

**Crown<sup>®</sup>**

# Products Catalogue

Gas Regulator·  
Flowmeter·Gasmixer



 **YUTAKA<sup>®</sup>**

The First Name in Performance.  
The Last Word in High Purity.



YUTAKA ENGINEERING CORPORATION, better known as Crown, was founded in 1956 by President and CEO, Yoshitake Toyokawa. Yoshitake's objectives were to provide products with sincerity, enthusiasm and originality from a company with excellent service and technical support. These goals have continued to guide the company throughout the years.

In 1956, YUTAKA began producing pressure regulators and flowmeters intended solely for the general industry. These products were designed and manufactured exclusively for the welding gas applications. In 1980, the company's efforts have remained focused on meeting the ever changing needs of the high purity applications. Our products designs

and manufacturing techniques are constantly evolving to meet the future challenges of the industry's next generation requirements at a competitive price. The product line continues to grow year by year with additional innovative components which compliment our offering.

Today, YUTAKA continues to strive towards our goals. We are still working to improve our already high standards of quality, performance and reliability backed by service and support.

# For the Hi-Technology



**e-flow**  
for high purity process



▲ Head Office in Tokyo



▲ Matsumoto Factory



▲ Integrated Gas System



# FR-I Series

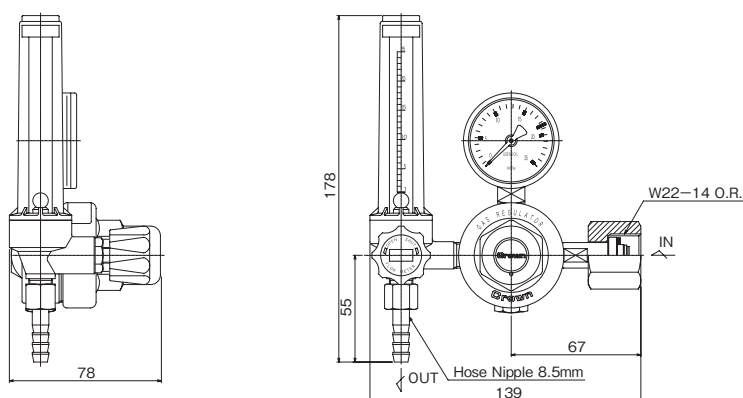
## For Cylinder Single-Stage Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Proof Pressure	0.15 or 0.2MPa
Inlet Pressure	14.8MPa or less	Inlet Connection	W22-14 O.R.
Outlet Pressure	0.15 or 0.2MPa	Outlet Connection	Hose Nipple 8.5mm
Flow Range	1~25L/min	Accessories	Gasket Packing(Fiber)×2Pcs.
Type of Flowmeter	IN	Approximate Weight	1.4kg

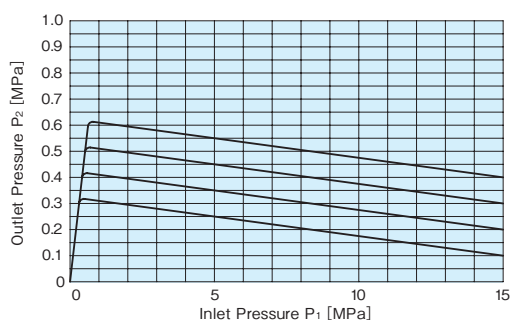


### Outline drawing



[Note]  
 ■ Unit: mm  
 ■ Dimensions are subject to change without notice.

### Supply pressure effect characteristics



[Note]  
 ■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Flowmeter				Inlet Connection	Outlet Connection
		Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa		
FR-I	25	Ar	25	IN	0.15	W22 (R)	Hose Nipple 8.5 mm
	25	N <sub>2</sub>	25	IN	0.15	W22 (R)	Hose Nipple 8.5 mm
	25	O <sub>2</sub>	25	IN	0.15	W22 (R)	Hose Nipple 8.5 mm
	25	H <sub>2</sub>	30	IN	0.15	W22 (L)	Hose Nipple 8.5 mm
	25	He	30	IN	0.15	W21 (L)	Hose Nipple 8.5 mm
	25	Ar	25	IN	0.2	W22 (R)	Hose Nipple 8.5 mm

# FR-II Series

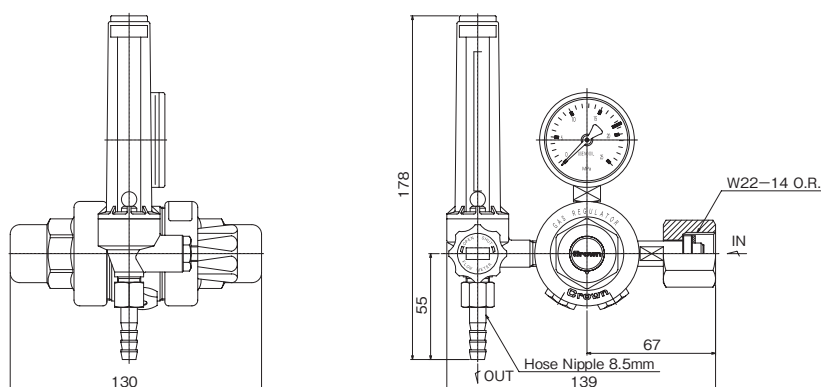
## For Cylinder Two-Stage Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Proof Pressure	0.25MPa
Inlet Pressure	14.8MPa or less	Inlet Connection	W22-14 O.R.
Outlet Pressure	0.25MPa	Outlet Connection	Hose Nipple 8.5mm
Flow Range	1~25L/min	Accessories	Gasket Packing(Fiber)×2Pcs.
Type of Flowmeter	OUT	Approximate Weight	2.0kg

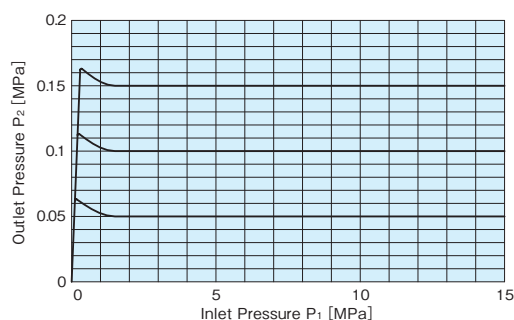


### Outline drawing



[Note]  
 ■ Unit: mm  
 ■ Dimensions are subject to change without notice.

### Supply pressure effect characteristics



[Note]  
 ■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Flowmeter				Inlet Connection	Outlet Connection
		Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa		
FR-II	25	Ar	25	OUT	0.25	W22 (R)	Hose Nipple 8.5 mm
	25	Ar	25	OUT	0.2	W22 (R)	Hose Nipple 8.5 mm
	25	N <sub>2</sub>	25	OUT	0.2	W22 (R)	Hose Nipple 8.5 mm
	25	O <sub>2</sub>	25	OUT	0.2	W22 (R)	Hose Nipple 8.5 mm

# FR-IIW Series

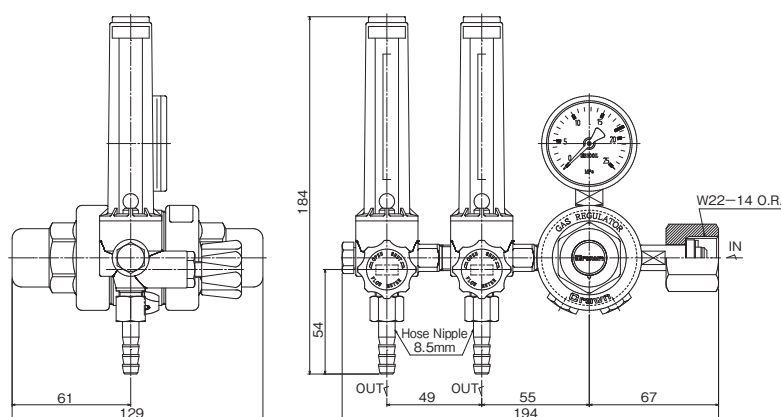
## For Cylinder Two-Stage Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Proof Pressure	0.25MPa
Inlet Pressure	14.8MPa or less	Inlet Connection	W22-14 O.R.
Outlet Pressure	0.25MPa	Outlet Connection	Hose Nipple 8.5mm
Flow Range	1~25L/min	Accessories	Gasket Packing(Fiber)×2Pcs.
Type of Flowmeter	OUT	Approximate Weight	2.7kg

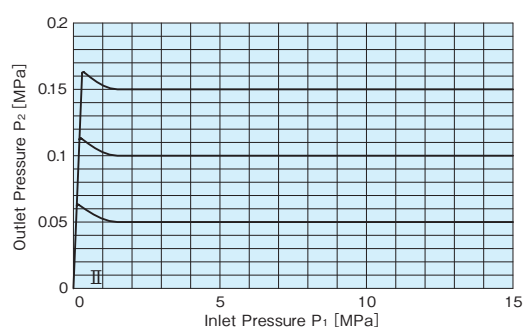


### Outline drawing



[Note]  
 ■ Unit : mm  
 ■ Dimensions are subject to change without notice.

### Supply pressure effect characteristics



[Note]  
 ■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Flowmeter				Inlet Connection	Outlet Connection
		Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa		
FR-IIW	25	Ar	25	OUT	0.25	W22 (R)	Hose Nipple 8.5mm
	25	Ar	25	OUT	0.2	W22 (R)	Hose Nipple 8.5mm
	25	N <sub>2</sub>	25	OUT	0.2	W22 (R)	Hose Nipple 8.5mm
	25	O <sub>2</sub>	25	OUT	0.2	W22 (R)	Hose Nipple 8.5mm

# FR-IA Series

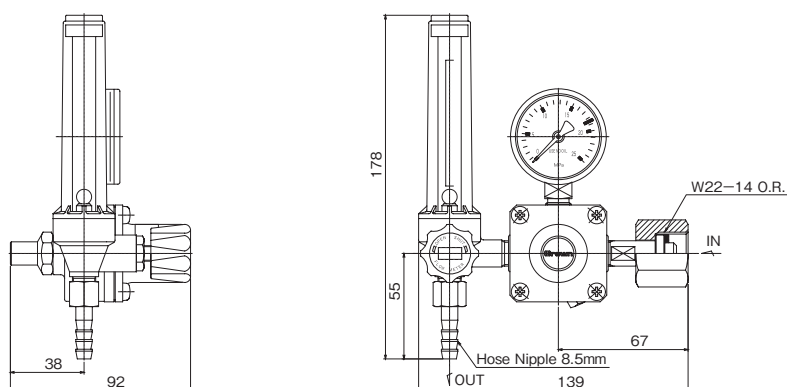
## For Cylinder Stay-Flat Type Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Proof Pressure	0.25MPa
Inlet Pressure	14.8MPa or less	Inlet Connection	W22-14 O.R.
Outlet Pressure	0.25MPa	Outlet Connection	Hose Nipple 8.5mm
Flow Range	1~25L/min	Accessories	Gasket Packing(Fiber)×2Pcs.
Type of Flowmeter	OUT	Approximate Weight	1.6kg



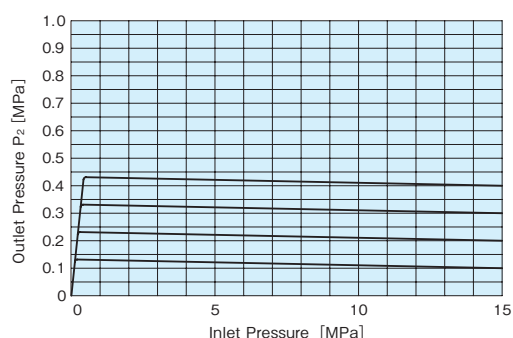
### Outline drawing



[Note]

- Unit: mm
- Dimensions are subject to change without notice.

### Supply pressure effect characteristics



[Note]

- These tests were performed at ambient conditions.

### Materials of construction

Body	C3771BE
Bonnet	ZDC
Seat	PTFE
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Flowmeter				Inlet Connection	Outlet Connection
		Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa		
FR-IA	25	Ar	25	OUT	0.25	W22 (R)	Hose Nipple 8.5 mm
	25	Ar	25	OUT	0.2	W22 (R)	Hose Nipple 8.5 mm
	25	N <sub>2</sub>	25	OUT	0.2	W22 (R)	Hose Nipple 8.5 mm
	25	O <sub>2</sub>	25	OUT	0.2	W22 (R)	Hose Nipple 8.5 mm

# FR-IP Series

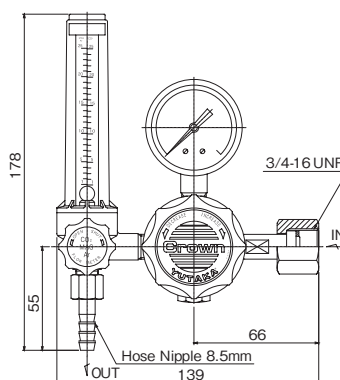
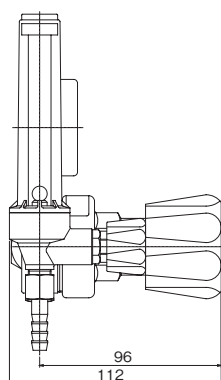
## For Line Pressure Regulator

### Specifications

Outlet Pressure Gauge	0.6MPa	Proof Pressure	0.2MPa
Inlet Pressure	0.99MPa or less	Inlet Connection	3/4-16UNF
Outlet Pressure	0~0.4MPa	Outlet Connection	Hose Nipple 8.5mm
Flow Range	1~25L/min	Accessories	Nil
Type of Flowmeter	OUT	Approximate Weight	1.4kg



### Outline drawing

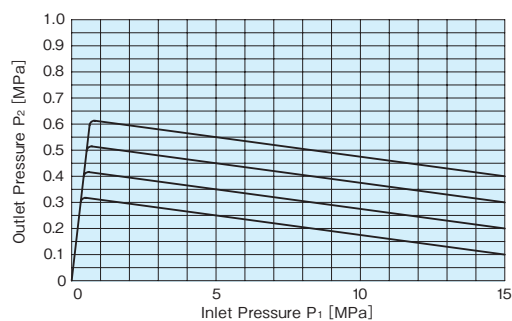


[Note]

■ Unit : mm

■ Dimensions are subject to change without notice.

