

**LORRIC**®  
paranoid about performance

# About Us

United Benefit Corporation (UBC), was established in 1991, and is the first company in Taiwan that both designs and manufactures industrial products for the most demanding industries such as: electroplating, semiconductors, pollution control and PCB. UBC primarily produces industrial strength precision Nozzles and Flowmeters for industry leading companies such as Sanyang Motor, China Steel, Manz, Compeq, Hitachi and Kinsus. UBC global brands: Kingspray and LORRIC are known worldwide for durability and performance.

Since UBC was founded over two decades ago, the principles of professionalism and precision have been at the core of the company's culture. This is clearly evident in UBC's industry leading designs, efficient manufacturing and installation processes. UBC continually strives for the highest levels of professionalism toward customers and precision toward products.

We welcome direct inquiries from existing and potential future clients. Please feel free to call on us to enquire about how we can be at your service.

# SPP

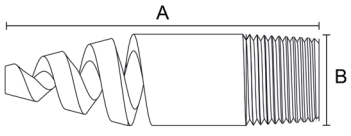


## Features

- Unibody design with no internal parts
- Clog-resistant performance
- Standard thread is BSPT Male
- Wide range of flowrates and spray angles
- Fine atomization
- Spray patterns: Full Cone.
- Spray angles: 120° to 170°
- Recommended working pressure: 2kg/cm<sup>2</sup>
- Flowrate tolerance: ± 5%
- Angle tolerance: ± 5°

## Applications

- Cleaning: Gas (Scrubber Applications), Fire Cleanup, Cleaning Machinery, Mesh, Tank, Parts, Rubble, Hoggin, etc.
- Cooling: Gas, Machinery, Tank, Plate Steel, etc.
- Spreading: Sewage Treatment, Aeration, Defoaming, Fire Prevention, Fire Protection, Dust Suppression, etc.

Model	Thread	Dimension(mm)		Material	
		A	B		
SPP		1/2" BSPT Male	77	22	PVC, Teflon

Flow Code	1/4"	3/8"	1/2"	3/4"	Flow Range (L/min) to Pressure (kg/cm <sup>2</sup> )						Angle	Min. Free Passage (mm)	Eq. Orifice (mm)
					0.5	0.7	1.0	2.0	3.0	5.0			
4.5	●				2.3	2.7	3.2	4.5	5.5	7.1	120°	-	-
52.7		●			26.4	31.2	37.3	52.7	64.5	83.3	170°	-	-
105			●		53	62	74	105	129	166	170°	3.3	11.0
134				●	67	79	95	134	164	212	170°	-	-

- The NPT thread and the BSPT female thread are manufactured to order.
- Please contact us to check stock availability before placing your order.

## Order Example:

Thread	Model	Flow Code	Angle	Material
1/2"	SPP	105	170	PVC

# H · AH · NH · VH · V



Spray Pattern


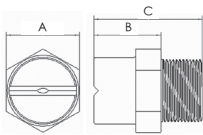
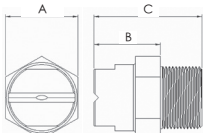
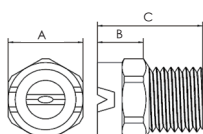
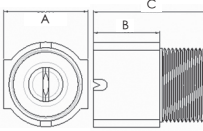


## Features

- High impact.
- Medium size particle size.
- Produces an eye shaped spray pattern.
- Hexagon body for easy installation, and distortion resistance.
- Recommended working pressure: 3kg/cm<sup>2</sup>
- Flowrate tolerance: ± 5%
- Angle tolerance: ± 5°

## Applications

PCB Wet Processing, Display Panel Wet Processing, High Pressure Cleaning, Dust And Powder Washing, Gravel Washing, Gas Washing, Solution Dispersion, General Humidifying, and Steel Cooling.

Model	Model Features	Thread (BSPT)	Unit (mm)			Material	
			A	B	C		
H			1/8" Male (Metal)	12	12	19	AISI303 AISI316 BRASS HSS PP
			1/4" Male (Metal)	14	15	26	
			3/8" Male (Metal)	18	15	30	
AH NH	<ul style="list-style-type: none"> <li>• There are two parallel planes to facilitate alignment during installation.</li> <li>• It is especially recommended to use the AH/NH-type for smaller flowrates.</li> </ul>		1/8" Male (PP)	11.75	10.3	19	AISI303 AISI316 BRASS HSS PP
			1/4" Male (PP)	13.7	13.7	25	
VH	<ul style="list-style-type: none"> <li>• PVDF is resistant to temperature and corrosive chemical solutions.</li> </ul>		1/8" Male	11.8	10.3	19	PVDF
			1/4" Male	15	10.5	21.4	
			3/8" Male	16.7	13	24.6	
V	<ul style="list-style-type: none"> <li>• Optimal for small flowrates.</li> <li>• PVDF is resistant to temperature and corrosive chemical solutions.</li> </ul>		1/4" Male	14	13.7	25	PVDF

Flow Code	1/8"	1/4"	3/8"	Flow Range (L/min) to Pressure (kg/cm <sup>2</sup> )						
				0.5	1.0	2.0	3.0	4.0	5.0	6.0
01	●	●		0.16	0.23	0.32	0.39	0.45	0.5	0.55
02	●	●		0.32	0.45	0.64	0.78	0.90	1.01	1.11
03	●	●		0.48	0.68	0.96	1.17	1.35	1.51	1.66
04	●	●		0.64	0.90	1.28	1.56	1.81	2.02	2.21
05	●	●		0.80	1.13	1.60	1.96	2.26	2.52	2.76
06	●	●		0.96	1.35	1.92	2.35	2.71	3.03	3.32
08	●	●		1.28	1.81	2.55	3.13	3.61	4.04	4.42
10	●	●		1.60	2.26	3.19	3.91	4.52	5.05	5.53
12.5	●	●		2.00	2.82	3.99	4.89	5.64	6.31	6.91
15	●	●		2.40	3.39	4.79	5.87	6.77	7.57	8.29
20	●	●		3.19	4.52	6.39	7.82	9.03	10.10	11.06
25		●		3.99	5.64	7.98	9.78	11.29	12.62	13.82
30		●	●	4.79	6.77	9.58	11.73	13.55	15.14	16.69
50		●	●	7.98	11.29	15.96	19.55	22.58	25.24	27.65
80			●	12.77	18.06	25.54	31.28	36.12	40.38	44.24
100			●	15.96	22.58	31.93	39.10	45.15	50.48	55.30

• Standard nozzle spray angle at 3kg/cm<sup>2</sup> pressure: 65°, 80° and 90°.  
• Also available at angle 0°, 15°, 25°, 40°, 50°, 100° and 120° by custom order.

