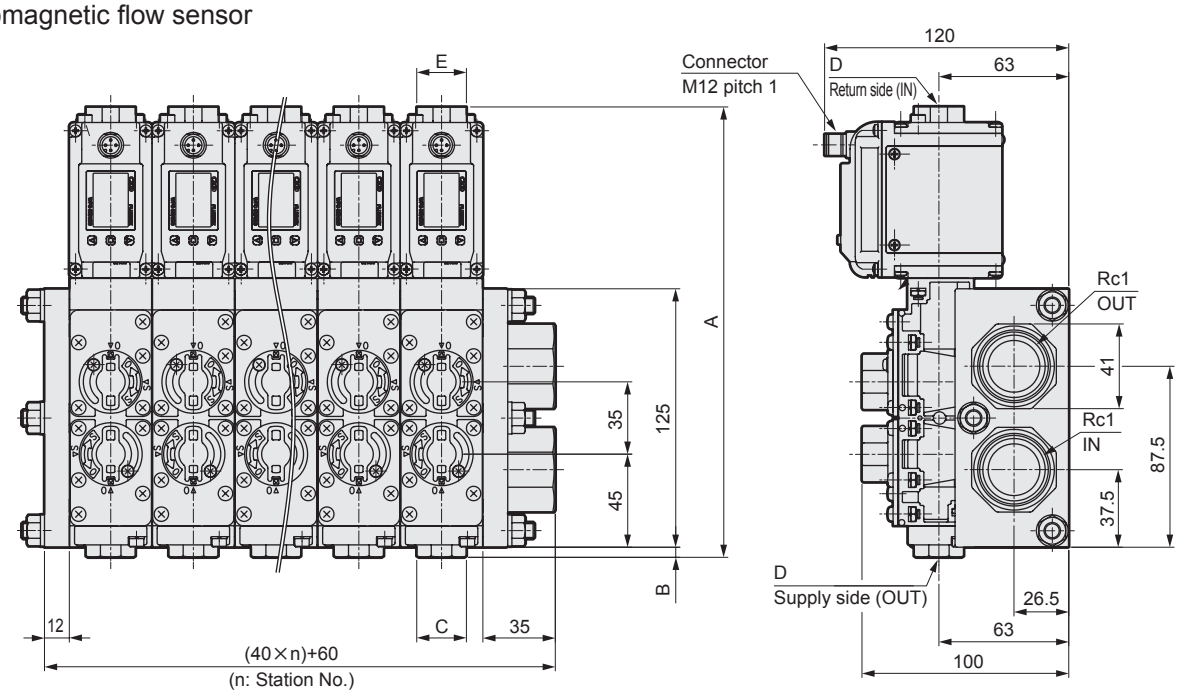
● Karman vortex flow rate sensor

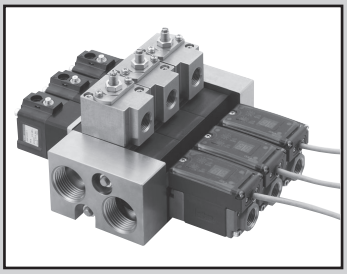




Model No.	A	B	C	D	E
WXU-H-***-10-**	190	5	24	Rc3/8	-
WXU-H-***-10-**T	205	5	24	Rc3/8	-
WXU-H-***-15-**	200	10	29	Rc1/2	-
WXU-HC-***-10-150-***	218	5	24	Rc3/8	24
WXU-HC-***-15-600-***	228	10	29	Rc1/2	28

● Electromagnetic flow sensor





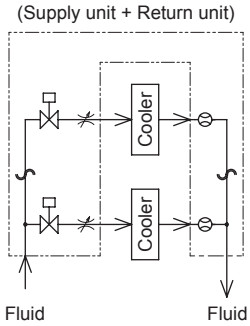
Integrated unit for water control　One-fluid control

WXU-J Series

- Port size: Rc3/8, Rc1/2, Rc3/4, Rc1
- Flow rate range: 0.5 to 32 ℓ/min

RoHS

[Application examples]



A single unit serves as supply and return for the cooling piping. Each circuit can be controlled separately.

Common specifications

Descriptions		WXU-J
Working fluid		Water/hot water
Working pressure MPa		0 to 0.4 (Note)
Proof pressure (water pressure) MPa		1.0
Fluid temperature °C		1 to 70
Ambient temperature °C		5 to 50
Atmosphere		Place free of corrosive gas and explosive gas
Flow rate adjusting range %		0 to 100 (water) [with closing function]
Station No.		2 to 10 stations
Mounting orientation		Unrestricted
Sealant		Fluoro rubber
Port size	IN/OUT port	Rc3/4 or Rc1
	Branching ports	Rc3/8 or Rc1/2

Note: Contact CKD about use at pressure higher than working pressure.

