

WATER FLOW METER



Designed and made as
per
GERMAN Standard

WATER FLOW METER

Magnetic flow meter, also known as electromagnetic flow meter or mag meter, is widely used because less obstruction, cost-effective and accurate measurement. Electromagnetic flow meter don't have any moving parts to wear down, reducing the need for maintenance or replacement. We offer flowmeters with a range of liners, electrodes, and sizes, which can meet various conductive liquids.



Compact



Remote

Industries

- Effluent Treatment Plant
- Sewage Treatment Plant
- Water Supply Scheme
- Steel & Aluminum Industries
- Food & Drug Industries
- Chemical & Fertilizer Industries
- Dairy Industries
- Sugar Industries
- Textile Processing Industries

Applications

- Raw Water
- Potable Water
- Sea Water
- Waste Water
- Heat Exchanger
- Industrial Cooling
- Water Pulp & Beverages
- Acidic & Alkaline Solution
- Brine Solutions

Features

- Wide range of nominal diameters (DN3-3000)
- Independent of pressure, temperature, density and viscosity
- No moving parts, maintenance-free
- Automatic power failure recording function (optional)
- Built-in grounding electrodes
- Bi-directional flow measurement
- High accuracy 0.2% available
- Self-diagnosis function, empty pipe alarm, exciting alarm
- Support data record / bluetooth / wireless communication