### Supply pressure effect characteristics



[Note]

■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Outlet Pressure Gauge MPa	Flowmeter				Inlet Connection	Outlet Connection
		Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa		
FR-IP	0.6	MAG, Ar/CO2 Dual scale	25	OUT	0.2	3/4-16 UNF	Hose Nipple 8.5 mm
	0.6	Ar	25	OUT	0.25	3/4-16 UNF	Hose Nipple 8.5 mm
	0.6	Ar	25	OUT	0.2	3/4-16 UNF	Hose Nipple 8.5 mm
	0.6	N <sub>2</sub>	25	OUT	0.2	3/4-16 UNF	Hose Nipple 8.5 mm
	0.6	O <sub>2</sub>	25	OUT	0.2	3/4-16 UNF	Hose Nipple 8.5 mm

# FR-IS-OP Series

## For Cylinder Single-Stage Pressure Regulator

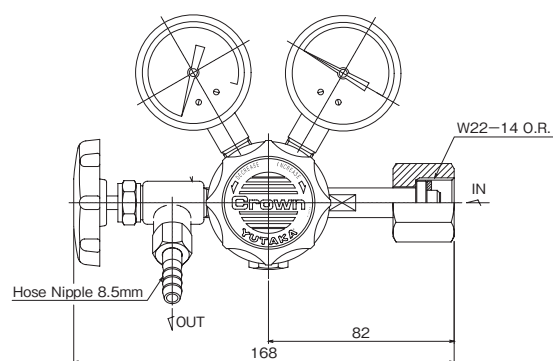
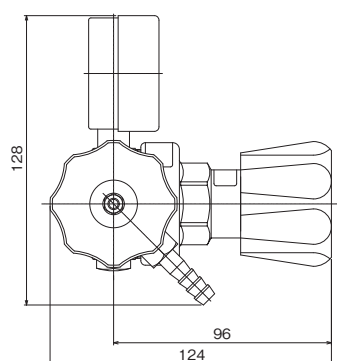
### Specifications

Inlet Pressure Gauge	25MPa
Outlet Pressure Gauge	0.6, 1, 1.6MPa
Inlet Pressure	14.8MPa or less
Outlet Pressure	60% of Full scale

Inlet Connection	W22-14 O.R.
Outlet Connection	Hose Nipple 8.5mm
Accessories	Gasket Packing(Fiber)×2Pcs.
Approximate Weight	1.5kg



### Outline drawing

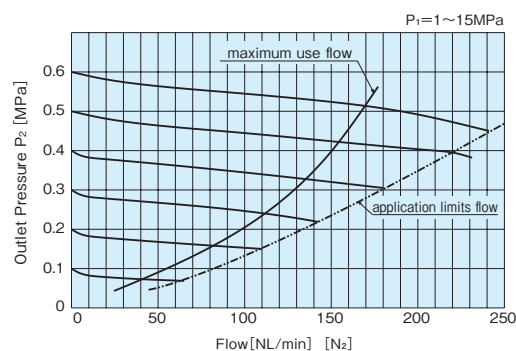


[Note]

■ Unit: mm

■ Dimensions are subject to change without notice.

### Flow characteristics



[Note]

■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Outlet Pressure Gauge MPa	Inlet Connection	Outlet Connection
FR-IS-OP	25	0.6	W22 (R)	Hose Nipple 8.5 mm
	25	1	W22 (R)	Hose Nipple 8.5 mm
	25	0.6	W22 (L)	Hose Nipple 8.5 mm
	25	1	W22 (L)	Hose Nipple 8.5 mm



# FR-IS-P Series

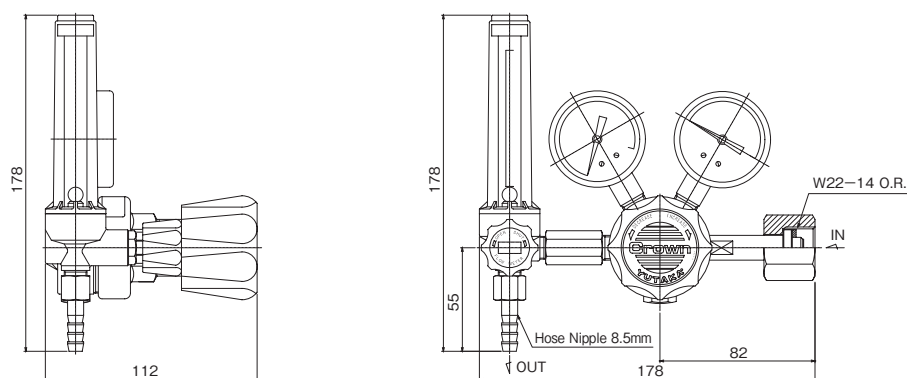
## For Cylinder Single-Stage Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Proof Pressure	0.15 or 0.2MPa
Outlet Pressure Gauge	0.6 MPa	Inlet Connection	W22-14 O.R.
Inlet Pressure	14.8MPa or less	Outlet Connection	Hose Nipple 8.5mm
Outlet Pressure	0 ~ 0.4 MPa	Accessories	Gasket Packing(Fiber)×2 Pcs.
Flow Range	1~25L/min	Approximate Weight	1.6kg
Type of Flowmeter	IN		

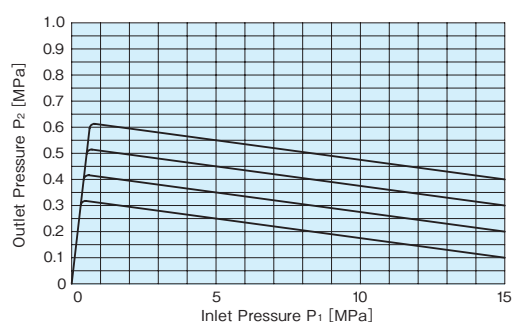


### Outline drawing



[Note]  
 ■ Unit : mm  
 ■ Dimensions are subject to change without notice.

### Supply pressure effect characteristics



[Note]  
 ■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Outlet Pressure Gauge MPa	Flowmeter				Inlet Connection	Outlet Connection
			Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa		
FR-IS-P	25	0.6	Ar	25	IN	0.15	W22 (R)	Hose Nipple 8.5 mm
	25	0.6	N <sub>2</sub>	25	IN	0.15	W22 (R)	Hose Nipple 8.5 mm
	25	0.6	O <sub>2</sub>	25	IN	0.15	W22 (R)	Hose Nipple 8.5 mm
	25	0.6	H <sub>2</sub>	30	IN	0.15	W22 (L)	Hose Nipple 8.5 mm
	25	0.6	He	30	IN	0.15	W21 (L)	Hose Nipple 8.5 mm
	25	0.6	Ar	25	IN	0.2	W22 (R)	Hose Nipple 8.5 mm

# FR-IIS-OP Series

## For Cylinder Two-Stage Pressure Regulator

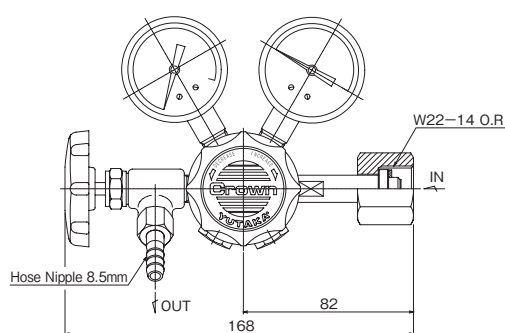
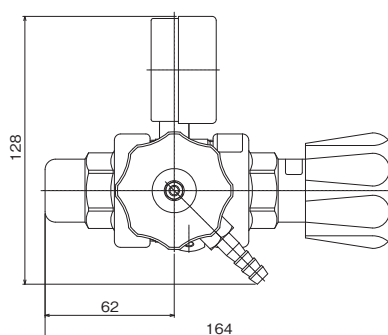
### Specifications

Inlet Pressure Gauge	25 MPa
Outlet Pressure Gauge	0.1, 0.3, 0.6, 1 MPa
Inlet Pressure	14.8 MPa or less
Outlet Pressure	0~0.6MPa

Inlet Connection	W22-14 O.R.
Outlet Connection	Hose Nipple 8.5 mm
Accessories	Gasket Packing(Fiber)×2 Pcs.
Approximate Weight	1.9 kg



### Outline drawing

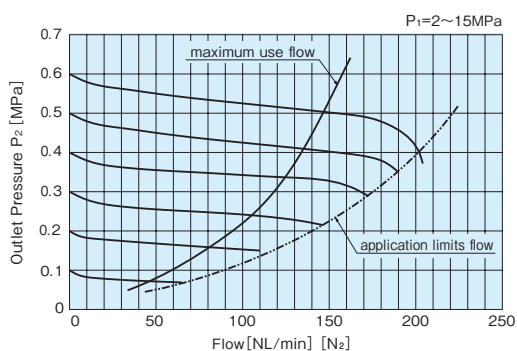


[Note]

■ Unit : mm

■ Dimensions are subject to change without notice.

### Flow characteristics



[Note]

■ These tests were performed at ambient conditions

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Outlet Pressure Gauge MPa	Inlet Connection	Outlet Connection
FR-IIS-OP	25	0.1	W22 (R)	Hose Nipple 8.5 mm
	25	0.3	W22 (R)	Hose Nipple 8.5 mm
	25	0.6	W22 (R)	Hose Nipple 8.5 mm
	25	1	W22 (R)	Hose Nipple 8.5 mm
	25	0.3	W22 (L)	Hose Nipple 8.5 mm
	25	0.6	W22 (L)	Hose Nipple 8.5 mm
	25	1	W22 (L)	Hose Nipple 8.5 mm
	25	0.6	W21 (L)	Hose Nipple 8.5 mm

# FR-IIS-P Series

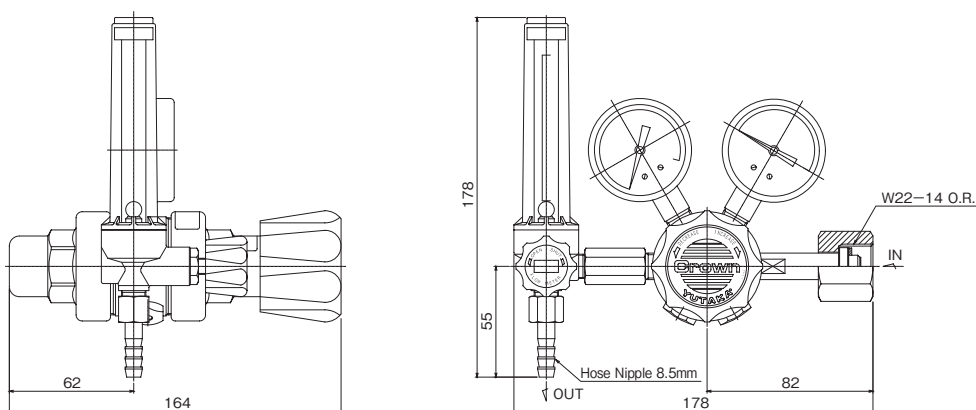
## For Cylinder Two-Stage Pressure Regulator

### Specifications

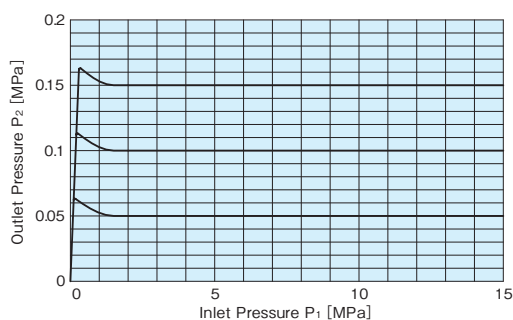
Inlet Pressure Gauge	25MPa	Proof Pressure	0.25MPa
Outlet Pressure Gauge	0.6MPa	Inlet Connection	W22-14 O.R.
Inlet Pressure	14.8MPa or less	Outlet Connection	Hose Nipple 8.5mm
Outlet Pressure	0~0.4MPa	Accessories	Gasket Packing(Fiber)×2Pcs.
Flow Range	1~25L/min	Approximate Weight	2.3kg
Type of Flowmeter	OUT		



### Outline drawing



### Supply pressure effect characteristics



[Note]  
■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Outlet Pressure Gauge MPa	Flowmeter				Inlet Connection	Outlet Connection
			Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa		
FR-IIS-P	25	0.6	Ar	25	OUT	0.25	W22 (R)	Hose Nipple 8.5 mm
	25	0.6	N <sub>2</sub>	25	OUT	0.2	W22 (R)	Hose Nipple 8.5 mm
	25	0.6	O <sub>2</sub>	25	OUT	0.2	W22 (R)	Hose Nipple 8.5 mm

# FR-IO Series

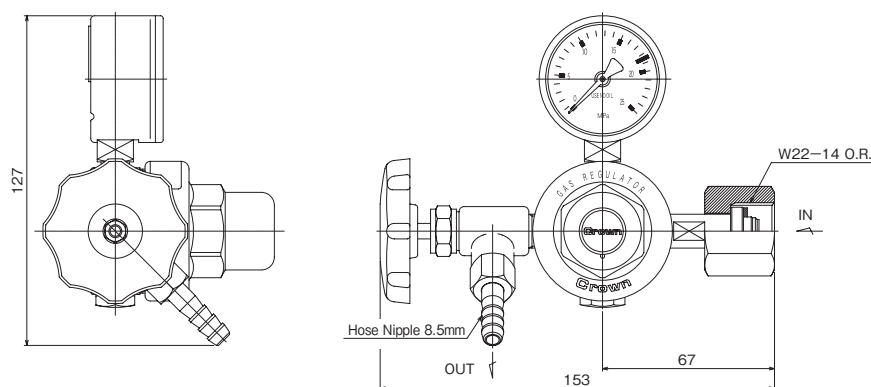
## For Cylinder Single-Stage Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Outlet Connection	Hose Nipple 8.5mm
Inlet Pressure	14.8MPa or less	Accessories	Gasket Packing(Fiber)×2Pcs.
Outlet Pressure	0.15 or 0.2MPa	Approximate Weight	1.2kg
Inlet Connection	W22-14 O.R.		