Weight

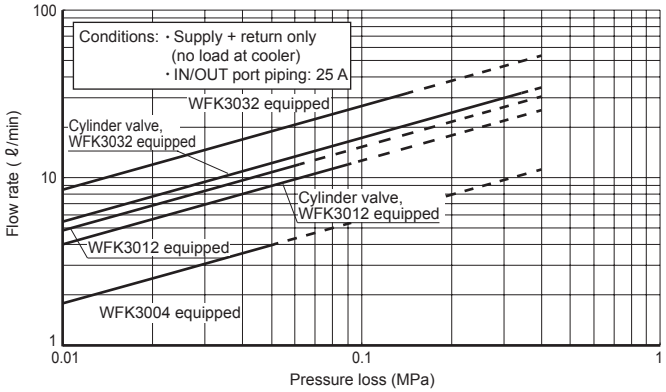
			-
In-block (kg)		Port size	
		20A	1.30
		25A	1.20
End block (kg)			1.05
One station assembly (kg)		Supply side Cylinder valve	-
		Large flow rate specifications	1.29
		None	1.05

Flow characteristics

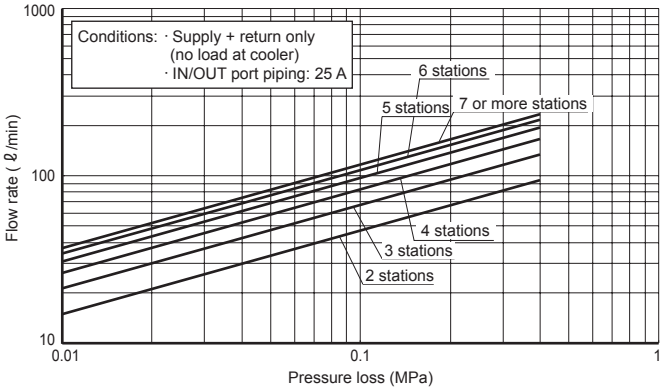
Supply/drain category	Configuration		Cv
	Cylinder valve	Flow rate sensor	
Supply side (one station)	Large flow rate specifications	-	1.34
	None	-	2.51
Return side (one station)	-	WFK3004	0.41
		WFK3012	1.18
		WFK3032	2.82

Note: Make sure to check the flow rate of one station (each system) and overall unit. (Refer to "Reading the Flow Properties Table" on page 24)

● One station



● Overall unit



How to order

When the configuration of all one-station assembly machines is identical, the entire unit can be displayed in the model number by selecting the codes.
When assembling a unit from different configurations of one-station assembly machines, specify the configuration in "Manifold specifications" (page 24).

How to order

WXU-J - 6 - L - 25 - B1 - 15 - 12 - A0N0

Ⓗ Flow rate sensor output (2)
Ⓖ Flow rate sensor output (1)

Code	Content
Ⓐ Station No.	
2	2 stations
to	to
10	10 stations
Ⓑ In-block position	
L	Left
R	Right
W	Both sides
Ⓒ Port size (IN/OUT port)	
20	Rc3/4
25	Rc1
Ⓓ Valve actuation	
B1	NC (normally closed) (large flow rate specifications)
B2	NO (normally open) (large flow rate specifications)
00	None
Ⓔ Port size (branching port)	
10	Rc3/8
15	Rc1/2 ("T" with water temperature measuring function cannot be selected.)
Ⓕ Flow rate range for flow sensor	
04	0.5 to 4.0 L/min
12	1.5 to 12 L/min
32	4.0 to 32 L/min

Ⓐ Station No.
Ⓑ In-block position
Ⓒ Port size (IN/OUT port)
Ⓓ Valve actuation
Ⓔ Port size (branching port)
Ⓕ Flow rate range for flow sensor

Ⓖ Flow rate sensor output (1)		Ⓗ Flow rate sensor output (2)					
		Blank	N0	N1	P0	P1	T
		Not required	Transistor output 1 point				Water temperature measuring function
			NPN a contact	NPN b contact	PNP a contact	PNP b contact	
A0	0 to 5 VDC	●	●	●	●	●	●
A1	4 to 20 mADC	●	●	●	●	●	
A2	1 to 5 VDC	●	●	●	●	●	●
A3	0 to 10 VDC	●	●	●	●	●	●
N0	NPN transistor output, 2 points (a contact)	●					
N1	NPN transistor output, 2 points (b contact)	●					
P0	PNP transistor output, 2 points (a contact)	●					
P1	PNP transistor output, 2 points (b contact)	●					

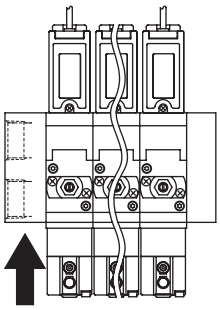
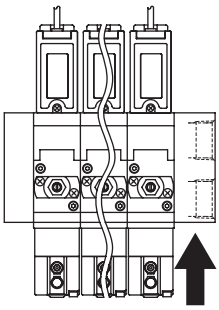
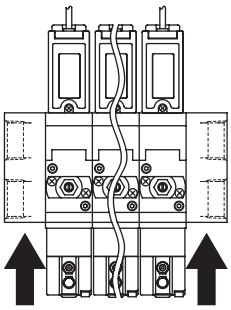
[Example of model No.]