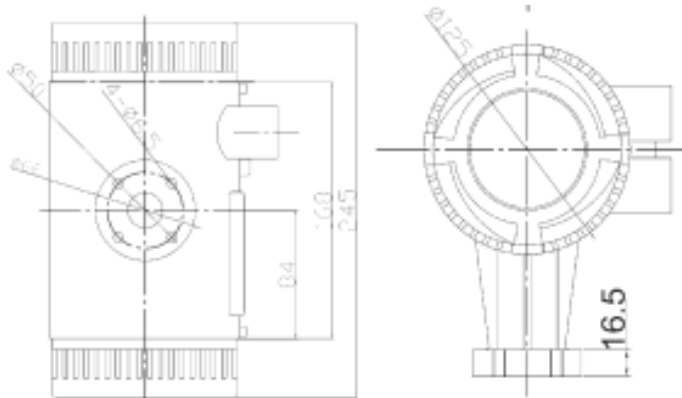
WATER FLOW METER

Technical Data

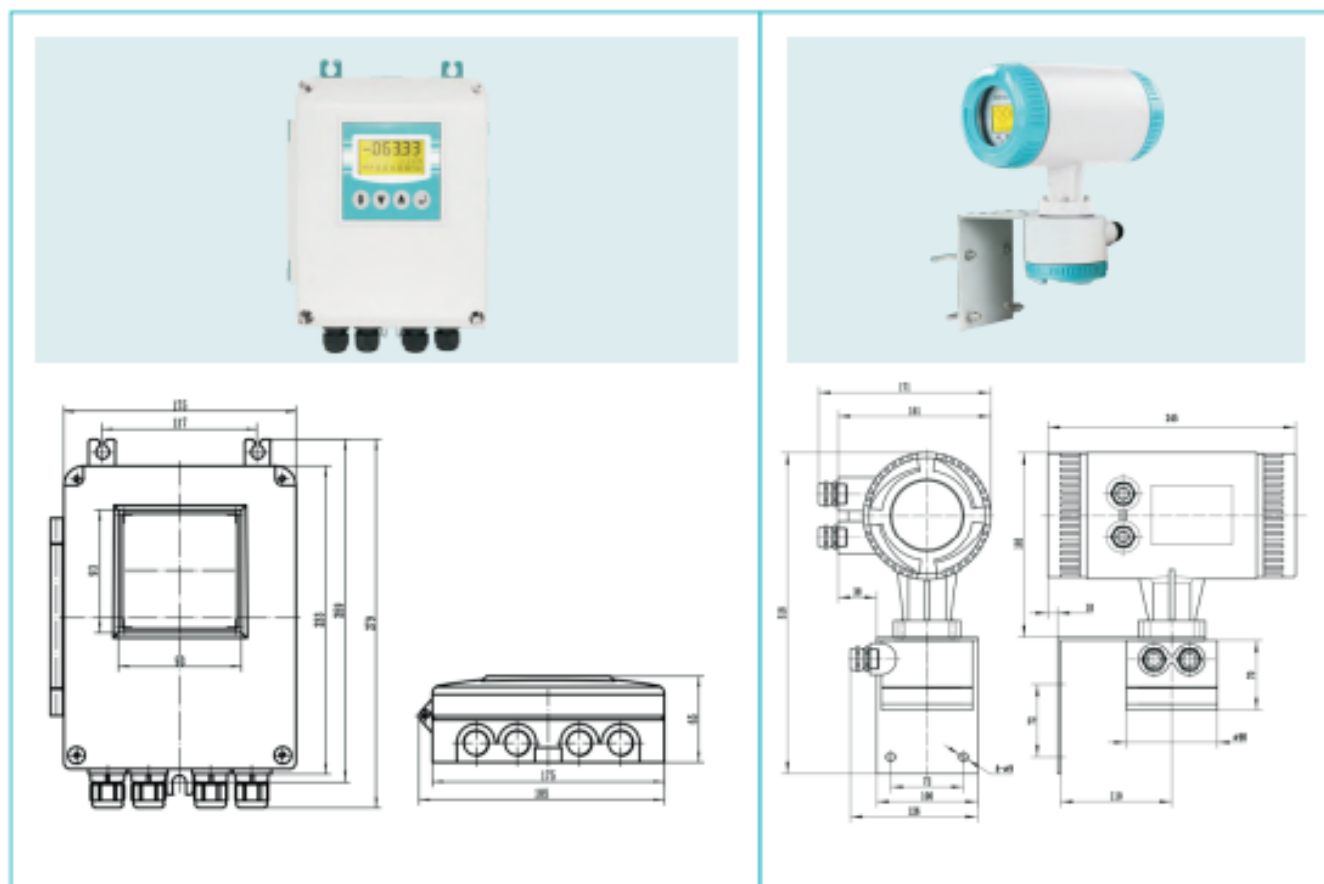
Parameter	Specification
Size	DN3-DN3000mm (1/8"-120")
Accuracy	±0.5% of reading at flow velocity > 0.5 m/s, ±0.2% optional at flow velocity > 0.5 m/s
Velocity	0.1-15 m/s
Repeatability	<0.17%
Structure	Compact / remote, cable length 10m standard, 100m max
Conductivity	>5 µS/cm, demineralized water >20 µS/cm
Protection Grade	Transmitter: IP65 standard, IP67 optional Sensor: IP65 standard, IP68 (submersible, remote type only)
Electrode	SS316L, Hastelloy C, Hastelloy B, Titanium, Tantalum, Platinum-iridium
Power Supply	85-250 VAC (50/60 Hz), 20-36 VDC
Power Consumption	<20W
Signal Output	Analog 4-20mA (load resistor ≤750Ω) Frequency: Forward & reverse flow output (1-5000 Hz) Alarm: Two isolated open collector transistor (OCT) outputs for alarm signals
Communication	RS485 MODBUS RTU standard, HART, GPRS, PROFIBUS optional
Display	LCD Display, 128x128mm, three lines, 4 buttons
Ambient Temperature	-20°C-60°C