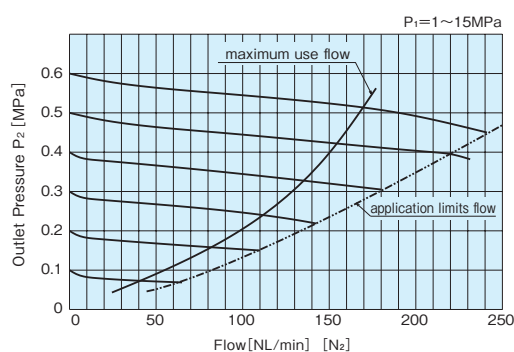


### Outline drawing



[Note]  
 ■ Unit: mm  
 ■ Dimensions are subject to change without notice.

### Flow characteristics



[Note]  
 ■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Outlet Pressure MPa	Inlet Connection	Outlet Connection
FR-IO	25	0.15	W22 (R)	Hose Nipple 8.5 mm
	25	0.2	W22 (R)	Hose Nipple 8.5 mm
	25	0.25	W22 (R)	Hose Nipple 8.5 mm
	25	0.15	W21 (L)	Hose Nipple 8.5 mm
	25	0.2	W21 (L)	Hose Nipple 8.5 mm
	25	0.25	W21 (L)	Hose Nipple 8.5 mm



# FR-II0 Series

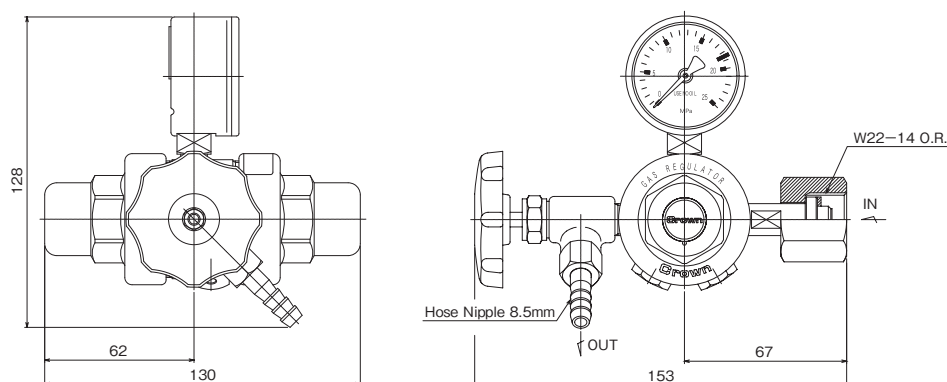
## For Cylinder Two-Stage Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Outlet Connection	Hose Nipple 8.5mm
Inlet Pressure	14.8MPa or less	Accessories	Gasket Packing(Fiber) × 2Pcs.
Outlet Pressure	0.15 or 0.2MPa	Approximate Weight	1.8kg
Inlet Connection	W22-14 O.R.		



### Outline drawing

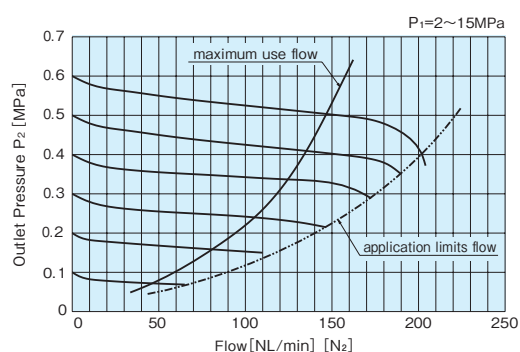


[Note]

■ Unit : mm

■ Dimensions are subject to change without notice.

### Flow characteristics



[Note]

■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Outlet Pressure MPa	Inlet Connection	Outlet Connection
FR-II0	25	0.15	W22 (R)	Hose Nipple 8.5mm
	25	0.2	W22 (R)	Hose Nipple 8.5mm
	25	0.25	W22 (R)	Hose Nipple 8.5mm
	25	0.15	W21 (L)	Hose Nipple 8.5mm
	25	0.2	W21 (L)	Hose Nipple 8.5mm
	25	0.25	W21 (L)	Hose Nipple 8.5mm

# FR-I0-P Series

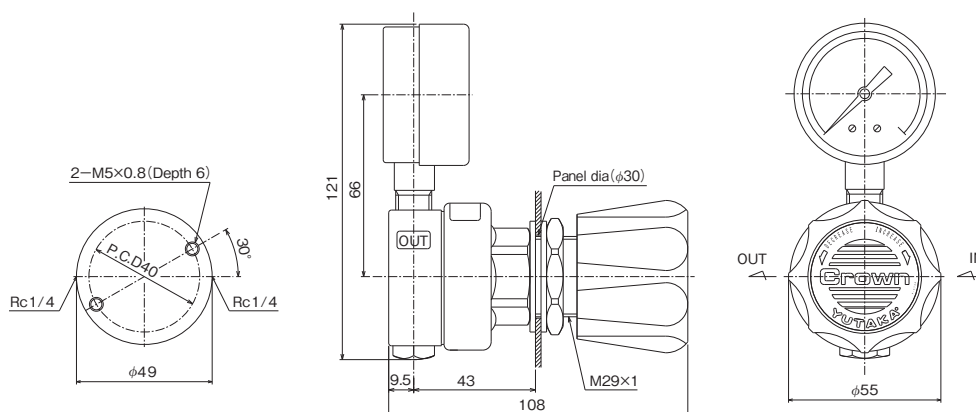
## For Line Pressure Regulator

### Specifications

Outlet Pressure Gauge	0.3, 0.6, 1MPa	Outlet Connection	Rc1/4
Inlet Pressure	0.99MPa or less	Accessories	Nil
Outlet Pressure	0 ~ 0.6MPa	Approximate Weight	1.2kg
Inlet Connection	Rc1/4		



### Outline drawing

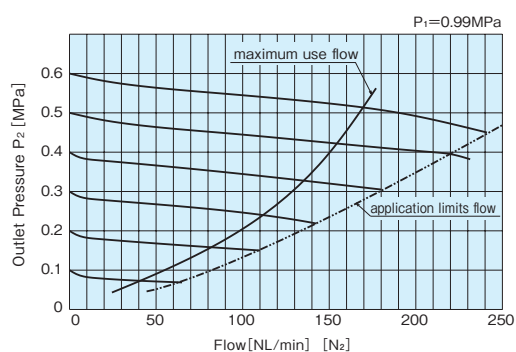


[Note]

■ Unit: mm

■ Dimensions are subject to change without notice.

### Flow characteristics



[Note]

■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3604 BD
Bonnet	ZDC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

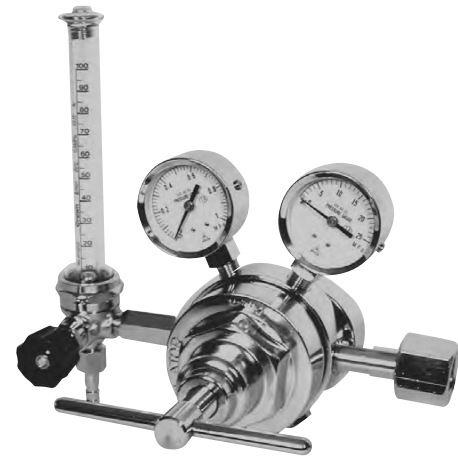
Series	Inlet Pressure Gauge MPa	Inlet Connection	Outlet Connection
FR-I0-P	0.3	Rc1/4	Rc1/4
	0.6	Rc1/4	Rc1/4
	1	Rc1/4	Rc1/4
	0.3	1/4 SUS Pipe Nipple	1/4 SUS Pipe Nipple
	0.6	1/4 SUS Pipe Nipple	1/4 SUS Pipe Nipple
	1	1/4 SUS Pipe Nipple	1/4 SUS Pipe Nipple

# FR-II L Series

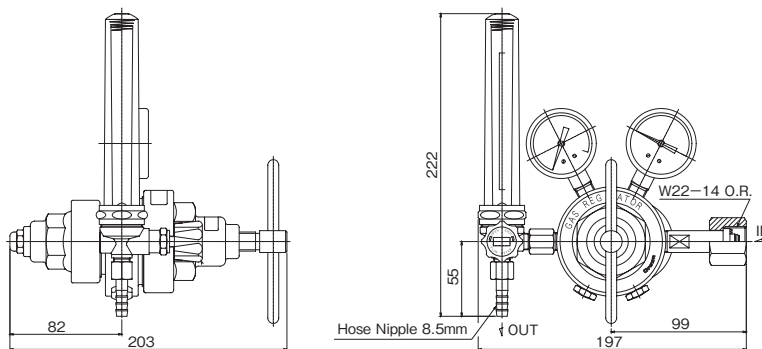
## For Cylinder, Medium Flow Two-Stage Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Proof Pressure	0.5MPa
Outlet Pressure Gauge	1MPa	Inlet Connection	W22-14 O.R.
Inlet Pressure	14.8MPa or less	Outlet Connection	Hose Nipple 8.5mm
Outlet Pressure	0 ~ 0.6MPa	Accessories	Gasket Packing(Fiber)×2Pcs.
Flow Range	10 ~ 100L/min	Approximate Weight	3.5kg
Type of Flowmeter	OUT		



### Outline drawing

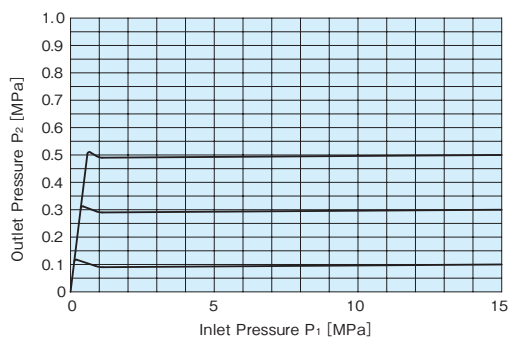


[Note]

■ Unit : mm

■ Dimensions are subject to change without notice.

### Supply pressure effect characteristics



### Materials of construction

Body	C3771 BE
Bonnet	C3771 BE
Poppet	C3604 BD
Inlet Pressure Seat	PCTFE
Outlet Pressure Seat	NBR
Diaphragm	NBR
Safety valve seat	CR

[Note]

■ These tests were performed at ambient conditions.