WXU-J-6-L-25-B1-15-12-A0N0

Model name: Integrated unit for water control One-fluid control

Ⓐ Station No. : 6 stations
Ⓑ In-block position : Left
Ⓒ Port size : Rc1
Ⓓ Valve actuation : NC (normally closed) (large flow rate specifications)
Ⓔ Port size : Rc1/2
Ⓕ Flow rate range for flow sensor : 1.5 to 12 L/min
Ⓖ Flow rate sensor output (1) : 0 to 5 VDC
Ⓗ Flow rate sensor output (2) : NPN transistor output, 1 points (a contact)

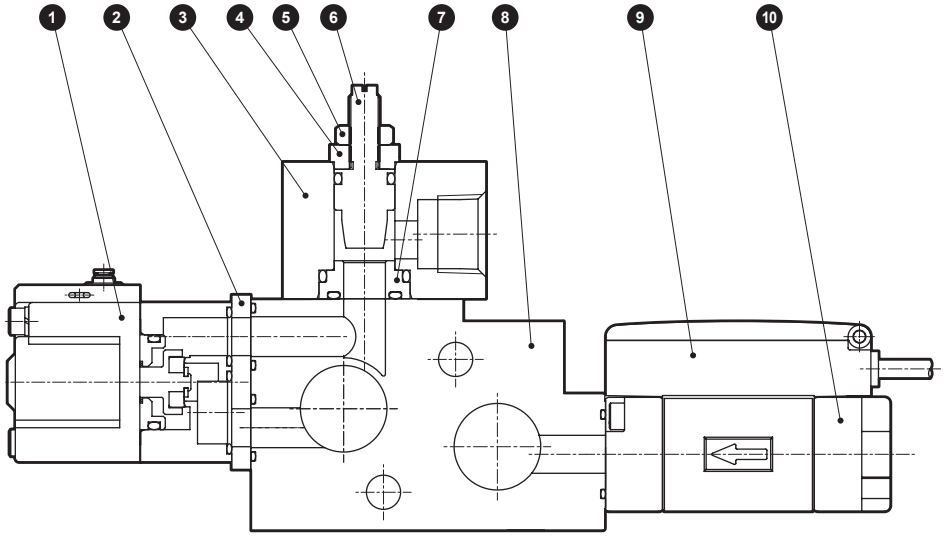
Ⓑ In-block position

Code	L	R	W
Content	Left	Right	Both sides
Layout			

Internal structure and parts list

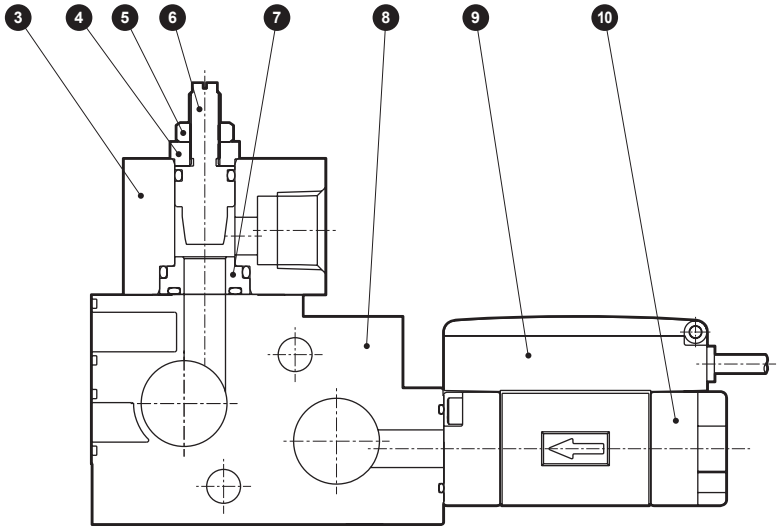
● One station assembly

· With valve



(Needle is fully opened at shipment.)