- The NPT thread and the BSPT female thread are manufactured to order.
- Please contact us to check stock availability before placing your order.

## Order Example:

Thread	Nozzle Series	Flow Code	Angle	Material
1/4"	H	10	65	AISI316

# QFH · QFYH



Spray Pattern



## FEATURES

- High impact.
- Two piece nozzle design enables quick and accurate installation by hand.
- PVDF and PP materials are temperature and chemical resistant.
- O-rings are available in EPDM or VITON materials.
- Recommended working pressure: 3kg/cm<sup>2</sup>
- Flowrate tolerance: ± 5%
- Angle tolerance: ± 5°

## APPLICATIONS

Washing, Cleaning, Humidifying, Distribution, Cooling and Water Curtain.

Model	Thread (BSPT)	Unit(mm)			Material	
		A	B	C		
<p>Tip O-ring Body</p>		1/8" Male	32	27.5	39	PVDF
		1/4" Male	32	27.5	42.6	
		3/8" Male	32	27.5	42.6	
<p>Tip O-ring Body</p>		1/8" Male	36	27.5	39	PP, PVDF
		1/4" Male	36	27.5	42.6	
		3/8" Male	36	27.5	42.6	

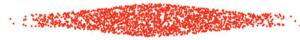
Flow Code	Flow Range (L/min) Pressure (kg/cm <sup>2</sup> )								
	0.5	0.7	1.0	2.0	3.0	4.0	5.0	6.0	
01	0.16	0.19	0.23	0.32	0.39	0.45	0.5	0.55	<ul style="list-style-type: none"> <li>• Standard nozzle spray angle at 3kg/cm<sup>2</sup> pressure: 65°, 80° and 90°.</li> <li>• Also available at angle 0°, 15°, 25°, 40°, 50°, 100° and 120° by custom order.</li> </ul>
02	0.32	0.38	0.45	0.64	0.78	0.90	1.01	1.11	
03	0.48	0.57	0.68	0.96	1.17	1.35	1.51	1.66	
04	0.64	0.76	0.90	1.28	1.56	1.81	2.02	2.21	
05	0.80	0.94	1.13	1.60	1.96	2.26	2.52	2.76	
06	0.96	1.13	1.35	1.92	2.35	2.71	3.03	3.32	
08	1.28	1.51	1.81	2.55	3.13	3.61	4.04	4.42	
10	1.60	1.89	2.26	3.19	3.91	4.52	5.05	5.53	
12.5	2.00	2.36	2.82	3.99	4.89	5.64	6.31	6.91	
15	2.40	2.83	3.39	4.79	5.87	6.77	7.57	8.29	
20	3.19	3.78	4.52	6.39	7.82	9.03	10.10	11.06	
25	3.99	4.72	5.64	7.98	9.78	11.29	12.62	13.82	
30	4.79	5.67	6.77	9.58	11.73	13.55	15.14	16.69	

- The NPT thread and the BSPT female thread are manufactured to order.
- Please contact us to check stock availability before placing your order.

# EB · HB · BB · TB



Spray Pattern



## Features

- Adjustable female nut allows for easy nozzle angle modifications.
- Unique pipe clamp design enables quick and easy installation onto any pipe without special tools.
- Recommended working pressure: 1kg/cm<sup>2</sup>
- Flowrate tolerance: ± 5%.
- EB Clamp can tolerate 3.0-4.0kg/cm<sup>2</sup> pressure at room temperature.

## Applications

Coating pretreatment, Basket Cleaning, Car Washing Machine

Fan Nozzle

Model	Model Features	Material
	<p>HB</p> <ul style="list-style-type: none"> <li>• Recommended maximum working temperature: 60°C</li> <li>• Well-distributed flat spray</li> <li>• Hollow sphere shape nozzle provides great "anti clogging" function.</li> </ul>	<ul style="list-style-type: none"> <li>• HB, BB: PP</li> <li>• TB, EB Clamp, and Nut: Strengthened Fiberglass PP</li> <li>• Pipe Clamp: Stainless 316</li> <li>• Sealing Ring: NBR</li> <li>• EB Sealing Ring: NBR</li> </ul>
	<p>BB</p> <ul style="list-style-type: none"> <li>• Stopper Nozzle</li> </ul>	
	<p>TB</p> <ul style="list-style-type: none"> <li>• TB is available with a 1/4" or 3/8" PT female thread for flexible use with other kind of nozzles.</li> </ul>	
	<p>EB Clamp</p> <ul style="list-style-type: none"> <li>• Installation hole diameter:                             <ul style="list-style-type: none"> <li>Ø 15 (14.3~15m/m)</li> <li>Ø 17 (16.4~17m/m)</li> <li>Ø 20 (19.0~20m/m)</li> </ul> </li> <li>• Fits 1", 1-1/4", 1-1/2" sizes pipe.</li> </ul>	

Flow Code	Color	Flow Range (L/min) to Pressure (kg/cm <sup>2</sup> )						<ul style="list-style-type: none"> <li>• Available Nozzle Spray Angle at 1kg/cm<sup>2</sup> pressure: 65° and 80°.</li> </ul>
		0.5	1.0	1.2	1.5	2.0	3.0	
10	Light Blue	1.60	2.26	2.47	2.76	3.19	3.91	
20	Red	3.19	4.52	4.95	5.53	6.39	7.82	
30	Orange	4.79	6.77	7.42	8.29	9.58	11.73	
35	Black	5.59	7.90	8.66	9.68	11.17	13.69	
40	Yellow	6.39	9.03	9.89	11.06	12.77	15.64	
50	Navy Blue	7.98	11.29	12.37	13.82	15.96	19.55	
60	Green	9.58	13.55	14.84	16.59	19.16	23.46	

- The NPT thread and the BSPT female thread are manufactured to order.
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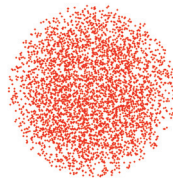
## Order Example:

Pipe clamp	Drilling hole	Nozzle Series	Flow Code	Angle
1-1/4"	EB 15	HB	30	65
1"	EB 17	BB		

# KP • KH



Spray Pattern

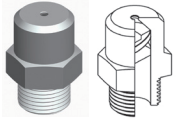
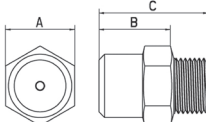
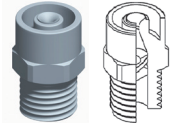
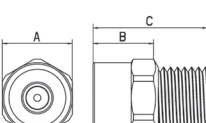
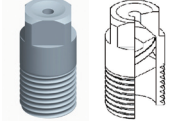
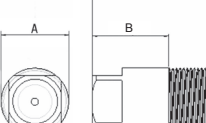