### List of specifications

Series	Inlet Pressure Gauge MPa	Outlet Pressure Gauge MPa	Flowmeter				Inlet Connection	Outlet Connection
			Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa		
FR-II L	25	1	Ar	50	OUT	0.3	W22 (R)	Hose Nipple 8.5 mm
	25	1	N <sub>2</sub>	50	OUT	0.3	W22 (R)	Hose Nipple 8.5 mm
	25	1	O <sub>2</sub>	50	OUT	0.3	W22 (R)	Hose Nipple 8.5 mm
	25	1	Ar	100	OUT	0.5	W22 (R)	Hose Nipple 8.5 mm
	25	1	N <sub>2</sub>	100	OUT	0.5	W22 (R)	Hose Nipple 8.5 mm
	25	1	O <sub>2</sub>	100	OUT	0.5	W22 (R)	Hose Nipple 8.5 mm

# FR-III L Series

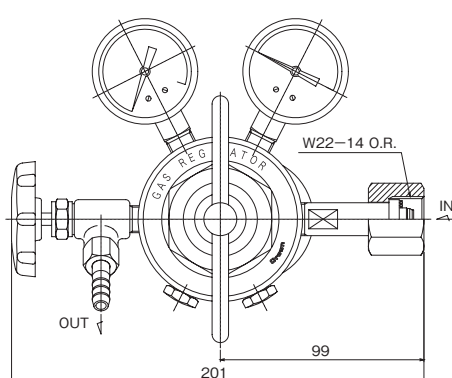
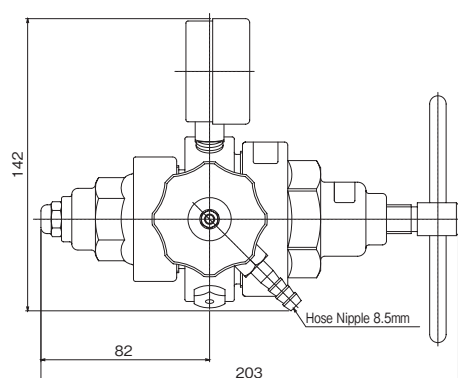
## For Cylinder, Medium Flow Two-Stage Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Inlet Connection	W22-14 O.R.
Outlet Pressure Gauge	0.6MPa	Outlet Connection	Hose Nipple 8.5mm
Inlet Pressure	14.8MPa or less	Accessories	Gasket Packing(Fiber)×2Pcs.
Outlet Pressure	0 ~ 0.6MPa	Approximate Weight	2.4kg

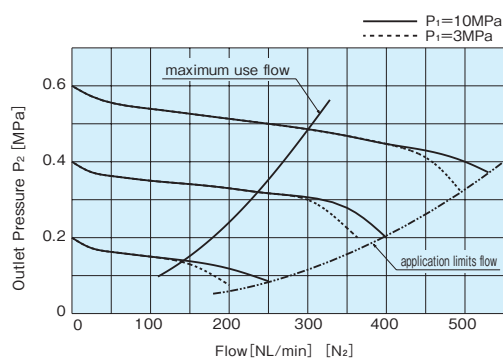


### Outline drawing



[Note]  
 ■ Unit: mm  
 ■ Dimensions are subject to change without notice.

### Flow characteristics



### Materials of construction

Body	C3771 BE
Bonnet	C3771 BE
Poppet	C3604 BD
Inlet Pressure Seat	PCTFE
Outlet Pressure Seat	NBR
Diaphragm	NBR
Safety valve seat	CR

[Note]  
 ■ These tests were performed at ambient conditions.

### List of specifications

Series	Inlet Pressure Gauge MPa	Outlet Pressure Gauge MPa	Inlet Connection	Outlet Connection
FR-III L	25	0.3	W22 (R)	Hose Nipple 8.5 mm
	25	0.6	W22 (R)	Hose Nipple 8.5 mm
	25	1	W22 (R)	Hose Nipple 8.5 mm
	25	0.3	W22 (L)	Hose Nipple 8.5 mm
	25	0.6	W22 (L)	Hose Nipple 8.5 mm
	25	1	W22 (L)	Hose Nipple 8.5 mm



# FR-ILS-OP Series

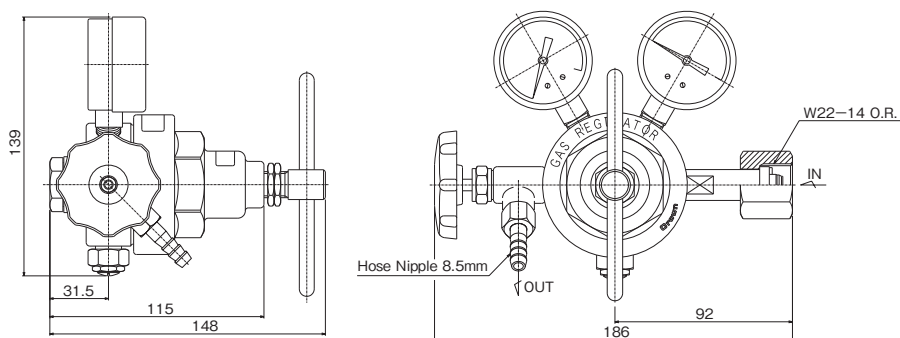
## For Cylinder, High Flow Single-Stage Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Inlet Connection	W22-14 O.R.
Outlet Pressure Gauge	6MPa	Outlet Connection	Hose Nipple 8.5mm
Inlet Pressure	14.8MPa or less	Accessories	Gasket Packing(Fiber)×2Pcs.
Outlet Pressure	0 ~ 3.5MPa	Approximate Weight	2.5kg



### Outline drawing

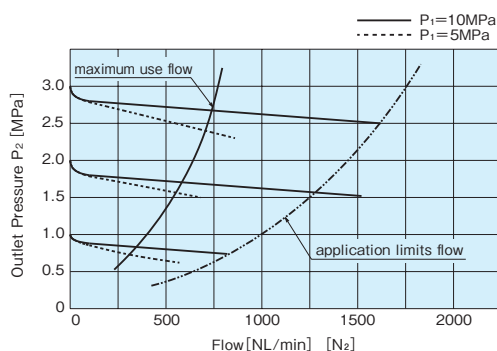


[Note]

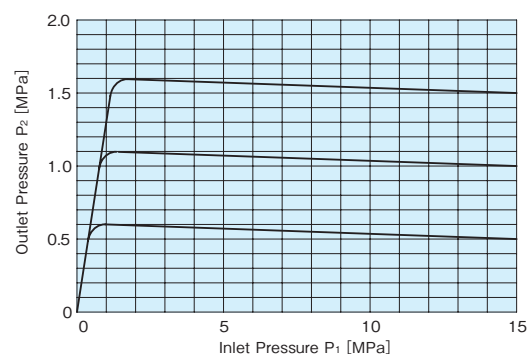
■ Unit : mm

■ Dimensions are subject to change without notice.

### Flow characteristics



### Supply pressure effect characteristics



[Note]

■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3771BE
Bonnet	C3771BE
Poppet	C3604 BD
Seat	PCTFE
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Inlet Pressure Gauge MPa	Outlet Pressure Gauge MPa	Inlet Connection	Outlet Connection
FR-ILS-OP	25	2.5	W22 (R)	Hose Nipple 8.5 mm
	25	4	W22 (R)	Hose Nipple 8.5 mm
	25	6	W22 (R)	Hose Nipple 8.5 mm
	25	2.5	W22 (R)	Rc1/4
	25	4	W22 (R)	Rc1/4
	25	6	W22 (R)	Rc1/4

# FR-IH-OP Series

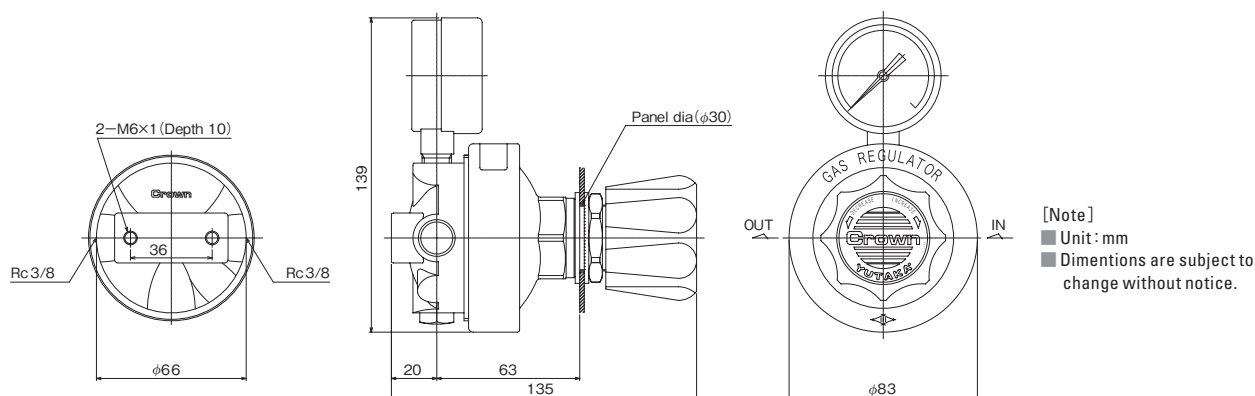
## For Line, Medium Flow Pressure Regulator

### Specifications

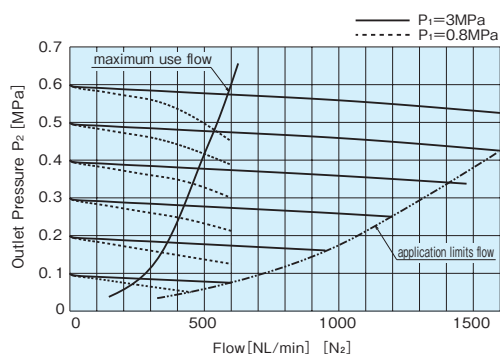
Outlet Pressure Gauge	1MPa	Outlet Connection	Rc3/8
Inlet Pressure	3MPa or less	Accessories	Nil
Outlet Pressure	0 ~ 0.6MPa	Approximate Weight	1.6kg
Inlet Connection	Rc3/8		



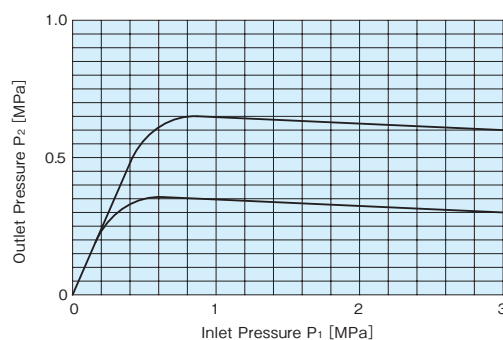
### Outline drawing



### Flow characteristics



### Supply pressure effect characteristics



[Note]  
■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3771BE
Bonnet	ADC
Poppet	C3604 BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

### List of specifications

Series	Outlet Pressure Gauge MPa	Inlet Connection	Outlet Connection
FR-IH-OP	0.6	Rc3/8	Rc3/8
	1	Rc3/8	Rc3/8
	0.6	3/8 SUS Pipe Nipple	3/8 SUS Pipe Nipple
	1	3/8 SUS Pipe Nipple	3/8 SUS Pipe Nipple
	0.6	Rc3/8	Hose Nipple 8.5 mm
	1	Rc3/8	Hose Nipple 8.5 mm

# FR4L Series

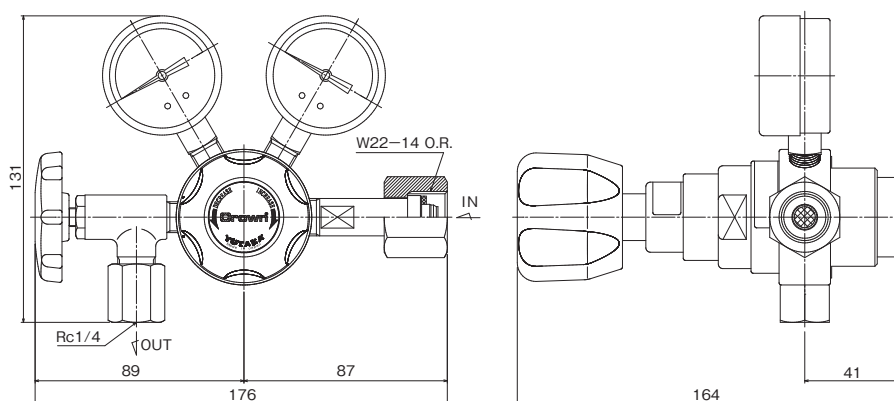
## For Cylinder, High Pressure Regulator

### Specifications

Inlet Pressure Gauge	25MPa	Inlet Connection	W22-14 O.R.
Outlet Pressure Gauge	25MPa	Outlet Connection	Rc1/4
Inlet Pressure	14.8MPa or less	Accessories	Gasket Packing(Nylon)×2Pcs.
Outlet Pressure	0 ~ 14.8MPa	Approximate Weight	3.1kg

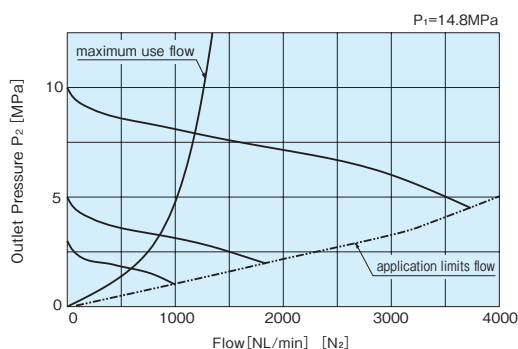


### Outline drawing



[Note]  
 ■ Unit : mm  
 ■ Dimensions are subject to change without notice.

### Flow characteristics



### Materials of construction

Body	C3604 BD
Bonnet	C3604 BD
Poppet	C3604 BD
Seat	PCTFE

[Note]  
 ■ These tests were performed at ambient conditions.