· Without valve

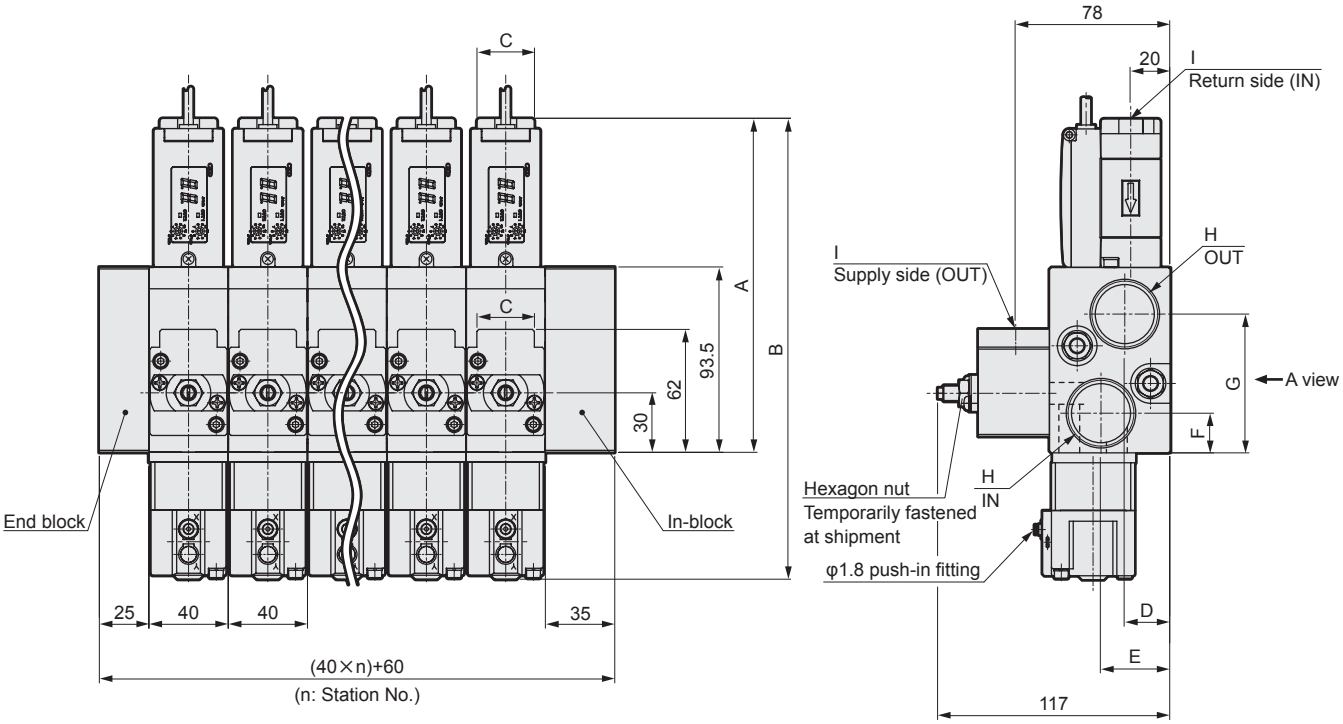


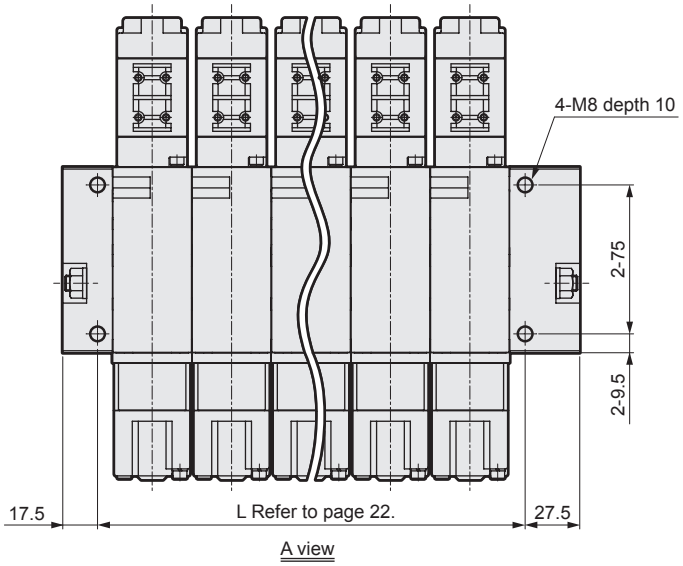
(Needle is fully opened at shipment.)