## Features

- Full cone spray.
- Unibody design allows for secure and easy installation.
- X-shaped core provides minimal clogging.
- Recommended working pressure: 2kg/cm<sup>2</sup>
- Flowrate Tolerance: ± 5%
- Angle Tolerance: ± 5°

## Applications

Industrial Cleaning, Purging, Cooling

Model	Model Features	Thread (BSPT)	Unit (mm)			Material	
			A	B	C		
KP in metal 			1/8"Male	12	12	19	AISI303 AISI316 BRASS
			1/4"Male	14	11-15	22-26	
			3/8"Male	18	15	30	
KP in plastic  2014 model	<ul style="list-style-type: none"> <li>• One piece body with removable core for easy cleaning and maintenance.</li> <li>• Highly durable PVDF material is ideal for use under high temperatures and/or with highly corrosive chemicals.</li> </ul>		1/8"Male	11.8	10.3	19	PVDF or PP Core: PP
			1/4"Male	15	10.5	21.4	
			3/8"Male	16.7	13	24.6	
KH 	<ul style="list-style-type: none"> <li>• One piece body with removable core for easy cleaning and maintenance.</li> </ul>		1/8"Male	11.8	10.3	19	PP Core: PP
			1/4"Male	15	11.3	21.4	
			3/8"Male	16.7	13	24.6	

Flow Code	1/8"	1/4"	3/8"	Flow Range (L/min) to Pressure (kg/cm <sup>2</sup> )						
				0.5	1.0	1.5	2.0	3.0	5.0	6.0
010	●	●		0.50	0.71	0.87	1.00	1.22	1.58	1.73
015	●	●		0.75	1.06	1.30	1.50	1.84	2.37	2.60
020	●	●		1.00	1.41	1.73	2.00	2.45	3.16	3.46
025	●	●		1.25	1.77	2.17	2.50	3.06	3.95	4.33
030	●	●		1.50	2.12	2.60	3.00	3.67	4.74	5.20
035	●	●	●	1.75	2.47	3.03	3.50	4.29	5.53	6.06
040		●	●	2.00	2.83	3.46	4.00	4.90	6.32	6.93
050		●	●	2.50	3.54	4.33	5.00	6.12	7.91	8.66
060		●	●	3.00	4.24	5.20	6.00	7.35	9.49	10.39
070		●	●	3.50	4.95	6.06	7.00	8.57	11.07	12.12
080		●	●	4.00	5.66	6.93	8.00	9.80	12.65	13.86
100			●	5.00	7.07	8.66	10.00	12.25	15.81	17.32
120			●	6.00	8.49	10.39	12.00	14.70	18.97	20.78

• Standard nozzle spray angle at 3kg/cm<sup>2</sup> pressure: 60°.  
• Also available at angle 90° and 120° by custom order.

- The NPT thread and the BSPT female thread are manufactured to order.
- Please contact us to check stock availability before placing your order.

## Order Example:

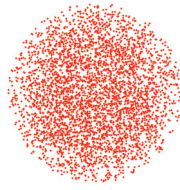
Thread Connection	Nozzle Series	Flow Code	Angle	Material
3/8"	KPMF	120	60	AISI303



# LORRIC® KPMF



Spray Pattern



## Features

- Full cone spray.
- Unibody Design
- Multi-slotted core provides more uniform impact than other full cone nozzles
- Recommended working pressure: 2kg/cm<sup>2</sup>
- Flowrate Tolerance: ± 5%
- Angle Tolerance: ± 5°

## Applications

Industrial Cleaning, Purging, Cooling, Etching, Developing

Model	Model Features	Thread (BSPT)	Unit (mm)			Material	
			A	B	C		
KPMF in Metal			1/8"Male	12	12	19	AISI303 AISI316 BRASS
			1/4"Male	14	15	26	
			3/8"Male	18	15	30	

KPMF in plastic	<ul style="list-style-type: none"> <li>• Unibody with removable core for easy cleaning and maintenance.</li> <li>• Highly durable PVDF material is ideal for use under high temperatures and/or with highly corrosive chemicals.</li> <li>• 2014 model is optimal for small flowrates.</li> </ul>		1/8"Male	11.8	10.3	19	PVDF CORE: PVC  CORE: PVDF (by special order)
			1/4"Male	15	10.5	21.4	
			3/8"Male	16.7	13	24.6	
	2014 model		1/4"Male	12	9	21	

Flow Code	1/8"	1/4"	3/8"	Flow Range (L/min) to Pressure (kg/cm <sup>2</sup> )						
				0.5	1.0	1.5	2.0	3.0	5.0	6.0
010	●	●		0.50	0.71	0.87	1.00	1.22	1.58	1.73
015	●	●		0.75	1.06	1.30	1.50	1.84	2.37	2.60
020	●	●		1.00	1.41	1.73	2.00	2.45	3.16	3.46
025	●	●		1.25	1.77	2.17	2.50	3.06	3.95	4.33
030	●	●		1.50	2.12	2.60	3.00	3.67	4.74	5.20
035	●	●	●	1.75	2.47	3.03	3.50	4.29	5.53	6.06
040		●	●	2.00	2.83	3.46	4.00	4.90	6.32	6.93
050		●	●	2.50	3.54	4.33	5.00	6.12	7.91	8.66
060		●	●	3.00	4.24	5.20	6.00	7.35	9.49	10.39
070		●	●	3.50	4.95	6.06	7.00	8.57	11.07	12.12
080		●	●	4.00	5.66	6.93	8.00	9.80	12.65	13.86
100			●	5.00	7.07	8.66	10.00	12.25	15.81	17.32
120			●	6.00	8.49	10.39	12.00	14.70	18.97	20.78

• Standard nozzle spray angle at 3kg/cm<sup>2</sup> pressure: 60°.  
• Also available at angle 90° and 120° by custom order.

- The NPT thread and the BSPT female thread are manufactured to order.
- Please contact us to check stock availability before placing your order.