### List of specifications

Series	Inlet Pressure Gauge MPa	Outlet Pressure Gauge MPa	Inlet Connection	Outlet Connection
FR4L	25	10	W22 (R)	Rc1/4
	25	16	W22 (R)	Rc1/4
	25	25	W22 (R)	Rc1/4
	25	10	W22 (R)	W22-14 O.R.Male
	25	16	W22 (R)	W22-14 O.R.Male
	25	25	W22 (R)	W22-14 O.R.Male

# FCR-N Series

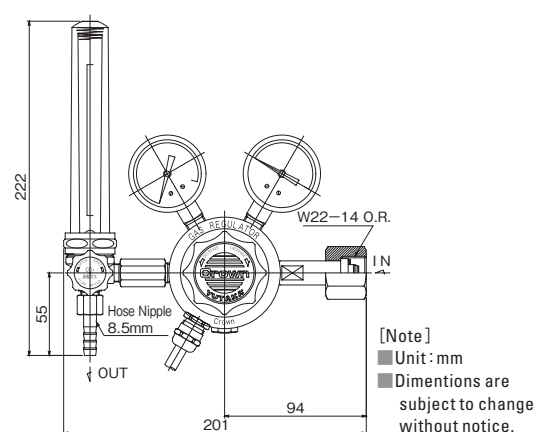
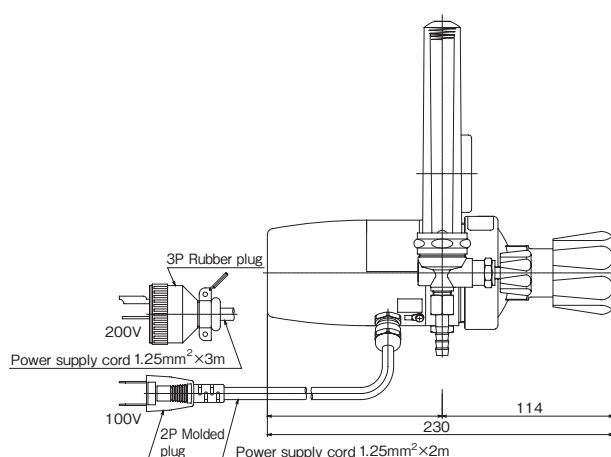
## For Cylinder, Carbon Dioxide Pressure Regulator

### Specifications

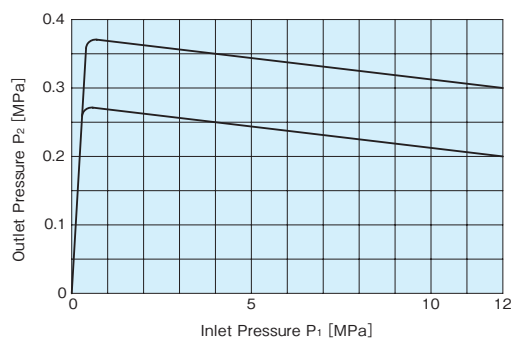
	FCR-50N	FCR-100N	FCR-150N	FCR-200N	FCR-500N
Inlet Pressure Gauge	25MPa				
Outlet Pressure Gauge	1MPa				
Inlet Pressure	12MPa or less				
Outlet Pressure	0.3MPa	0.5MPa	0.5MPa	0.6MPa	0.6MPa
Flow Range	5~50L/min	10~100L/min	10~150L/min	70~200L/min	50~500L/min
Type of Flowmeter	OUT	OUT	OUT	OUT	OUT
Proof Pressure	0.3MPa	0.5MPa	0.5MPa	0.6MPa	0.6MPa
Inlet Connection	W22-14 O.R.				
Outlet Connection	Hose Nipple 8.5mm				
Heater capacity	400W	600W	800W	1200W	2000W
Voltage	100V				200V
Power Supply cord	2m				3m
Accessories	Gasket Packing(Fiber)×2Pcs.				
Approximate Weight	3.3kg	3.6kg	4.5kg	4.5kg	8kg



### Outline drawing



### Supply pressure effect characteristics



### Materials of construction

Body	C3771BE
Bonnet	ADC12
Poppet	C3604BD
Seat	PCTFE
Diaphragm	NBR
Safety valve seat	NBR



# SCH Series

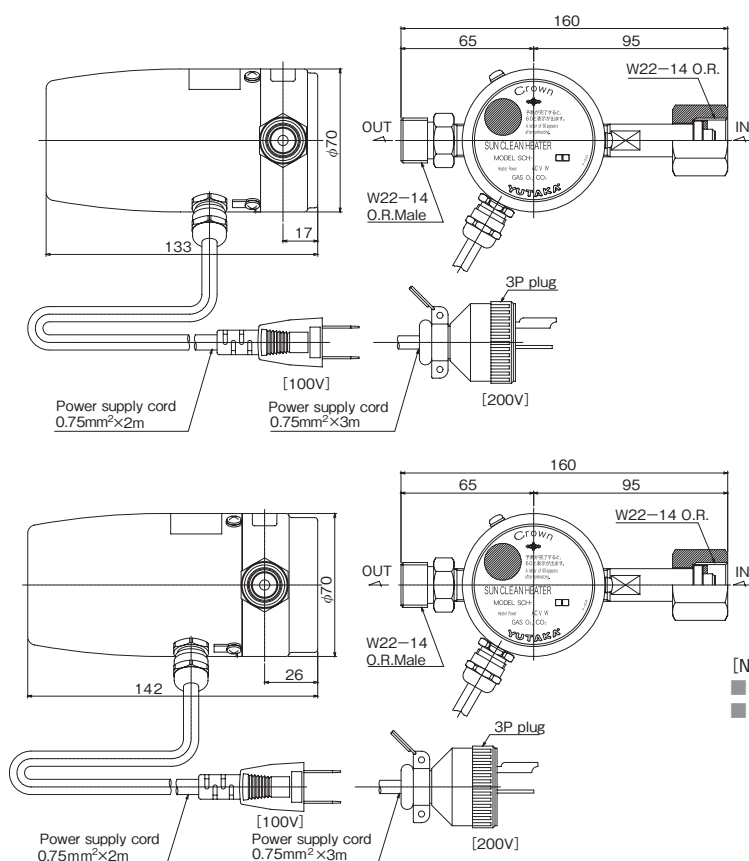
## Gas Heater Sun·Clean Heater

### Specifications

	SCH-2	SCH-4	SCH-6	SCH-8	SCH-10	SCH-12
Use Pressure	14.8MPa or less					
Standard Flow	CO <sub>2</sub> Pressure 7.5MPa or less	12Nm <sup>3</sup> /h	19Nm <sup>3</sup> /h	39Nm <sup>3</sup> /h	54Nm <sup>3</sup> /h	70Nm <sup>3</sup> /h
	CO <sub>2</sub> Pressure 7.5MPa more than	2.5Nm <sup>3</sup> /h	4Nm <sup>3</sup> /h	8Nm <sup>3</sup> /h	11Nm <sup>3</sup> /h	14Nm <sup>3</sup> /h
	O <sub>2</sub> , N <sub>2</sub>	50Nm <sup>3</sup> /h	72Nm <sup>3</sup> /h	120Nm <sup>3</sup> /h	160Nm <sup>3</sup> /h	200Nm <sup>3</sup> /h
Inlet Connection	W22-14 O.R.					
Outlet Connection	W22-14 O.R.Male					
Heater Capacity	200W	400W	600W	800W	1000W	1200W
Heater Voltage	100V					
Accessories	Gasket Packing(Fiber)×2Pcs.					
Approximate Weight	2.3kg					2.5kg



### Outline drawing



[Note]  
 ■ Unit : mm  
 ■ Dimensions are subject to change without notice.

### Materials of construction

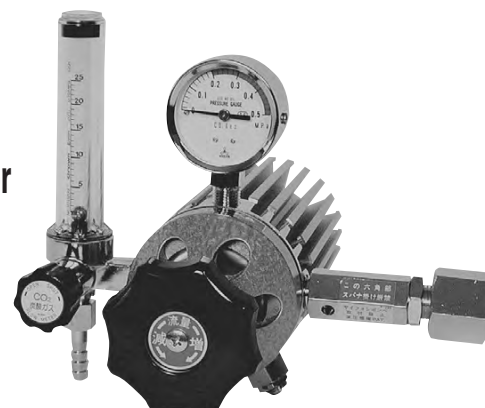
Body	C3771BE
Bonnet	SPCC
Brass tube	C3604BD
Cylinder Connection	C3604BD
Cylinder nut	C3604BD

# NP-PF Series

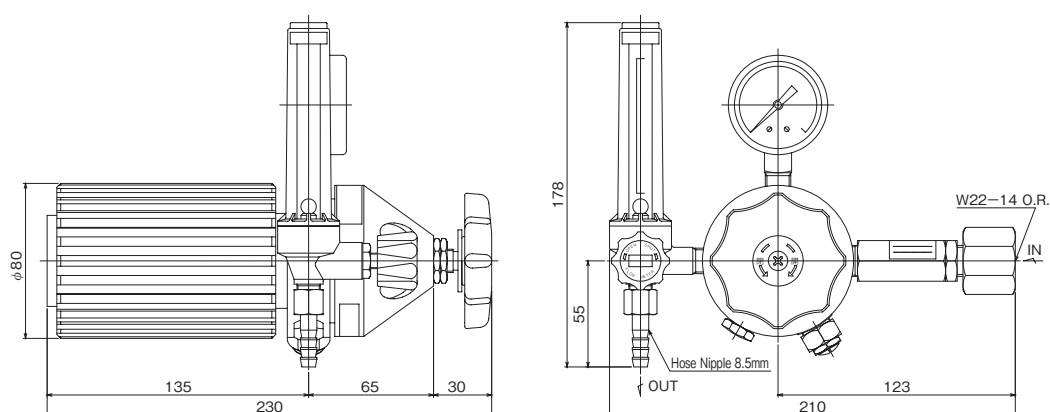
## For Cylinder, No Heater type Carbon Dioxide Pressure Regulator

### Specifications

Outlet Pressure Gauge	0.5MPa	Proof Pressure	0.15MPa
Inlet Pressure	12MPa or less	Inlet Connection	W22-14 O.R.
Outlet Pressure	0.15MPa	Outlet Connection	Hose Nipple 8.5mm
Flow Range	1 ~ 25L/min	Accessories	Gasket Packing(Fiber)×2Pcs.
Type of Flowmeter	IN	Approximate Weight	2.4kg

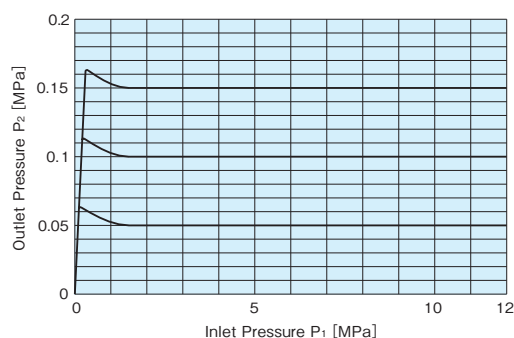


### Outline drawing



[Note]  
 ■ Unit : mm  
 ■ Dimensions are subject to change without notice.

### Supply pressure effect characteristics



[Note]  
 ■ These tests were performed at ambient conditions.

### Materials of construction

Body	C3771BE
Bonnet	ADC12
Fin cover	A6063S-T5
Poppet	C3604BD
Seat	PTFE
Diaphragm	Phosphor bronze
Safety valve seat	NBR

### List of specifications

Series	Outlet Pressure Gauge MPa	Flowmeter				Inlet Connection	Outlet Connection
		Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa		
NP-PF	0.5	CO <sub>2</sub>	25	IN	0.15	W22(R)	Hose Nipple 8.5mm
	0.5	CO <sub>2</sub>	25	IN	0.15	W22(R)	UNF9/16-18 Male
	0.5	CO <sub>2</sub>	25	IN	0.15	W22(R)	Rc1/4
	0.5	CO <sub>2</sub>	25	IN	0.15	Yoke Connection	Hose Nipple 8.5mm

# FCR-226 Series

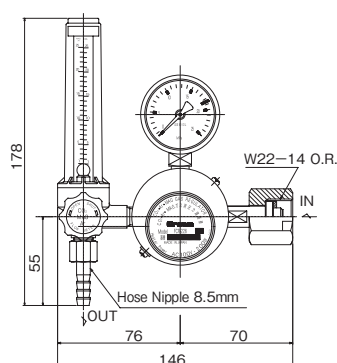
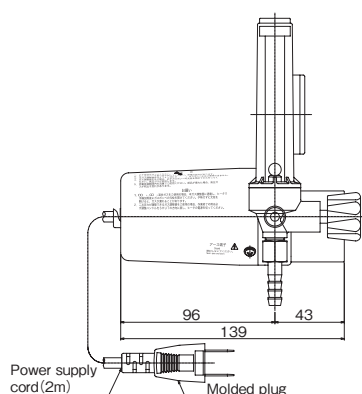
## For Cylinder, Two-Stage Pressure Regulator

### Specifications

Applicable gas	MAG、Ar、CO <sub>2</sub> (Ar 80%、CO <sub>2</sub> 20%)	Proof Pressure	0.25MPa
Inlet Pressure Gauge	25MPa	Inlet Connection	W22-14 O.R.
Inlet Pressure	Ar、MAG : 14.8MPa or less CO <sub>2</sub> : 12MPa or less	Outlet Connection	Hose Nipple 8.5mm
Outlet Pressure	0.25MPa	Heater capacity	200W
Flow Range	1 ~ 25L/min (MAG・Ar/CO <sub>2</sub> Dual Scale)	Heater Voltage	100V
Type of Flowmeter	OUT	Power supply cord	2m
		Accessories	Gasket Packing(Fiber)×2Pcs.
		Approximate Weight	2.2kg



### Outline drawing

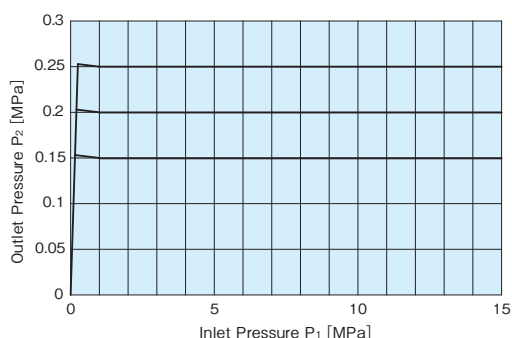


[Note]

■ Unit: mm

■ Dimensions are subject to change without notice.