No.	Part name	Material	
1	Cylinder valve [GNAB Series]		
2	Plate	SUS304	Stainless steel
3	Needle block	SUS304	Stainless steel
4	Needle stopper	SUS304	Stainless steel
5	Hexagon nut	SWCH	Carbon steel for cold rolling

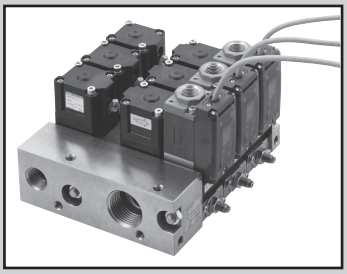
No.	Part name	Material	
6	Needle	SUS304	Stainless steel
7	Valving element	PP	Polypropylene
8	Base	PPS	Polyphenylene sulfide
9	Flow rate sensor [WFK3000 Series]		
10	Attachment	SCS13	Stainless steel casting

Dimensions





Model No.	A	B	C	D	E	F	G	H	I
WXU-J-***-20-***-10	164	228	24	22	33	24	65	Rc3/4	Rc3/8
WXU-J-***-25-***-10	164	228	24	23	35	20	70	Rc1	Rc3/8
WXU-J-***-20-***-15	169	233	29	22	33	24	65	Rc3/4	Rc1/2
WXU-J-***-25-***-15	169	233	29	23	35	20	70	Rc1	Rc1/2



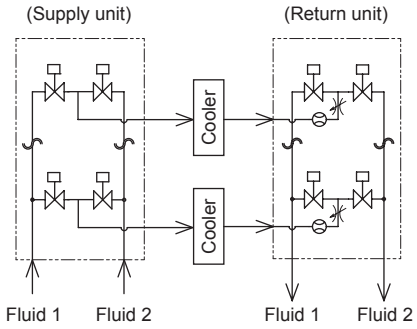
Integrated unit for water control　Two-fluid control

WXU-P Series

- Port size: Rc3/8, Rc1/2, Rc1
- Flow rate range: 0.5 to 32 ℓ/min

RoHS

[Application examples]



It enables flow of two kinds of fluid (e.g., water and air). Suitable for systems with both coolant and air purge. Each circuit can be controlled separately. (2 units are used)

Common specifications

Descriptions			WXU-P
Working fluid			Water, hot water, air
Working pressure		MPa	0 to 0.4　(Note)
Proof pressure (water pressure)		MPa	1.0
Fluid temperature		°C	1 to 70
Ambient temperature		°C	5 to 50
Atmosphere			Place free of corrosive gas and explosive gas
Flow rate adjusting range		%	15 to 100 (water)
Station No.			2 to 6 stations
Mounting orientation			Unrestricted
Sealant			Fluoro rubber
Port size	Port for fluid 1		Rc1
	Port for fluid 2		Rc1/2
	Branching ports		Rc3/8 or Rc1/2

Note: Contact CKD about use at pressures higher than working pressure.

Weight

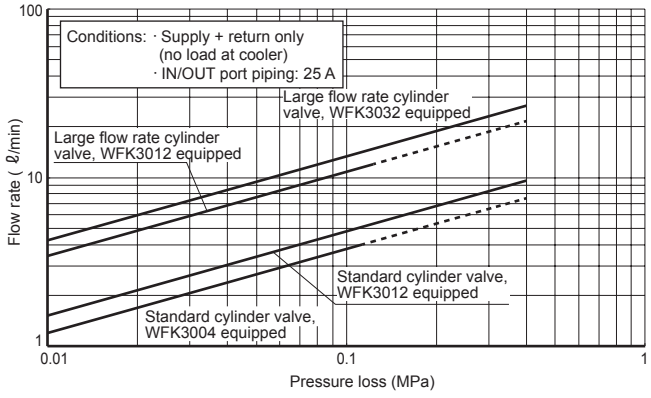
In-block (kg)				2.60
End block (kg)				0.70
One station assembly (kg)	Supply/drain category	Cylinder valve for fluid 1	Cylinder valve for fluid 2	-
	Supply side	Standard specifications	Standard specifications	0.87
		Large flow rate specifications	Standard specifications	0.90
	Return side	Standard specifications	Standard specifications	1.14
		Large flow rate specifications	Standard specifications	1.17

Flow characteristics

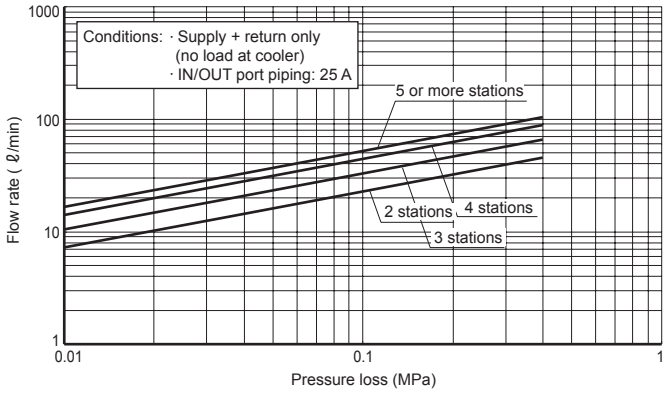
Supply/drain category	Configuration		Fluid 1 side Cv value	Fluid 2 side	
	Cylinder valve	Flow rate sensor		C[dm³/(s·bar)]	b
Supply side (one station)	Standard specifications	-	0.44	1.4	0.2
	Large flow rate specifications	-	1.28	3.0	0.1
Return side (one station)	Standard specifications	WFK3004	0.33	1.4	0.2
		WFK3012	0.52		
	Large flow rate specifications	WFK3012	0.94	3.0	0.1
		WFK3032	1.37		