Fluid Temperature	Compact: -20°C-80°C Remote: -20°C-120°C
Liner Material	PTFE (-20°C-150°C, DN15-DN1600) FEP (-20°C-120°C, DN3-DN1800) PFA (-20°C-160°C, DN3-DN800) Polyurethane (-10°C-60°C, DN40-DN1600) Neoprene (-10°C-80°C, DN40-DN3000) Hard Rubber (-10°C-80°C, DN40-DN3000) Ceramic (-20°C-180°C, DN15-DN200)
Flange Standard	DIN, ANSI, JIS
Sensor Material	Measuring tube: SS304 Flange & housing: Carbon steel (standard), SS304/SS316 optional
Transmitter Material	Aluminum alloy with epoxy painting
Nominal Pressure	PN10 / PN16 / PN25 / PN40 (DIN) 10K / 20K / 30K (JIS) 150# / 300# / 600# (ANSI) High pressure: 42 MPa / ANSI 2500# customizable
Display Unit	Instantaneous flow, total flow, flow velocity
Function	High and low alarm, exciting alarm, empty pipe alarm, self-diagnosis
Totalizer	Three built-in totalizers: forward flow, reverse flow, and net flow
Units	L/s, L/m, L/h, m³/s, m³/m, m³/h, UKG, USG, gal/s, gal/m, gal/h, kg/s, kg/m, kg/h, t/s, t/m, t/h
Language	English, Chinese, Italian, Portuguese, French, Spanish, Korean