### Supply pressure effect characteristics



### Materials of construction

Body	C3771BE
Bonnet	66-Nylon
Poppet	C3604BD
Seat	PCTFE, PFA
Safety valve seat	NBR
O Ring	FKM, NBR

[Note]

■ These tests were performed at ambient conditions.

### List of specifications

Series	Inlet Pressure Gauge MPa	Flowmeter				Heater capacity	Plug	Inlet Connection	Outlet Connection
		Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa				
FCR-226	25	MAG、Ar/CO <sub>2</sub> (Dual Scale)	25	OUT	0.25	AC100V-190W	2P	W22(R)	Hose Nipple 8.5mm
	25	Ar	25	OUT	0.25	AC100V-190W	2P	W22(R)	Hose Nipple 8.5mm
	25	CO <sub>2</sub>	25	OUT	0.25	AC100V-190W	2P	W22(R)	Hose Nipple 8.5mm

# NP-201 Series

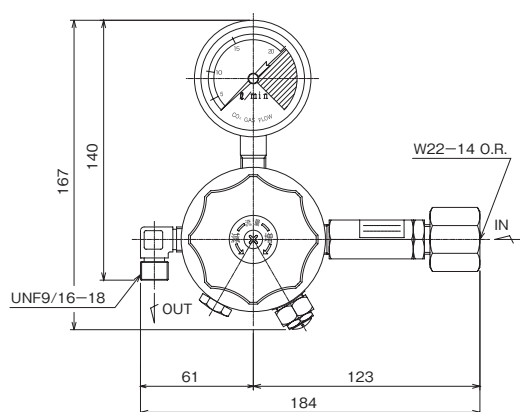
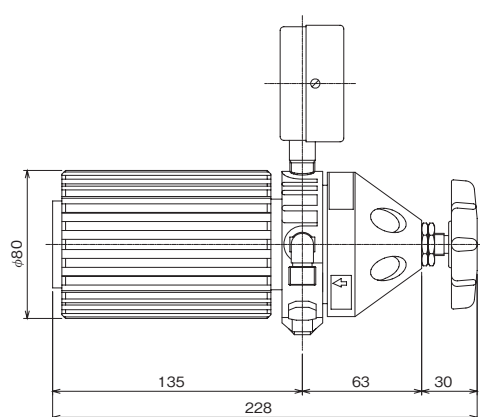
## For Cylinder, No Heater type Carbon Dioxide Pressure Regulator

### Specifications

Applicable gas	MAG, Ar, CO <sub>2</sub>	Flow Range	5 ~ 20L/min (CO <sub>2</sub> )
Inlet Pressure	Ar, MAG : 14.8MPa or less CO <sub>2</sub> : 12MPa or less	Inlet Connection	W22-14 O.R.
Outlet Pressure	0 ~ 0.2MPa	Outlet Connection	UNF9/16-18 male
Flowmeter	Bourdon tube flowmeter	Accessories	Gasket Packing(Fiber)×2Pcs.
		Approximate Weight	3.0kg



### Outline drawing



[Note]  
 ■ Unit: mm  
 ■ Dimensions are subject to change without notice.

### Materials of construction

Body	C3771BE
Bonnet	ADC12
Fin cover	A6063S-T5
Poppet	C3604BD
Seat	PTFE
Diaphragm	Phosphor bronze
Safety valve seat	NBR

### List of specifications

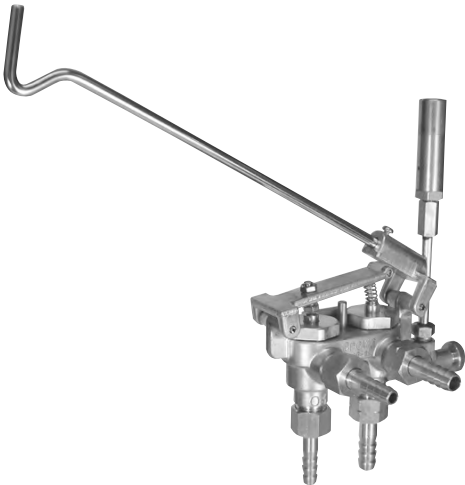
Series	Flowmeter L/min	Inlet Connection	Outlet Connection
NP-201	20	W22(R)	Hose Nipple 8.5mm
	20	W22(R)	UNF9/16-18
	20	W22(R)	Rc1/4

# YGS Series

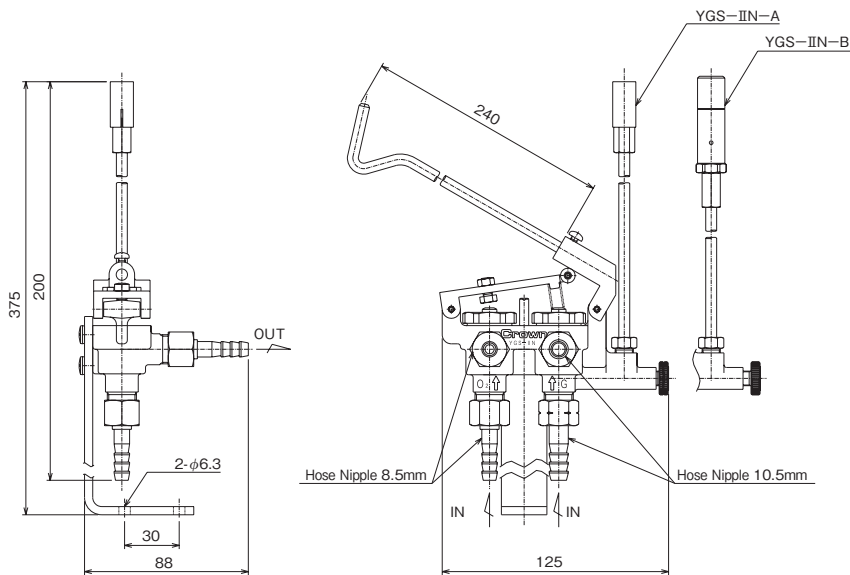
## Gas Saver

### Specifications

	YGS-IIN-A	YGS-IIN-B
Applicable gas	C <sub>2</sub> H <sub>2</sub> ・O <sub>2</sub>	LPG・O <sub>2</sub>
Use	O <sub>2</sub>	0.1~0.9MPa
Pressure	C <sub>2</sub> H <sub>2</sub> or LPG	0.002~0.09MPa
Inlet Connection	Hose Nipple 8.5mm, Hose Nipple 10.5mm	
Outlet Connection	Hose Nipple 8.5mm, Hose Nipple 10.5mm	
Approximate Weight	1.2kg	1.3kg



### Outline drawing



[Note]  
■ Unit : mm  
■ Dimentions are subject to change without notice.

### Materials of construction

Body	C3771BE
Hose Nipple	C3604BD
Poppet	C3604BD
Seat	NBR
Diaphragm	NBR

General industrial use

Flowmeter

Gas Mixer

Medical use



# NF Series

## Standard Type Flowmeter

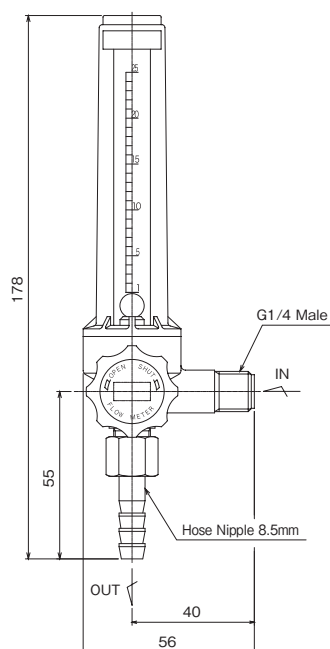
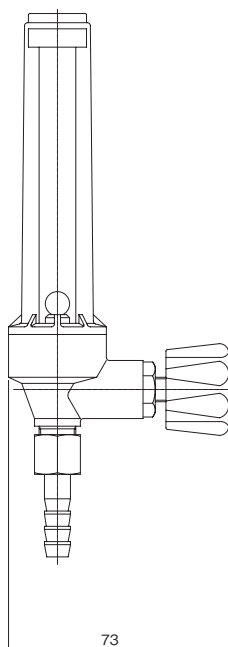
### Specifications

Flow Range	25L/min
Type of Flowmeter	IN
Proof Pressure	0.15MPa
Inlet Connection	G1/4 Male
Outlet Connection	Hose Nipple 8.5mm

Accuracy	± 5% (F.S)
Resisting Pressure	1MPa
Accessories	Nil
Approximate Weight	0.3kg



### Outline drawing



[Note]  
 ■ Unit : mm  
 ■ Dimensions are subject to change without notice.

### Materials of construction

Body	C3771BE
Cover	PC
Hose Nipple	C3604BD
O Ring	NBR

### List of specifications

Series	Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa	Inlet Connection	Outlet Connection
NF	Ar	25	IN	0.15	G1/4 Male	Hose Nipple 8.5mm
	N <sub>2</sub>	25	IN	0.15	G1/4 Male	Hose Nipple 8.5mm
	CO <sub>2</sub>	25	IN	0.15	G1/4 Male	Hose Nipple 8.5mm
	H <sub>2</sub>	30	IN	0.15	G1/4 Male	Hose Nipple 8.5mm
	He	30	IN	0.15	G1/4 Male	Hose Nipple 8.5mm
	Ar	25	IN	0.2	G1/4 Male	Hose Nipple 8.5mm

# NF-B Series

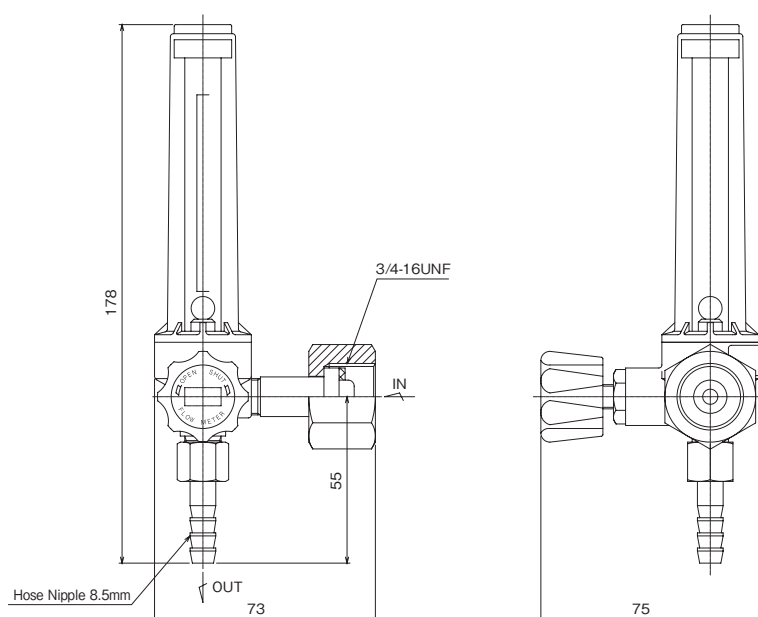
## For Line, Standard type Flowmeter

### Specifications

Flow Range	25L/min	Accuracy	± 5% (F.S)
Type of Flowmeter	OUT	Resisting Pressure	1MPa
Proof Pressure	0.2MPa	Accessories	Nil
Inlet Connection	3/4-16UNF	Approximate Weight	0.4kg
Outlet Connection	Hose Nipple 8.5mm		



### Outline drawing



#### [Note]

■ Unit : mm

■ Dimensions are subject to change without notice.

### Materials of construction

Body	C3771BE
Cover	PC
Hose Nipple	C3604BD
O Ring	NBR

### List of specifications

Series	Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa	Inlet Connection	Outlet Connection
NF-B	MAG · Ar/CO <sub>2</sub> Dual scale	25	OUT	0.2	3/4-16UNF	Hose Nipple 8.5mm
	Ar	25	OUT	0.2	3/4-16UNF	Hose Nipple 8.5mm
	N <sub>2</sub>	25	OUT	0.2	3/4-16UNF	Hose Nipple 8.5mm
	CO <sub>2</sub>	25	OUT	0.2	3/4-16UNF	Hose Nipple 8.5mm
	O <sub>2</sub>	25	OUT	0.2	3/4-16UNF	Hose Nipple 8.5mm
	Ar	25	OUT	0.25	3/4-16UNF	Hose Nipple 8.5mm

# NF-P Series

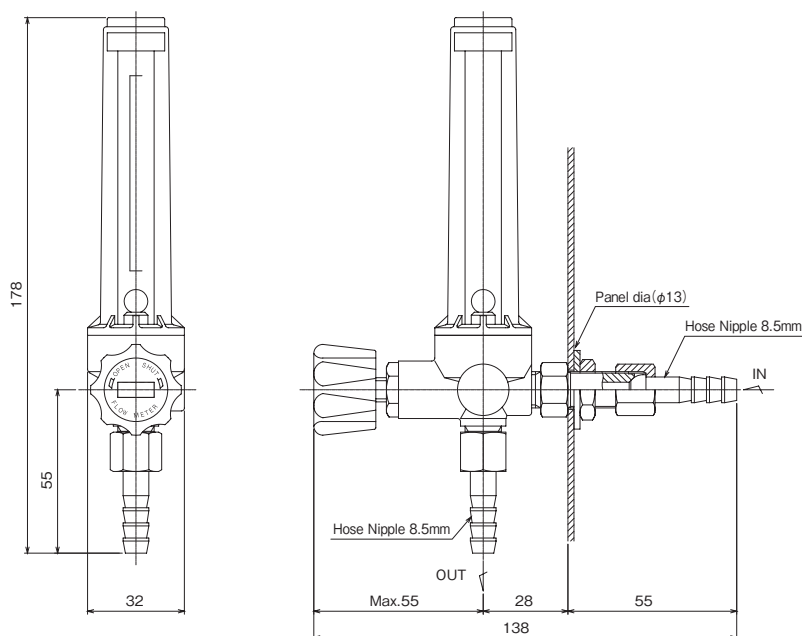
## For Panel Mount Flowmeter

### Specifications

Flow Range	25L/min	Accuracy	± 5% (F.S)
Type of Flowmeter	IN	Resisting Pressure	1MPa
Proof Pressure	0.15MPa	Accessories	Nil
Inlet Connection	Hose Nipple 8.5mm	Approximate Weight	0.3kg
Outlet Connection	Hose Nipple 8.5mm		



### Outline drawing



[Note]  
 ■ Unit : mm  
 ■ Dimensions are subject to change without notice.