Note: Make sure to check the flow rate of one station (each system) and overall unit. (Refer to "Reading the Flow Properties Table" on page 24)

● One station



● Overall unit



How to order

When the configuration of all one-station assembly machines is identical, the entire unit can be displayed in the model number by selecting the codes.
When assembling a unit from different configurations of one-station assembly machines, specify the configuration in "Manifold specifications" (page 25).

How to order

WXU-P - R - 6 - L - S 1 1 - N - 15 - 12 - A0N0

- R: A Supply/drain category
- 6: B Station No.
- L: C In-block position
- S: D Valve size for fluid 1
- 1: E Valve actuation for fluid 1
- 1: F Valve actuation for fluid 2
- N: G Flow rate adjustment function
- 15: H Port size (branching port)
- 12: I Flow rate range for flow sensor
- A0N0: J Flow rate sensor output (1), K Flow rate sensor output (2)

[Example of model No.]

WXU-P-R-6-L-S11-N-15-12-A0N0

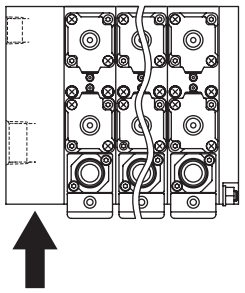
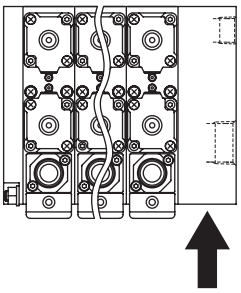
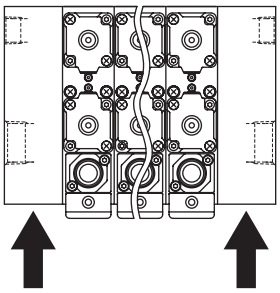
Model name: Integrated unit for water control Two-fluid control

- A Supply/drain category : Return side
- B Station No. : 6 stations
- C In-block position : Left
- D Valve size for fluid 1 : Standard specifications
- E Valve actuation for fluid 1 : NC (normally closed)
- F Valve actuation for fluid 2 : NC (normally closed)
- G Flow rate adjustment function : With flow rate adjustment function
- H Port size : Rc1/2
- I Flow rate range for flow sensor : 1.5 to 12 L/min
- J Flow rate sensor output (1) : 0 to 5 VDC
- K Flow rate sensor output (2) : NPN transistor output, 1 points (a contact)

J Flow rate sensor output (1)		K Flow rate sensor output (2)					
		Blank	N0	N1	P0	P1	T
		Not required	Transistor output 1 point				Water temperature measuring function
			NPN a contact	NPN b contact	PNP a contact	PNP b contact	
A0	0 to 5 VDC	●	●	●	●	●	●
A1	4 to 20 mADC	●	●	●	●	●	
A2	1 to 5 VDC	●	●	●	●	●	●
A3	0 to 10 VDC	●	●	●	●	●	●
N0	NPN transistor output, 2 points (a contact)	●					
N1	NPN transistor output, 2 points (b contact)	●					
P0	PNP transistor output, 2 points (a contact)	●					
P1	PNP transistor output, 2 points (b contact)	●					
000	Without flow sensor (A Supply/drain category "S")	●					