WATER FLOW METER

Transmitter



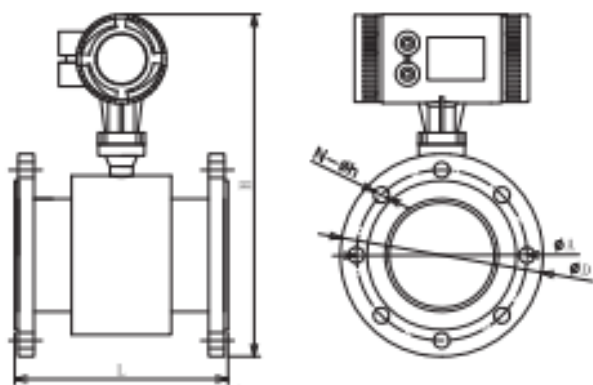
Compact Transmitter



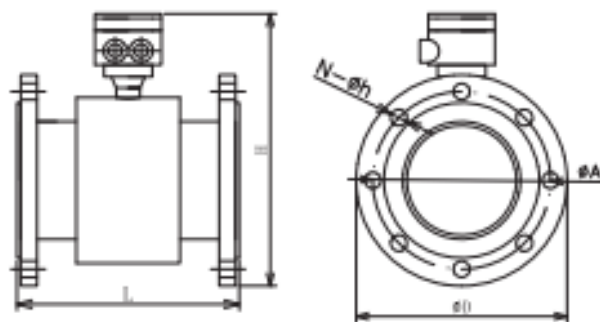
Remote Transmitter

WATER FLOW METER

Dimensions



DN 15-DN600 Compact Electromagnetic Flow Meter with DIN Drawing



DN15-DN600 Remote Electromagnetic Flow Meter with DIN Drawing

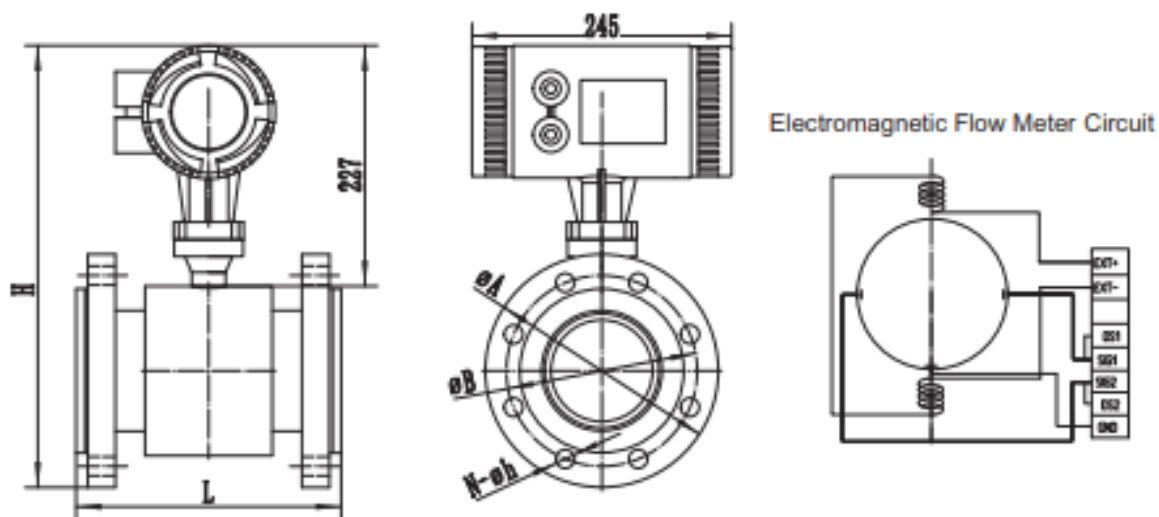
Size	Nominal Pressure	L (mm)	ΦD (mm)	ΦA (mm)	H (mm)	N-Φh (mm)
15	PN16	200	95	65	332	4-Φ14
20	PN16	200	105	75	332	4-Φ14
25	PN16	200	115	85	332	4-Φ14
32	PN16	200	140	100	332	4-Φ18
40	PN16	200	150	110	332	4-Φ18
50	PN16	200	165	125	332	4-Φ18
65	PN16	200	185	145	395	4-Φ18
80	PN16	200	200	160	422	8-Φ18
100	PN16	250	220	180	422	8-Φ18
125	PN16	250	250	210	455	8-Φ18
150	PN16	300	285	240	485	8-Φ22
200	PN16	350	340	295	582	12-Φ22
250	PN10	450	405	355	647	12-Φ26
300	PN10	500	460	410	682	12-Φ26
400	PN10	600	565	515	750	16-Φ26
450	PN10	600	615	565	750	16-Φ26
500	PN10	600	670	620	780	20-Φ26
600	PN10	600	780	725	824	20-Φ30

Size	Nominal Pressure	L (mm)	ΦD (mm)	ΦA (mm)	H (mm)	N-Φh (mm)
15	PN16	200	95	65	220	4-Φ14
20	PN16	200	105	75	220	4-Φ14
25	PN16	200	115	85	220	4-Φ14
32	PN16	200	140	100	240	4-Φ18
40	PN16	200	150	110	240	4-Φ18
50	PN16	200	165	125	263	4-Φ18
65	PN16	200	185	145	295	4-Φ18
80	PN16	200	200	160	310	8-Φ18
100	PN16	250	220	180	310	8-Φ18
125	PN16	250	250	210	373	8-Φ18
150	PN16	300	285	240	435	8-Φ22
200	PN16	350	340	295	535	12-Φ22
250	PN10	450	405	355	637	12-Φ26
300	PN10	500	460	410	682	12-Φ26
400	PN10	550	565	515	750	16-Φ26
450	PN10	600	615	565	780	16-Φ26
500	PN10	600	670	620	824	20-Φ26
600	PN10	600	780	725	882	20-Φ30

WATER FLOW METER

Dimensions

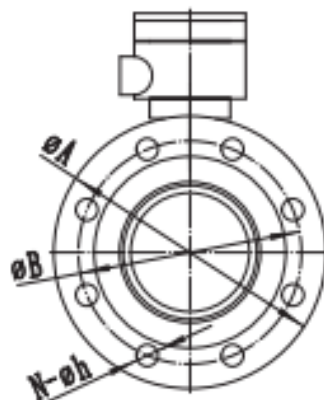
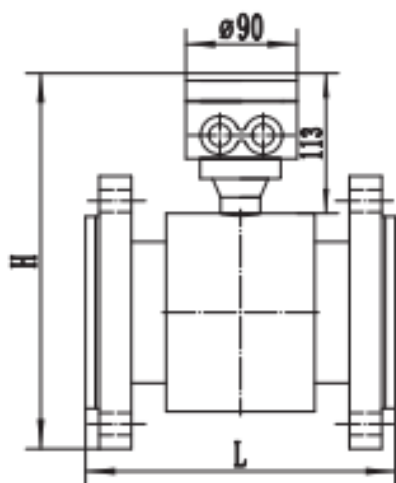
Size is from 1/2"-24", other sizes can be provided upon request.