## Order Example:

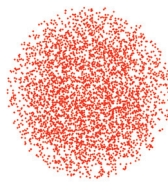
Thread Connection	Nozzle Series	Flow Code	Angle	Material
3/8"	KPMF	120	60	AISI303



# QFF · QFMF · QFYF



Spray Pattern



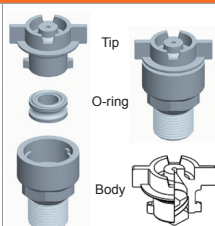
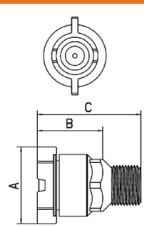
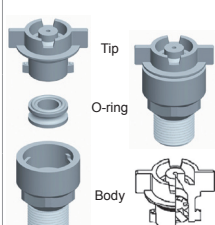
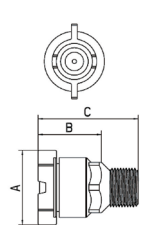
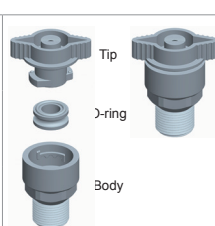
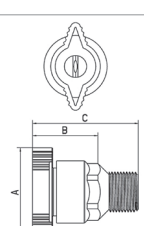
## FEATURES

- Two piece nozzle design allows for quick and accurate installation by hand.
- PVDF and PP materials are temperature and chemicals resistant.
- O-rings are available in EPDM or VITON materials
- Recommended working pressure: 2kg/cm<sup>2</sup>
- Flowrate Tolerance: ± 5%
- Angle Tolerance: ± 5°

## APPLICATIONS

Acid-Washing Chemical Treatment, Chemical Distribution, Etching (ex: Semiconductor, PCB and Panel)

Full Cone Nozzle

Model	Model Features	Thread (BSPT)	Unit (mm)			Material	
			A	B	C		
<b>QFF</b> 	<ul style="list-style-type: none"> <li>• X-Core design provides larger particle passage.</li> </ul>		1/8"Male	31.6	27.5	39	PVDF or PP Core: PP
			1/4"Male	31.6	27.5	42.6	Core: PVDF (by speical order)
			3/8"Male	31.6	27.5	42.6	
<b>QFMF</b> 	<ul style="list-style-type: none"> <li>• Optimal for small flowrates.</li> <li>• Utilizes a Multi-Slotted-Core to deliver a more uniform impact than other standard solid cone nozzles.</li> <li>• Provides better distribution pattern control. Available distribution patterns: mountain type, even type, and donut type</li> </ul>		1/8"Male	31.6	27.5	39	PVDF or PP Core: PVC
			1/4"Male	31.6	27.5	42.6	Core: PVDF (by speical order)
			3/8"Male	31.6	27.5	42.6	
<b>QFYF</b> 	<ul style="list-style-type: none"> <li>• X-Core design provides larger particle passage.</li> </ul>		1/8"Male	35	27.5	39	PVDF or PP Core: PVC
			1/4"Male	35	27.5	42.6	Core: PVDF (by speical order)
			3/8"Male	35	27.5	42.6	

Flow Code	Flow Range (L/min) Pressure (kg/cm <sup>2</sup> )						
	0.5	0.7	1.5	2.0	3.0	5.0	6.0
010	0.50	0.59	0.87	1.00	1.22	1.58	1.73
015	0.75	1.06	1.30	1.50	1.84	2.37	2.60
020	1.00	1.18	1.73	2.00	2.45	3.16	3.46
025	1.25	1.48	2.17	2.50	3.06	3.95	4.33
030	1.50	1.77	2.60	3.00	3.67	4.74	5.20
035	1.75	2.07	3.03	3.50	4.29	5.53	6.06
040	2.00	2.37	3.46	4.00	4.90	6.32	6.93
050	2.50	2.96	4.33	5.00	6.12	7.91	8.66
052	2.60	3.68	4.50	5.20	6.37	8.22	9.01
060	3.00	3.55	5.20	6.00	7.35	9.49	10.39
070	3.50	4.14	6.06	7.00	8.57	11.07	12.12
080	4.00	4.73	6.93	8.00	9.80	12.65	13.86
100	5.00	5.92	8.66	10.00	12.25	15.81	17.32
120	6.00	7.10	10.39	12.00	14.70	18.97	20.78

• Standard nozzle spray angle at 3kg/cm<sup>2</sup> pressure: 60°.  
• Also available at angle 90° and 120° by custom order.

- The NPT thread and the BSPT female thread are manufactured to order.
- Please contact us to check stock availability before placing your order.

# ED (Eductor Nozzle)



## Features

- Specially designed nozzle that creates a stirring and circulating effect. This nozzle can mix chemicals, direct the suspended substances to a filter and prevent precipitation.
- The eductor design enables the system to increase liquid flowrate by up to five times (by volume) from the tank significantly reducing the energy consumption
- One-piece design for easy and quick installation by hand.

## Applications

Automobile Coating, Painting, Anodising Tank Mixing, Ionic-Exchange Facility, Cooling Tower, C.I.P Tanks, Phosphatic Tank, Paint Stirring Tank, etc.

Model	Thread (BSPT)	Unit (mm)		Material
		A	B	
ED	3/8" BSPT Male	115.9	53.5	Strengthened Fiberglass PP, AISI316
	3/4" BSPT Male	159	74.4	

Thread	Flow Range (L/min) to Pressure (kg/cm <sup>2</sup> )						
	1	1.5	2	3	4	5	7
3/8"	34.36	42.09	48.6	59.52	68.73	76.84	90.92
3/4"	61.87	75.77	87.49	107.15	123.73	138.33	163.68

- The NPT thread and the BSPT female thread are manufactured to order.
- Please contact us to check stock availability before placing your order.

## Order Example:

Thread	Nozzle Series	Material
3/8"	ED	Strengthened Fiberglass PP

Special Nozzle

# F10 Series



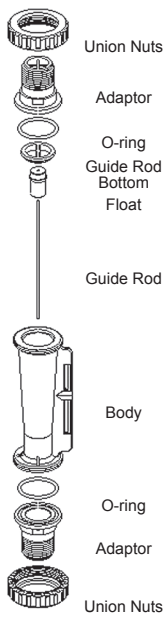
## Features

- Patented dual-indicator design for easy and clear flow range management.
- Laser engraved degree scales provide better readability and longer life.
- Available in customizable units and specific gravity (SG).
- Each batch of flowmeters will be calibrated before delivery for our best precision guarantee.
- Perpendicular joint is available for space saving installation.
- Hastelloy float is available for specific high PH liquid usage.

## Operating Conditions

- Full Scale Accuracy:  $\pm 5\%$ .
- Max. working pressure: 6.0kg/cm<sup>2</sup>.