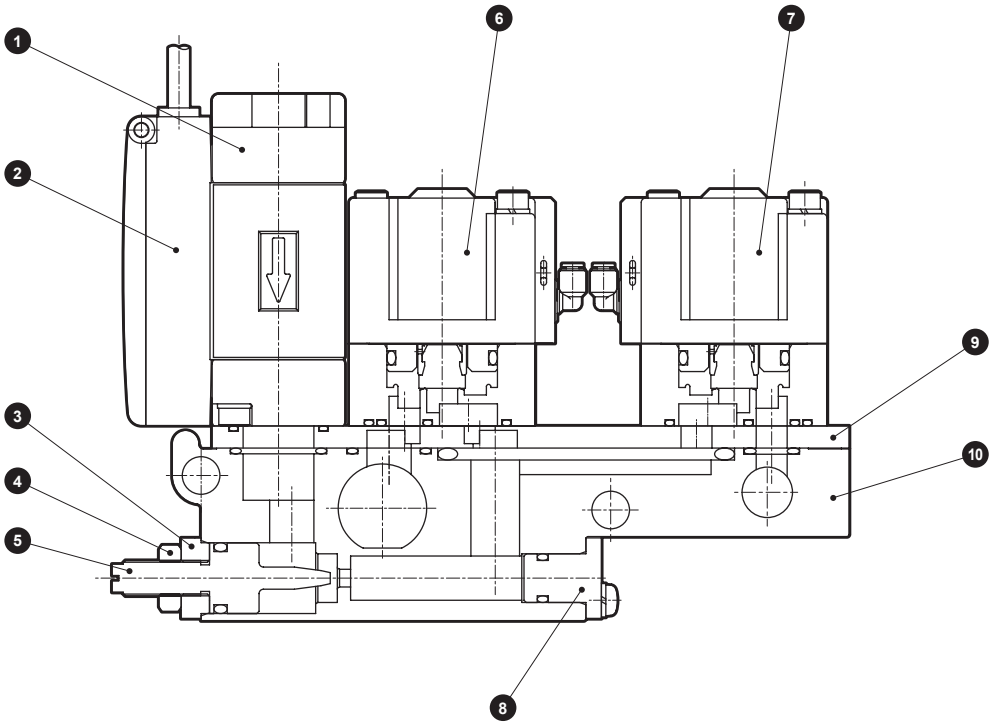
Code	Content
A Supply/drain category	
S	Supply side
R	Return side
B Station No.	
2	2 stations
to	to
6	6 stations
C In-block position	
L	Left
R	Right
W	Both sides
D Valve size for fluid 1	
S	Standard specifications
B	Large flow rate specifications
E Valve actuation for fluid 1	
1	NC (normally closed)
2	NO (normally open)
F Valve actuation for fluid 2	
1	NC (normally closed)
2	NO (normally open)
G Flow rate adjustment function	
N	With flow rate adjustment function
0	None
H Port size (branching port)	
10	Rc3/8
15	Rc1/2 ("T" with water temperature measuring function cannot be selected.)
I Flow rate range for flow sensor	
04	0.5 to 4.0 L/min
12	1.5 to 12 L/min
32	4.0 to 32 L/min
00	Without flow sensor (A Supply/drain category "S")

C In-block position

Code	L	R	W
Content	Left	Right	Both sides
Layout			

Internal structure and parts list

● One station assembly

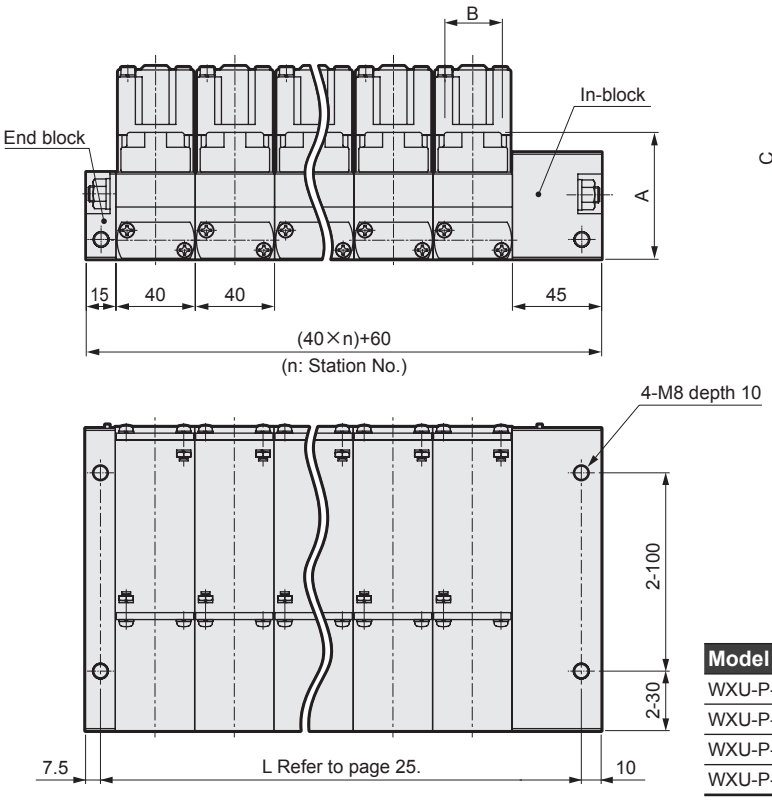


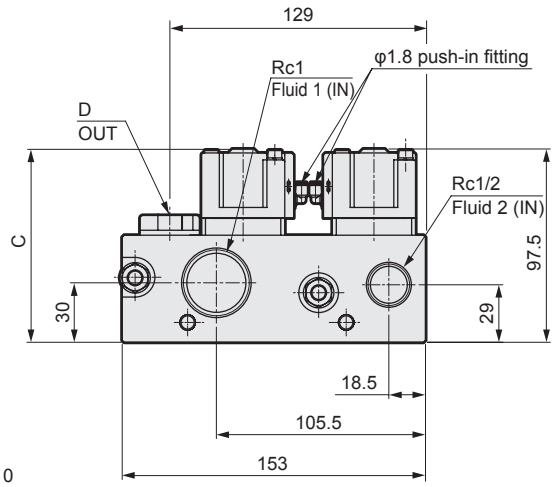
(Needle is fully opened at shipment.)