### Materials of construction

Body	C3771BE
Cover	PC
Hose Nipple	C3604BD
O Ring	NBR

### List of specifications

Series	Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa	Inlet Connection	Outlet Connection
NF-P	Ar	25	IN	0.15	Hose Nipple 8.5mm	Hose Nipple 8.5mm
	N <sub>2</sub>	25	IN	0.15	Hose Nipple 8.5mm	Hose Nipple 8.5mm
	CO <sub>2</sub>	25	IN	0.15	Hose Nipple 8.5mm	Hose Nipple 8.5mm
	H <sub>2</sub>	30	IN	0.15	Hose Nipple 8.5mm	Hose Nipple 8.5mm
	He	30	IN	0.15	Hose Nipple 8.5mm	Hose Nipple 8.5mm
	Ar	25	IN	0.2	Hose Nipple 8.5mm	Hose Nipple 8.5mm

# LF Series

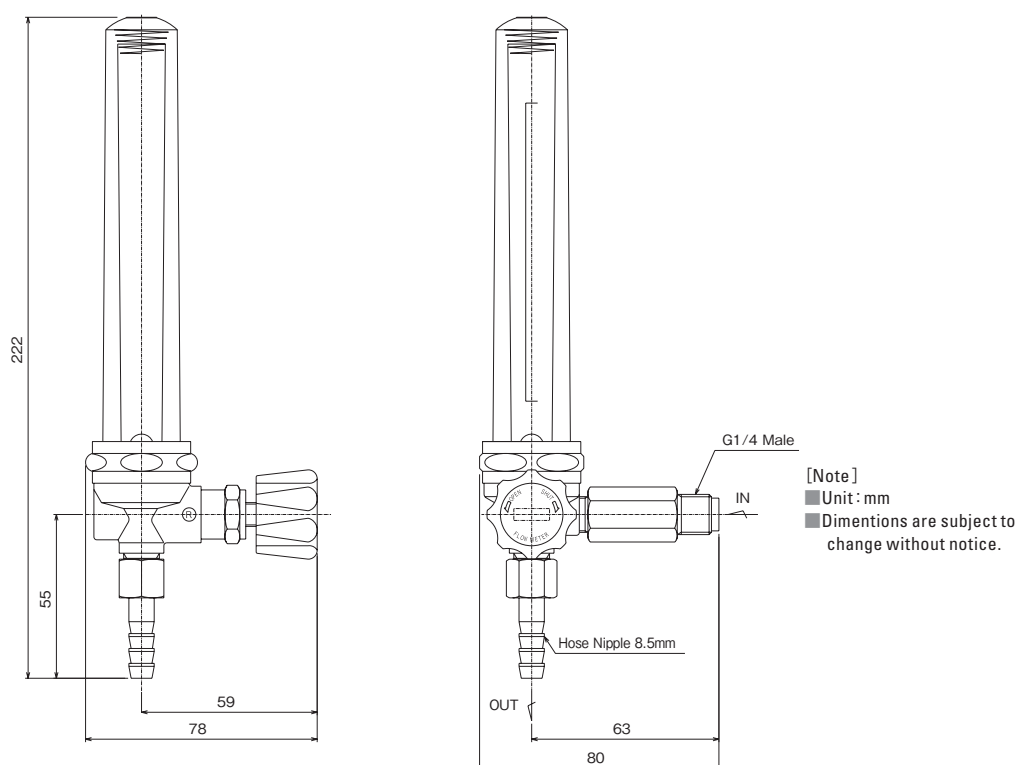
## Medium Flow, Flowmeter

### Specifications

Flow Range	100L/min	Accuracy	± 5% (F.S)
Type of Flowmeter	OUT	Resisting Pressure	1MPa
Proof Pressure	0.5MPa	Accessories	Nil
Inlet Connection	G1/4 Male	Approximate Weight	0.3kg
Outlet Connection	Hose Nipple 8.5mm		



### Outline drawing



### Materials of construction

Body	C3771BE
Cover	PC
Hose Nipple	C3604BD
O Ring	NBR

### List of specifications

Series	Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa	Inlet Connection	Outlet Connection
LF	Ar	50	OUT	0.3	G1/4 Male	Hose Nipple 8.5mm
	N <sub>2</sub>	50	OUT	0.3	G1/4 Male	Hose Nipple 8.5mm
	CO <sub>2</sub>	50	OUT	0.3	G1/4 Male	Hose Nipple 8.5mm
	Ar	100	OUT	0.5	G1/4 Male	Hose Nipple 8.5mm
	N <sub>2</sub>	100	OUT	0.5	G1/4 Male	Hose Nipple 8.5mm
	CO <sub>2</sub>	100	OUT	0.5	G1/4 Male	Hose Nipple 8.5mm

# LF-B Series

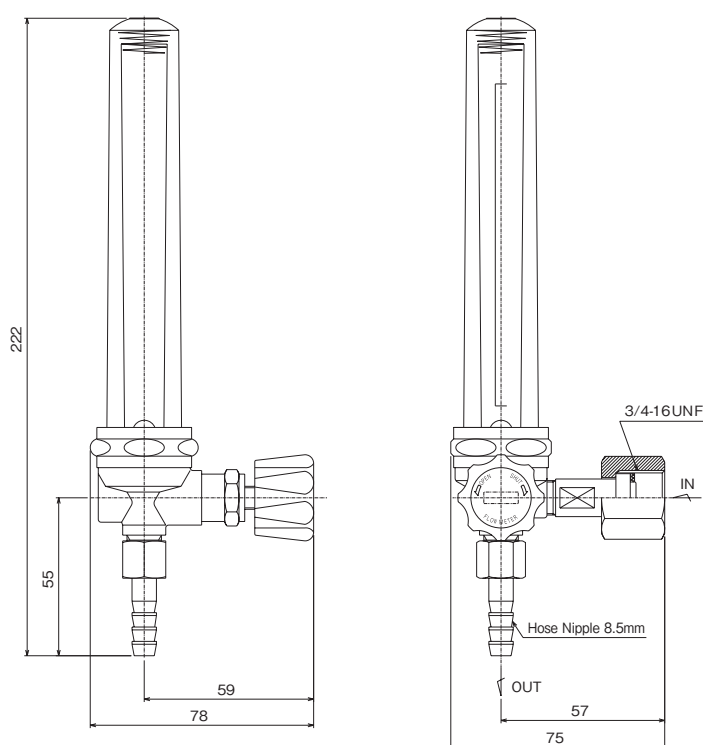
## For Line, Medium Flow Flowmeter

### Specifications

Flow Range	100L/min	Accuracy	± 5% (F.S)
Type of Flowmeter	OUT	Resisting Pressure	1MPa
Proof Pressure	0.5MPa	Accessories	Nil
Inlet Connection	3/4-16UNF	Approximate Weight	0.4kg
Outlet Connection	Hose Nipple 8.5mm		



### Outline drawing



[Note]  
 ■ Unit : mm  
 ■ Dimensions are subject to change without notice.

### Materials of construction

Body	C3771BE
Cover	PC
Hose Nipple	C3604BD
O Ring	NBR

### List of specifications

Series	Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa	Inlet Connection	Outlet Connection
LF-B	Ar	50	OUT	0.3	3/4-16UNF	Hose Nipple 8.5mm
	N <sub>2</sub>	50	OUT	0.3	3/4-16UNF	Hose Nipple 8.5mm
	CO <sub>2</sub>	50	OUT	0.3	3/4-16UNF	Hose Nipple 8.5mm
	Ar	100	OUT	0.5	3/4-16UNF	Hose Nipple 8.5mm
	N <sub>2</sub>	100	OUT	0.5	3/4-16UNF	Hose Nipple 8.5mm
	CO <sub>2</sub>	100	OUT	0.5	3/4-16UNF	Hose Nipple 8.5mm



# LF-P Series

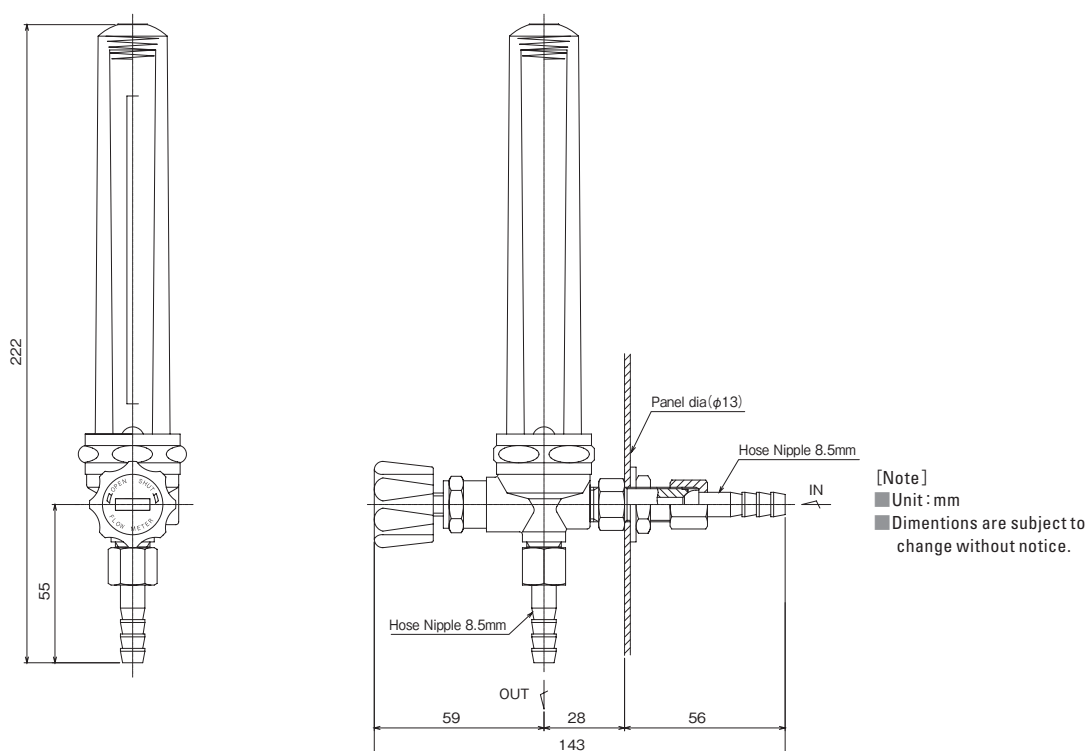
## For Panel Mount, Medium Flow Flowmeter

### Specifications

Flow Range	100L/min	Accuracy	± 5% (F.S)
Type of Flowmeter	OUT	Resisting Pressure	1MPa
Proof Pressure	0.5MPa	Accessories	Nil
Inlet Connection	Hose Nipple 8.5mm	Approximate Weight	0.4kg
Outlet Connection	Hose Nipple 8.5mm		



### Outline drawing



### Materials of construction

Body	C3771BE
Cover	PC
Hose Nipple	C3604BD
O Ring	NBR

### List of specifications

Series	Applicable gas	Flow L/min	Type of Flowmeter	Proof Pressure MPa	Inlet Connection	Outlet Connection
LF-P	Ar	50	OUT	0.3	Hose Nipple 8.5mm	Hose Nipple 8.5mm
	N <sub>2</sub>	50	OUT	0.3	Hose Nipple 8.5mm	Hose Nipple 8.5mm
	CO <sub>2</sub>	50	OUT	0.3	Hose Nipple 8.5mm	Hose Nipple 8.5mm
	Ar	100	OUT	0.5	Hose Nipple 8.5mm	Hose Nipple 8.5mm
	N <sub>2</sub>	100	OUT	0.5	Hose Nipple 8.5mm	Hose Nipple 8.5mm
	CO <sub>2</sub>	100	OUT	0.5	Hose Nipple 8.5mm	Hose Nipple 8.5mm