## Parts



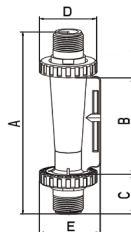
Model	F10 PC	F10 PSU	F10H PSU
Applicable Fluid	Tape Water	Chemical and Non-organic Solvents	When chemicals are corrosive to stainless steel
Recommended Highest Operating Temperature	50°C(UPVC Adaptor)	60°C(PP Adaptor) 100°C(PSU Adaptor)	
Scale Range(L/min) / Float Material	0.2 - 2.0 LPM / AISI316		0.2 - 2.0 LPM / Hastelloy C
	0.4 - 4.0 LPM / AISI316		0.4 - 4.0 LPM / Hastelloy C
	0.5 - 5.0 LPM / AISI316		0.5 - 5.0 LPM / Hastelloy C
	1.0 - 10 LPM / AISI316		1.0 - 10 LPM / Hastelloy C
	1.5 - 15 LPM / AISI316		1.5 - 15 LPM / Hastelloy C
Guide Rod Material	AISI316		Ti / Hastelloy C
O-ring Material	EPDM / VITON		
Union Nuts Material	UPVC / PSU		
Guide Rod Bottom Material	UPVC / PSU		
Adaptor Size and Adaptor Material	1/2" PT Male / Female Thread (UPVC / PSU / PP) 1/2" Welding Type (UPVC) 1/2" butt-fusion PP Adaptor (PP) 1/2" Panel Elbow PT Male Thread (UPVC)		

- Liquid flowmeters are calibrated for 20°C water. Gas flowmeters are calibrate for normal condition. ( 0°C , 1 atm)
- All adaptors can be manufactured to order, please contact us for price and lead time.
- Above temperature information is for reference only and may not be applicable for all environments.

## Dimensions

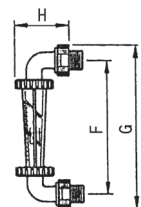
Unit:mm

Adaptor specification	A	B	C	D	E
1/2" PT Male / Female Thread or Welding Adaptor	168	90	40	41	45



Unit:mm

Adaptor specification	F	G	H
1/2" Panel Elbow	151	187	45

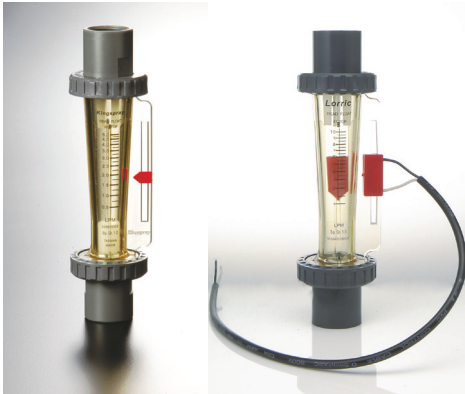


- A: Total Length (with adaptor)
- B: Body length (without adaptor and union nut)
- C: Nut + Adaptor length
- D: Union Nut Diameter
- E: Total Width

## Order Example:

Model	Body	Scale Range	Adaptor Size	O-ring
F10	PC	20LPM	1/2"PT Male thread	EPDM

# F22 Series



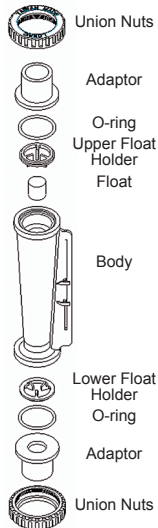
## Features

- Designed for use with highly corrosive solutions.
- Equipped with an inductor, which confirms the pipeline's current capacity by means of detecting the floating migration. The inductor can be connected instruments or computers and is often used as part of the control or alarm system.
- Patented dual-indicator design for easy and clear flow range management.
- Laser engraved degree scales provide better readability and longer life.
- Available in customizable units and specific gravity (SG).
- Each batch of flowmeters will be calibrated before delivery for our best precision guarantee.

## Operating Conditions

- Full Scale Accuracy: ±5%.
- Max. working pressure: 6.0kg/cm<sup>2</sup>.

## Parts



Model	F22 PSU	Magnet F22 PSU
Applicable Fluid	For Highly Corrosive Solutions	
Recommended Highest Operating Temperature	50°C (UPVC Adaptor) 60°C (PP Adaptor) 100°C (PSU Adaptor)	
Scale Range(L/min) / Float Material / Float Color	0.3 - 4.0 LPM / PVC / Red	0.5 - 6.0 LPM / PP / Red
	0.5 - 5.0 LPM / PVDF / colorless transparent	1.0 - 11 LPM / PVDF / Red
	0.8 - 8.0 LPM / Teflon / White	
	1.0 - 10 LPM / Teflon / White	
	50 - 500 LPH / Teflon / White	
O-ring Material	EPDM / VITON	
Union Nuts Material	UPVC / PSU	
Float Holder Material	PP	
Adaptor Size and Adaptor Material	3/4" PT Male / Female Thread (UPVC / PSU / PP) 3/4"Welding Type (UPVC) 3/4" PP Butt Fusion	

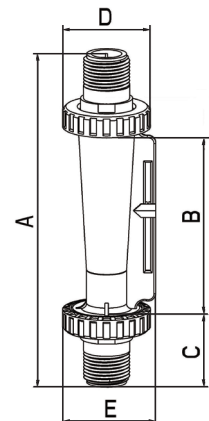
- Liquid flowmeters are calibrated for 20°C water. Gas flowmeters are calibrate for normal condition. ( 0°C , 1 atm)
- All adaptors can be manufactured to order, please contact us for price and lead time.
- Above temperature information is for reference only and may not be applicable for all environments.

## Dimensions

Unit:mm

Adaptor specification	A	B	C	D	E
3/4" PT Male / Female Thread	192	106	42	51	54
3/4" Welding Adaptor	196	106	44.5	51	54

A: Total Length (with adaptor)    B: Body length (without adaptor and union nut)    C: Nut + Adaptor length  
D: Union Nut Diameter    E: Total Width



## Order Example:

Model	Body	Scale Range	Adaptor Size	O-ring
F22	PSU	10LPM	3/4" Welding	VITON
Magnet F22	PSU	11LPM	3/4" PT Male thread	VITON

# F30 Series



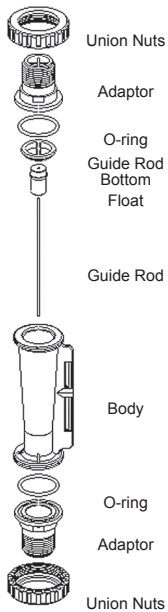
## Features

- Patented dual-indicator design for easy and clear flow range management.
- Laser engraved degree scales provide better readability and longer life.
- Available in customizable units and specific gravity (SG).
- Each batch of flowmeters will be calibrated before delivery for our best precision guarantee.
- Perpendicular joint is available for space saving installation.
- Hastelloy float is available for specific high PH liquid usage.