No.	Part name	Material	
1	Attachment	SCS13	Stainless steel casting
2	Flow rate sensor [WFK3000 Series]		
3	Needle stopper	SUS304	Stainless steel
4	Hexagon nut	SWCH	Carbon steel for cold rolling
5	Needle	SUS304	Stainless steel
6	Cylinder valve for fluid 1 [GNAB Series]		
7	Cylinder valve for fluid 2 [GNAB Series]		
8	Plug	SUS304	Stainless steel
9	Plate	SUS304	Stainless steel
10	Base	PPS	Polyphenylene sulfide

Dimensions

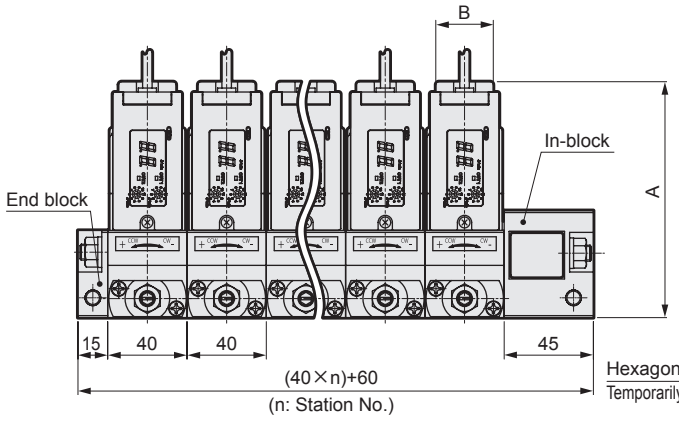
●WXU-P-S

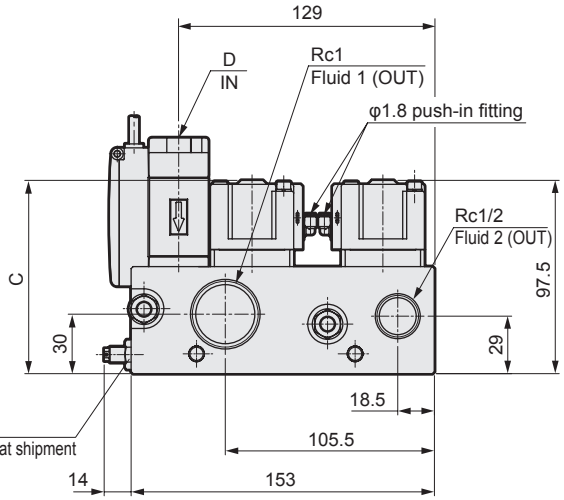


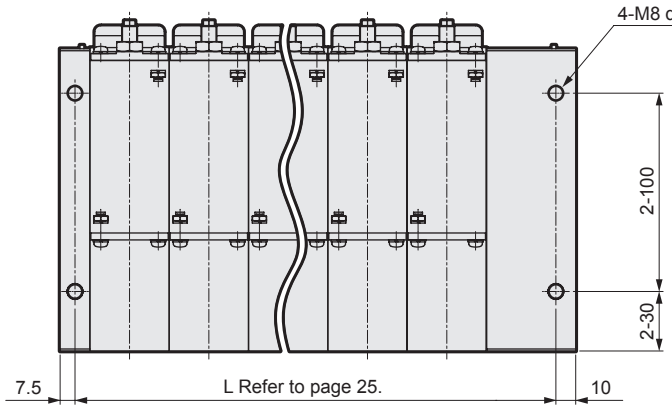


Model No.	A	B	C	D
WXU-P-S-***-S-***-10	59	24	97.5	Rc3/8
WXU-P-S-***-B-***-10	59	24	103	Rc3/8
WXU-P-S-***-S-***-15	64	29	97.5	Rc1/2
WXU-P-S-***-B-***-15	64	29	103	Rc1/2

●WXU-P-R







Model No.	A	B	C	D
WXU-P-R-***-S-***-10	114	24	97.5	Rc3/8
WXU-P-R-***-B-***-10	114	24	103	Rc3/8
WXU-P-R-***-S-***-15	119	29	97.5	Rc1/2
WXU-P-R-***-B-***-15	119	29	103	Rc1/2