# MX-N Series

## Standard Type Gas Mixer

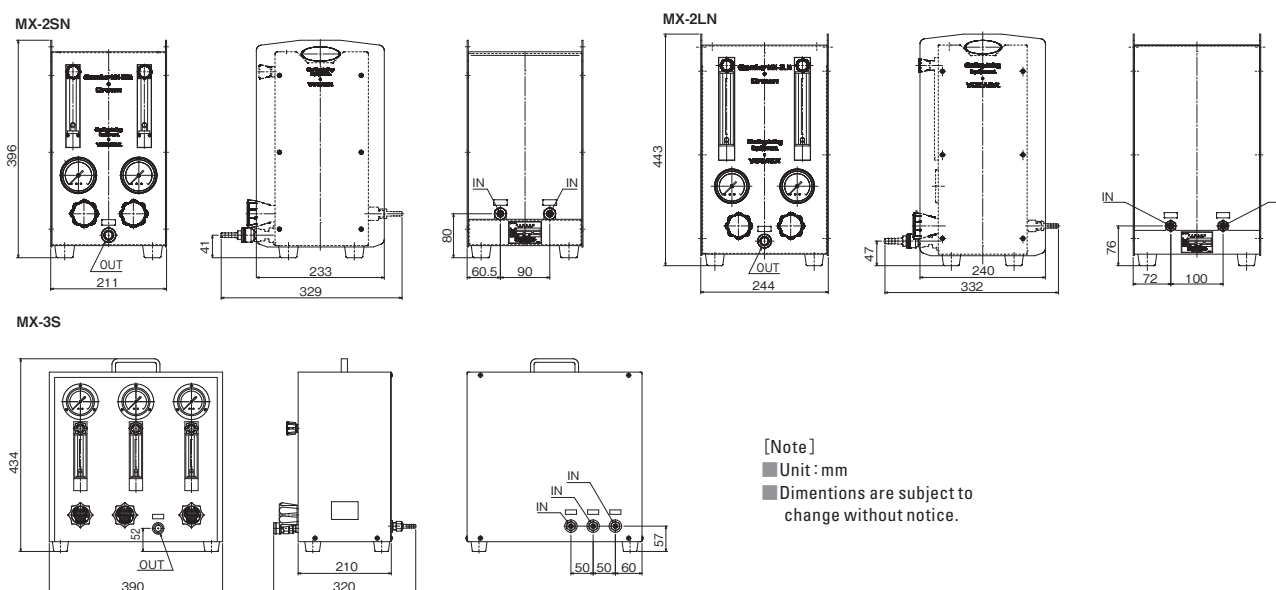
### Specifications

Model	MX-2SN	MX-2LN	MX-3S	MX-3L
Inlet Pressure	0.3~0.99MPa	0.4~0.99MPa		
Mixing Pressure	1~25L/min : 0.2MPa 10~100L/min : 0.5MPa		5~50L/min : 0.3MPa 20~200L/min : 0.5MPa	
Flow Range	1~25L/min	5~50L/min 10~100L/min 20~200L/min	1~25L/min	5~50L/min 10~100L/min 20~200L/min
Accuracy of Flowrate	±5%(F.S.)			
Accuracy of Mixing Ratio	±2.5%			
Inlet Connection	Hose Nipple 8.5mm			
Outlet Connection	20PH Coupler	30PH Coupler	20PH Coupler	30PH Coupler
Accessories	Nil			
Approximate Weight	9.8kg	12.9kg	15kg	

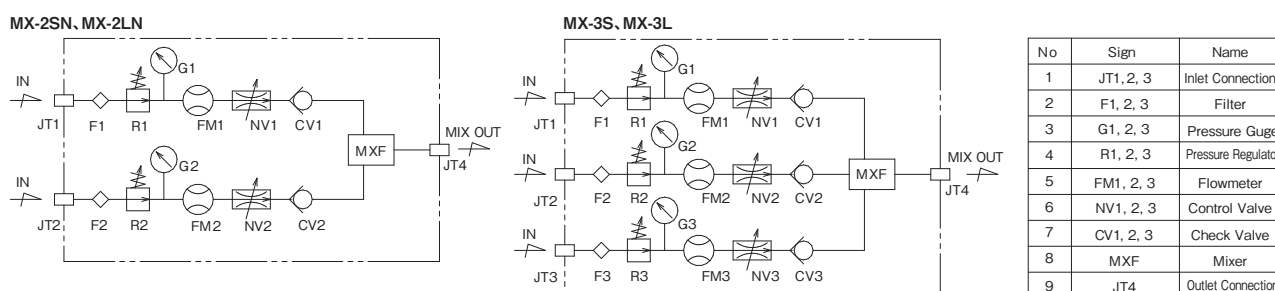


MX-2SN

### Outline drawing



### Flow Chart



# SMX-1 Series

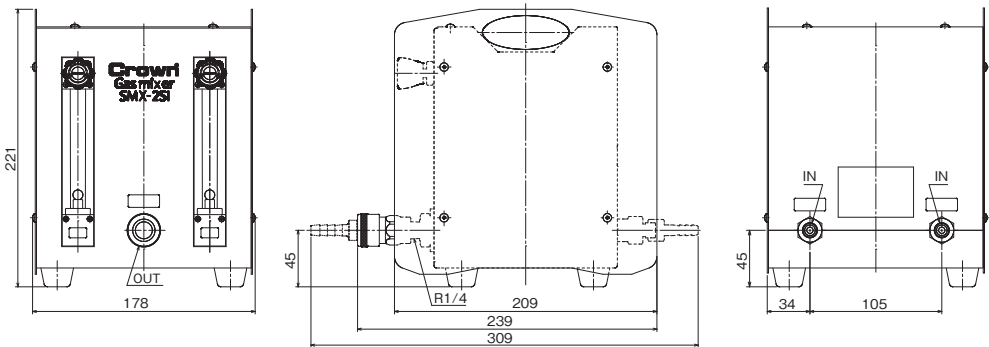
## Compact Size Gas Mixer

### Specifications

Model	SMX-2S1	SMX-2L1
Inlet Pressure	0.3~0.99MPa	0.4~0.99MPa
Mixing Pressure	0.2MPa	0.3MPa
Flow Range	1~25L/min	5~50L/min
Accuracy of Flowrate	±5% (F.S.)	
Accuracy of Mixing Ratio	2.5%	
Inlet Connection	Hose Nipple 8.5mm	
Outlet Connection	20PH Coupler	
Accessories	Nil	
Approximate Weight	5.2kg	

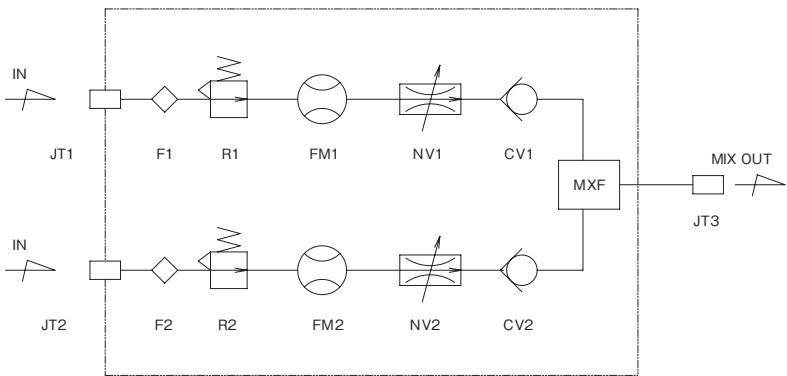


### Outline drawing



[Note]  
■ Unit : mm  
■ Dimention are subject to change without notice.

### Flow Chart



No	Sign	Name
1	JT1,2	Inlet Connection
2	F1,2	Filter
3	R1,2	Pressure Regulator
4	FM1,2	Flowmeter
5	NV1,2	Control Valve
6	CV1,2	Check Valve
7	MXF	Mixer
8	JT3	Outlet Connection

General industrial use

Flowmeter

Gas Mixer

Medical use

For Medical equipment

# FR-IK Series

## Gas regulator with humidified bottle

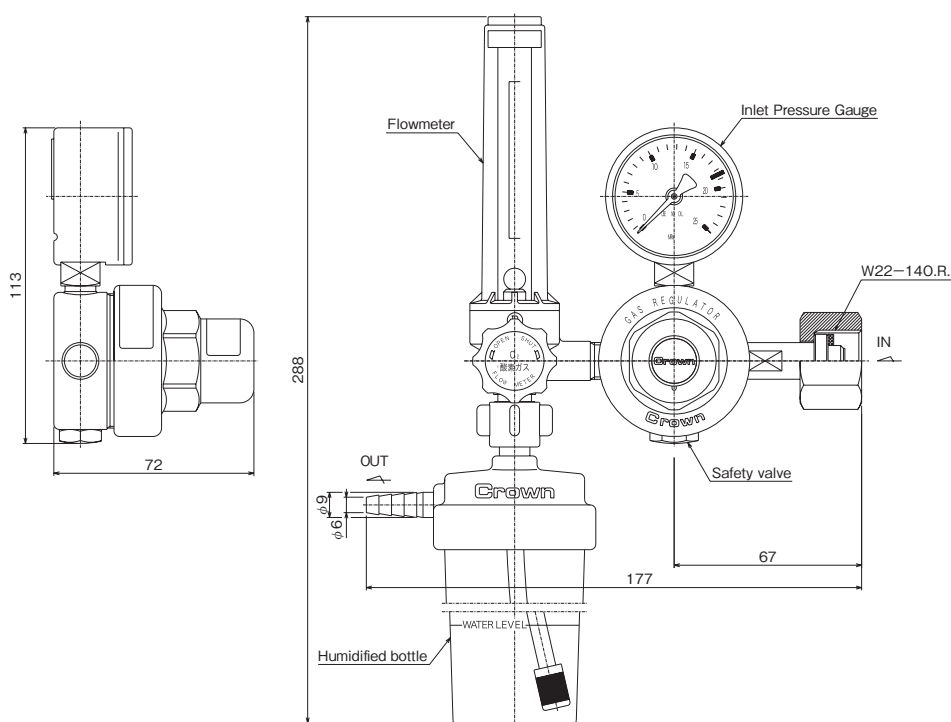
### Specifications

Applicable gas	Oxygen for medical purposes
Outlet Pressure Gauge	25MPa
Inlet Pressure	14.8MPa or less
Outlet Pressure	0.15MPa[P <sub>1</sub> =14.8MPa]
Operating pressure of safety valve	0.45MPa more than
Flow Range	0.2~10L/min

Type of Flowmeter	IN
Proof Pressure	0.15MPa
Inlet Connection	W22-14 O.R.
Outlet Connection	Hose Nipple 9mm
Accessories	Gasket Packing(Fiber)×2Pcs.
Approximate Weight	1.4kg



### Outline drawing



[Note]

■ Unit : mm

■ Dimensions are subject to change without notice.

### Materials of construction

Body	C3604BD
Bonnet	ZDC
Poppet	C3604BD
Seat	NBR
Diaphragm	NBR
Safety valve seat	NBR

For Medical equipment

# NF Series

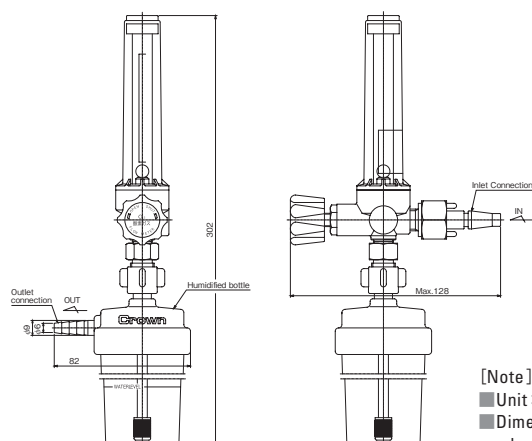
## Flowmeter of Oxygen for medical purposes

### Specifications

Applicable gas	Oxygen for medical purposes	Inlet Connection	Pin index style connector
Inlet Pressure	0.4MPa or less	Outlet Connection	Hose Nipple 9mm
Flow Range	0.2~10L/min	Accessories	Nil
Type of Flowmeter	IN	Approximate Weight	0.4kg



### Outline drawing



### Materials of construction

Body	C3771BE
Bonnet	PC
Poppet	C3604BD
O Ring	NBR
Diaphragm	AS resin

[Note]  
 ■ Unit : mm  
 ■ Dimensions are subject to change without notice.

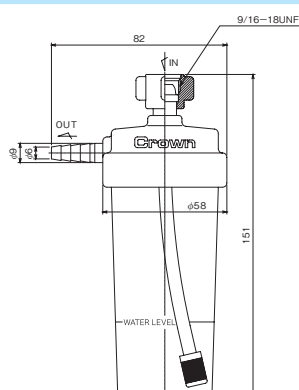
# K Series

## Humidified bottle

### Specifications

Applicable gas	Oxygen for medical purposes	Outlet Connection	Hose Nipple 9mm
Maximum Outlet pressure	0.5MPa	Heatproof temperature	80°C
Maximum flowrate	15NL/min	Accessories	Nil
Inlet Connection	DISS connector for Oxygen (No.1240)	Approximate Weight	0.1kg

### Outline drawing



[Note]  
 ■ Unit : mm  
 ■ Dimensions are subject to change without notice.

### Materials of construction

Cover	Polyphenylsulfone
Bottle	PC
Tube	Polyolefin
Packing	NBR
Filter	PE





TOTAL ENGINEERING OF GAS REGULATING EQUIPMENT  
**YUTAKA ENGINEERING CORPORATION**

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