## Operating Conditions

- Full Scale Accuracy: ±5%.
- Max. working pressure: 6.0kg/cm<sup>2</sup>.

## Parts

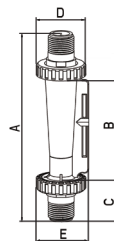


Model	F30 PC	F30 PSU	F30A PSU / F30AH PSU	F30H
Applicable Fluid	Tape Water	Chemical and Non-organic Solvents	Air	When chemicals are corrosive to stainless steel
Recommended Highest Operating Temperature	50°C(UPVC Adaptor)	60°C (PP Adaptor) 100°C (PSU Adaptor)		
Scale Range(L/min) / Float Material	2.0 - 20 LPM / AISI316	40 - 400 NLPM / PVC	2.0 - 20 LPM / Hastelloy C	
	3.0 - 30 LPM / AISI316	50 - 500 NLPM / PVC	3.0 - 30 LPM / Hastelloy C	
	4.0 - 40 LPM / AISI316	70 - 700 NLPM / PVC	4.0 - 40 LPM / Hastelloy C	
	5.0 - 50 LPM / AISI316	100 - 1000 NLPM / AISI316	5.0 - 50 LPM / Hastelloy C	
	6.0 - 60 LPM / AISI316	100 - 1000N LPM / Hastelloy C	6.0 - 60 LPM / Hastelloy C	
	7.0 - 70 LPM / AISI316		7.0 - 70 LPM / Hastelloy C	
	8.0 - 80 LPM / AISI316		8.0 - 80 LPM / Hastelloy C	
10 - 100 LPM / AISI316		10 - 100 LPM / Hastelloy C		
Guide Rod Material	AISI316	AISI316 / Ti / Hastelloy C		Ti / Hastelloy C
O-ring Material	EPDM / VITON			
Union Nuts Material	UPVC			
Guide Rod Bottom Material	PVDF			
Adaptor Size and Adaptor Material	1" PT Male /Female Thread (UPVC / PSU / PP) 1"Welding Type (UPVC) 1" PP Butt Fusion Panel Elbow Welding Type (UPVC)			

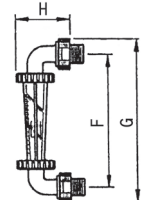
- Liquid flowmeters are calibrated for 20°C water. Gas flowmeters are calibrate for normal condition. ( 0°C , 1 atm)
- All adaptors can be manufactured to order, please contact us for price and lead time.
- Above temperature information is for reference only and may not be applicable for all environments.

## Dimensions

Adaptor specification	Unit:mm				
	A	B	C	D	E
1"PT Male / Female Thread	270	172	50	60	66
1"Welding Adaptor	255	172	42	60	66



Adaptor specification	Unit:mm		
	F	G	H
Panel Elbow	270	172	65



- A: Total Length (with adaptor)
- B: Body length (without adaptor and union nut)
- C: Nut + Adaptor length
- D: Union Nut Diameter
- E: Total Width

## Order Example:

Model	Body	Scale Range	Adaptor Size	O-ring
F30	PC	100LPM	1" PT Male hread	EPDM
F30A	PSU	1000NLPM	1"Welding	VITON

# F32B Series



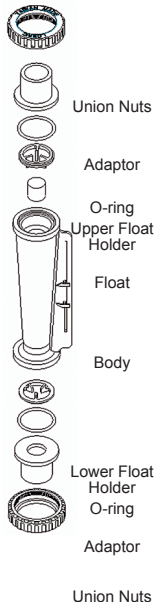
## Features

- Designed for use with highly corrosive solutions.
- Equipped with an inductor, which confirms the pipeline's current capacity by means of detecting the floating migration. The inductor can be connected instruments or computers and is often used as part of the control or alarm system.
- Patented dual-indicator design for easy and clear flow range management.
- Laser engraved degree scales provide better readability and longer life.
- Available in customizable units and specific gravity (SG).
- Each batch of flowmeters will be calibrated before delivery for our best precision guarantee.

## Operating Conditions

- Full Scale Accuracy:  $\pm 5\%$ .
- Max. working pressure:  $6.0\text{kg/cm}^2$ .

## Parts



Model	F32B PSU	Magnet F32B PSU
Applicable Fluid	For Highly Corrosive Solutions	
Recommended Highest Operating Temperature	50°C (UPVC Adaptor) 60°C (PP Adaptor) 100°C (PSU Adaptor)	
Scale Range(L/min) / Float Material / Float Color	9.0 - 18 LPM / PP / Red	
	16 - 32 LPM / PP / Red	
	30 - 60 LPM / PP / Red	
	45 - 90 LPM / PP / Red	
O-ring Material	EPDM / VITON	
Union Nuts Material	UPVC	
Float Holder Material	PP	
Adaptor Size and Adaptor Material	1" PT Male / Female Thread (UPVC / PSU / PP) 1"Welding Type (UPVC) 1" PP Butt Fusion	

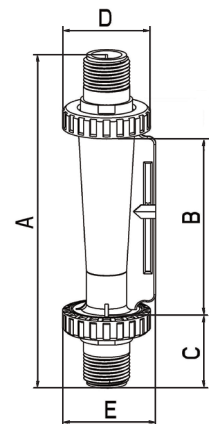
- Liquid flowmeters are calibrated for 20°C water. Gas flowmeters are calibrate for normal condition. ( 0°C , 1 atm)
- All adaptors can be manufactured to order, please contact us for price and lead time.
- Above temperature information is for reference only and may not be applicable for all environments.

## Dimensions

Unit:mm

Adaptor specification	A	B	C	D	E
1" Welding Adaptor	195	112	42	60	66

A: Total Length (with adaptor)    B: Body length (without adaptor and union nut)    C: Nut + Adaptor length  
D: Union Nut Diameter    E: Total Width



## Order Example:

Model	Body	Scale Range	Adaptor Size	O-ring
F32B	PSU	30-60LPM	1"Welding	VITON
Magnet F32B	PSU	16-32LPM	1"PT Male thread	VITON



# F34 Series



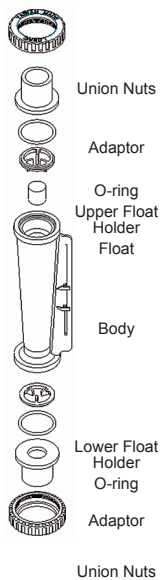
## Features

- Designed for use with highly corrosive solutions.
- Equipped with an inductor, which confirms the pipeline's current capacity by means of detecting the floating migration. The inductor can be connected instruments or computers and is often used as part of the control or alarm system.
- Patented dual-indicator design for easy and clear flow range management.
- Laser engraved degree scales provide better readability and longer life.
- Available in customizable units and specific gravity (SG).
- Each batch of flowmeters will be calibrated before delivery for our best precision guarantee..