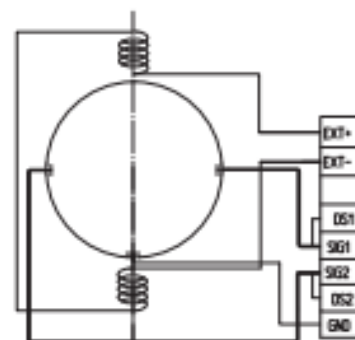
1/2"-24" Compact Electromagnetic Flow Meter with ANSI 150# Drawing

Size	Flange Standard	Pressure Rate	H (mm)	L (mm)	ΦA (mm)	ΦB (mm)	N (mm)	Φh (mm)
1/2"	ANSI	150#	318	200	88.9	60.45	4	15.7
3/4"	ANSI	150#	328	200	98.6	69.85	4	15.7
1"	ANSI	150#	328	200	108	79.25	4	15.7
1 1/4"	ANSI	150#	328	200	117.3	88.9	4	15.7
1 1/2"	ANSI	150#	328	200	127	98.45	4	15.7
2"	ANSI	150#	363	200	152.4	120.7	4	19.1
2 1/2"	ANSI	150#	363	200	177.8	139.7	4	19.1
3"	ANSI	150#	363	200	190.5	152.4	4	19.1
4"	ANSI	150#	378	200	228.6	190.5	8	19.1
5"	ANSI	150#	449	250	254	215.9	8	22.4
6"	ANSI	150#	470	300	279.4	241.3	8	22.4
8"	ANSI	150#	538	350	342.9	298.5	8	22.4
10"	ANSI	150#	600	450	406.4	362	12	25.4
12"	ANSI	150#	678	500	482.6	431.8	12	25.4
14"	ANSI	150#	758	600	533.4	476.2	12	29.2
16"	ANSI	150#	887	600	596.9	539.8	16	29.2
18"	ANSI	150#	960	600	635	578.2	16	31.75
20"	ANSI	150#	999	600	698.5	635	20	31.75
24"	ANSI	150#	999	600	812.8	749.3	20	35.1

WATER FLOW METER



Electromagnetic Flowmeter Circuit



1/2"-24" Remote Electromagnetic Flow Meter with ANSI 150# Drawing

Size	Flange Standard	Pressure Rate	H (mm)	L (mm)	ΦA (mm)	ΦB (mm)	N (mm)	Φh (mm)
1/2"	ANSI	150#	204	200	88.9	60.45	4	15.7
3/4"	ANSI	150#	209	200	98.6	69.85	4	15.7
1"	ANSI	150#	214	200	108	79.25	4	15.7
1 1/4"	ANSI	150#	219	200	117.3	88.9	4	15.7
1 1/2"	ANSI	150#	224	200	127	98.45	4	15.7
2"	ANSI	150#	249	200	152.4	120.7	4	19.1
2 1/2"	ANSI	150#	249	200	177.8	139.7	4	19.1
3"	ANSI	150#	249	200	190.5	152.4	4	19.1
4"	ANSI	150#	335	250	228.6	190.5	8	19.1
5"	ANSI	150#	335	250	254	215.9	8	22.4
6"	ANSI	150#	335	300	279.4	241.3	8	22.4
8"	ANSI	150#	385	350	342.9	298.5	8	22.4
10"	ANSI	150#	460	400	406.4	362	12	25.4
12"	ANSI	150#	525	450	482.6	431.8	12	25.4
14"	ANSI	150#	573	500	533.4	476.2	12	29.2
16"	ANSI	150#	650	550	596.9	539.8	16	29.2
18"	ANSI	150#	735	600	635	578.2	16	31.75
20"	ANSI	150#	800	650	698.5	635	20	31.75
24"	ANSI	150#	885	600	812.8	749.3	20	35.1