## Operating Conditions

- Full Scale Accuracy: ±5%.
- Max. working pressure: 6.0kg/cm<sup>2</sup>.

## Parts



Model	F34 PSU	Magnet F34 PSU
Applicable Fluid	For Highly Corrosive Solutions	
Recommended Highest Operating Temperature	50°C (UPVC Adaptor) 60°C (PP Adaptor) 100°C (PSU Adaptor)	
Scale Range(L/min) / Float Material / Float Color	3.0 - 30 LPM / PP / Red	
	5.0 - 50 LPM / PP / Red	
	6.0 - 60 LPM / PP / Red	
	8.0 - 80 LPM / PP / Red	
	10 - 100 LPM / PP / Red	
	12 - 120 LPM / PP / Red (Developing)	
O-ring Material	EPDM / VITON	
Union Nuts Material	UPVC	
Float Holder Material	PP	
Adaptor Size and Adaptor Material	1" PT Male / Female Thread (UPVC / PSU / PP) 1" Welding Type (UPVC) 1" PP Butt Fusion	

- Liquid flowmeters are calibrated for 20°C water. Gas flowmeters are calibrate for normal condition. ( 0°C , 1 atm)
- All adaptors can be manufactured to order, please contact us for price and lead time.
- Above temperature information is for reference only and may not be applicable for all environments.

## Dimensions

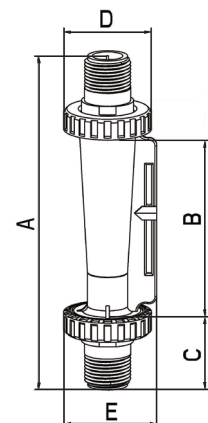
Unit:mm

Adaptor specification	A	B	C	D	E
1"Welding Adaptor	255	172	42	60	66
1"PT Male / Female Thread	270	172	50	60	66

A: Total Length (with adaptor)  
D: Union Nut Diameter

B: Body length (without adaptor and union nut)  
E: Total Width

C: Nut + Adaptor length

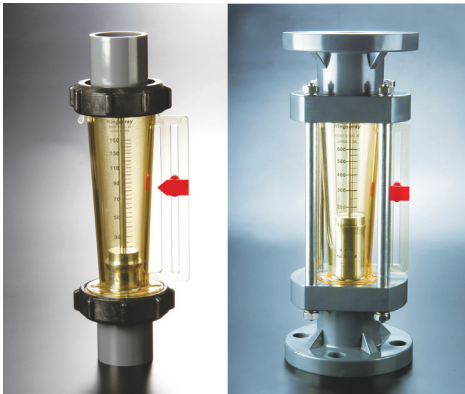


## Order Example:

Model	Body	Scale Range	Adaptor Size	O-ring
F34	PSU	50 LPM	1"PT Female Thread	VITON
Magnet F34	PSU	80 LPM	1"Welding	VITON



# F45 Series



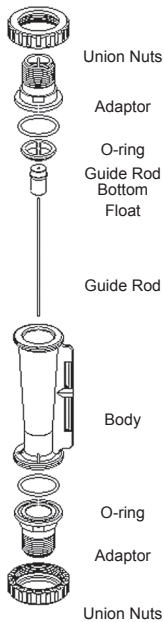
## Features

- The flange flowmeter is equipped with four stainless steel poles on four sides and uses flange adaptor. This flowmeter is robust, highly secure and ideal for high pressure conditions. This flowmeter's lifetime is usually longer than ordinary flowmeters.
- Patented dual-indicator design for easy and clear flow range management.
- Laser engraved degree scales provide better readability and longer life.
- Available in customizable units and specific gravity (SG).
- Each batch of flowmeters will be calibrated before delivery for our best precision guarantee.
- Hastelloy float is available for specific high PH liquid usage.

## Operating Conditions

- Full Scale Accuracy:  $\pm 5\%$ .
- Max. working pressure: 6.0kg/cm<sup>2</sup>.

## Parts



Model	F45 PC	F45 PSU	F45H PSU
Applicable Fluid	Tape Water	Chemical and Non-organic Solvents	When chemicals are corrosive to stainless steel
Recommended Highest Operating Temperature	50°C (UPVC Adaptor)	60°C (PP Adaptor) 100°C (PSU Adaptor)	
Scale Range(L/min) / Float Material	10 - 100 LPM / AISI316	10 - 100 LPM / Hastelloy C	
	15 - 150 LPM / AISI316	15 - 150 LPM / Hastelloy C	
	20 - 200 LPM / AISI316	20 - 200 LPM / Hastelloy C	
	25 - 250 LPM / AISI316	25 - 250 LPM / Hastelloy C	
	30 - 300 LPM / AISI316	30 - 300 LPM / Hastelloy C	
	50 - 450 LPM / AISI316	60 - 400 LPM / Hastelloy C	
Guide Rod Material	316SUS / AISI316	Ti / Hastelloy C	
O-ring Material	EPDM / VITON		
Union Nuts Material	UPVC		
Guide Rod Bottom Material	PP		
Pole Material	AISI316 / 304SS / 420SS		
Adaptor Size and Adaptor Material	1-1/2", 2" PT Male / Female Thread (UPVC / PSU / PP) 1-1/2", 2" Welding Type (UPVC) 1-1/2", 2" PP Butt Fusion 2" Flange (UPVC)		

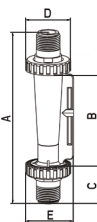
- Liquid flowmeters are calibrated for 20°C water. Gas flowmeters are calibrate for normal condition. ( 0°C , 1 atm)
- All adaptors can be manufactured to order, please contact us for price and lead time.
- Above temperature information is for reference only and may not be applicable for all environments.

## Dimensions

Unit:mm

Adaptor specification	A	B	C	D	E
1-1/2" Welding Adaptor	346	187	86	109	120

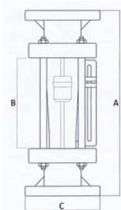
- A: Total Length (with adaptor)
- B: Body length (without adaptor and union nut)
- C: Nut + Adaptor length
- D: Union Nut Diameter
- E: Total Width



Unit:mm

Adaptor specification	A	B	C
2"Flange	390	187	155

- A: Total Length (with adaptor)
- B: Body length (without adaptor and union nut)
- C: Total Width



## Order Example:

Model	Body	Scale Range	Adaptor Size	O-ring
F45 Magnetic indicator	PSU	450 LPM	2" Welding	VITON

# Magnetic Indicator Flowmeter (Patented)



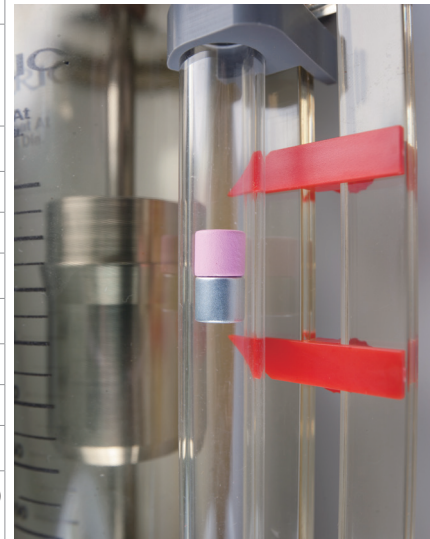
## Features

- Ideal for dark color and or solutions that easily precipitate .
- Patented dual-indicator design for easy and clear flow range management.
- Laser engraved degree scales provide better readability and longer life.
- Available in customizable units and specific gravity (SG).
- Each batch of flowmeters will be calibrated before delivery for our best precision guarantee.

## Operating Conditions

- Full Scale Accuracy: ±5%.
- Max. working pressure: 6.0kg/cm<sup>2</sup>.

Model	F45 PSU
Applicable Fluid	Chemical and Non-organic Solvents
Recommended Highest Operating Temperature	50°C (UPVC Adaptor) 60°C (PP Adaptor) 100°C (PSU Adaptor)
Scale Range(L/min) / Float Material	50-300 LPM / AISI316
	50-450 LPM / AISI316
	100-600 LPM / AISI316
Guide Rod Material	316SUS / AISI316
O-ring Material	EPDM / VITON
Union Nuts Material	UPVC
Guide Rod Bottom Material	PP
Pole Material	AISI316 / 304SS / 420SS
Adaptor Size and Adaptor Material	1-1/2", 2" PT Male / Female Thread (UPVC / PSU / PP) 1-1/2", 2" Welding Type (UPVC) 1-1/2", 2" PP Butt Fusion 2" Flange (UPVC)



Flowmeter

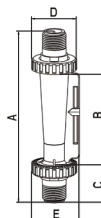
- Liquid flowmeters are calibrated for 20°C water. Gas flowmeters are calibrate for normal condition. ( 0°C , 1 atm)
- All adaptors can be manufactured to order, please contact us for price and lead time.
- Above temperature information is for reference only and may not be applicable for all environments.

## Dimensions

Unit:mm

Adaptor specification	A	B	C	D	E
1-1/2" Welding Adaptor	346	187	86	109	120

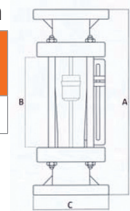
- A: Total Length (with adaptor)
- B: Body length (without adaptor and union nut)
- C: Nut + Adaptor length
- D: Union Nut Diameter
- E: Total Width



Unit:mm

Adaptor specification	A	B	C
2" Flange	390	187	155

- A: Total Length (with adaptor)
- B: Body length (without adaptor and union nut)
- C: Total Width



## Order Example:

Model	Body	Scale Range	Adaptor Size	O-ring
F45 Magnetic indicator	PSU	450 LPM	2" Welding	VITON

# F46 Series



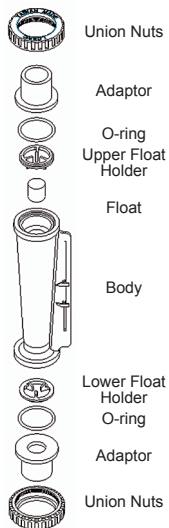
## Features

- Designed for use with highly corrosive solutions.
- Equipped with an inductor, which confirms the pipeline's current capacity by means of detecting the floating migration. The inductor can be connected instruments or computers and is often used as part of the control or alarm system.
- Patented dual-indicator design for easy and clear flow range management.
- Laser engraved degree scales provide better readability and longer life.
- Available in customizable units and specific gravity (SG).
- Each batch of flowmeters will be calibrated before delivery for our best precision guarantee.

## Operating Conditions

- Full Scale Accuracy:  $\pm 5\%$ .
- Max. working pressure: 6.0kg/cm<sup>2</sup>.

## Parts



Model	F46 PSU
Applicable Fluid	For Highly Corrosive Solutions
Recommended Highest Operating Temperature	50°C (UPVC Adaptor) 60°C (PP Adaptor) 100°C (PSU Adaptor)
Scale Range(L/min) / Float Material / Float Color	20 - 100 LPM / Teflon / White
	30 - 150 LPM / PP / Red (Developing)
	40 - 200 LPM / PP / Red (Developing)
	60 - 300 LPM / PP / Red (Developing)
O-ring Material	EPDM / VITON
Union Nuts Material	UPVC
Float Holder Material	PP
Adaptor Size and Adaptor Material	1-1/2", 2" PT Male / Female Thread (UPVC / PSU / PP) 1-1/2", 2" Welding Type (UPVC) 1-1/2", 2" PP Butt Fusion

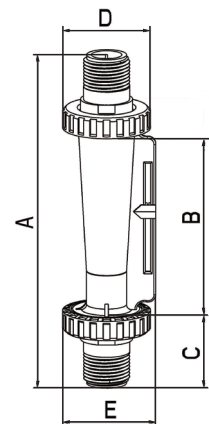
- Liquid flowmeters are calibrated for 20°C water. Gas flowmeters are calibrate for normal condition. ( 0°C , 1 atm)
- All adaptors can be manufactured to order, please contact us for price and lead time.
- Above temperature information is for reference only and may not be applicable for all environments.

## Dimensions

Unit:mm

Adaptor specification	A	B	C	D	E
1-1/2"Welding Adaptor	346	187	86	109	120

A: Total Length (with adaptor)    B: Body length (without adaptor and union nut)    C: Nut + Adaptor length  
D: Union Nut Diameter    E: Total Width



## Order Example:

Model	Body	Scale Range	Adaptor Size	O-ring
F46	PSU	100 LPM	1-1/2" Welding	VITON

Flowmeter



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