WATER FLOW METER

Main Performance of Electrode Material

Electrode Material	Application
SS316L	Applicable to industrial and municipal water, wastewater, and low corrosive mediums. Widely used in petroleum and chemical industries.
Hastelloy B	Strong resistance to hydrochloric acids below the boiling point. Resistant to oxidizable acids, alkali, and non-oxidizable salts like vitriol, phosphate, hydrofluoric acids, and organic acids.
Hastelloy C	Exceptional resistance to strong solutions of oxidizing salts and acids, like Fe^{+++} , Cu^{++} , Nitric acids, and mixed acids.
Titanium	Can withstand corrosive mediums such as seawater, chloride salt solutions, hypochlorite salts, oxidizable acids (including fuming nitric acids), organic acids, and alkali. Not resistant to high purity reducing acids such as sulfuric acids and hydrochloric acids.
Tantalum	Highly resistant to corrosive mediums. Applicable to all chemical mediums except hydrofluoric acids, oleum, and alkali.
Platinum-iridium	Applicable to all chemical mediums except for ammonium salts and fortis.

Main Performance of Liner Material

PTFE	Best chemical resistance, withstands boiling hydrochloric acid, sulfuric acid, nitric acid, alkali, and various organic solvents. Poor wear resistance and poor adhesion.
PFA	Highly resistant to chemicals. Performs well under vacuum pressure conditions.
Neoprene	Excellent elasticity and good abrasion resistance. Withstands the corrosion of low-concentration acid, alkali, salt, and other media. Not resistant to corrosion by oxidizing mediums.
Polyurethane	Strong abrasion resistance, suitable for slurries and muds. Poor corrosion resistance; cannot be used for corrosive mediums.
Hard Rubber	Withstands the corrosion of hydrochloric acid, acetic acid, oxalic acid, ammonia water, phosphoric acid, and 50% sulfuric acid, sodium hydroxide, and potassium hydroxide. Used for general acid, alkali, and salt solutions, but not resistant to the corrosion of strong oxidants.
Ceramic	Withstands high temperature, corrosion, and wear. Smooth inner surface and totally vacuum resistant.

WATER FLOW METER

Selection Table

QTLD		X	X	X	X	X	X	X	X	X	X	X
Caliber size	DN3-DN3000 (1/8"-120")											
Structure	Compact	1										
	Remote	2										
	Compact with explosion proof	3										
	Remote with explosion proof	4										
Accuracy	±0.5%	1										
	±0.2%	2										
	Others	3										
Lining Material	PTFE	1										
	FEP	2										
	PFA	3										
	Neoprene	4										
	Polyurethane	5										
	Hard Rubber	6										
	Ceramic	7										
	Others	8										
Electrode Material	SS316L	1										
	Hastelloy B	2										
	Hastelloy C	3										
	Titanium	4										
	Tantalum	5										
	Platinum-iridium	6										
	Stainless steel covered with tungsten carbide	7										
	Others	8										
Sensor Material	Carbon steel	1										
	SS304	2										
	SS316	3										
Power Supply	20~36 VDC							G				
	85~265 VAC							E				
	9~36 VDC solar power							SD				
	Others							X				
Signal Output / Communication	4~20 mA + Pulse + RS485 MODBUS								A			
	4~20 mA + HART								B			
	4~20 mA + Profibus PA/DP								C			
	GPRS								D			
Flange Process Connection	DIN D10: DIN PN10, D16: DIN PN16, D25: DIN PN25, D40: DIN PN40								D**			
	ANSI A15: ANSI 150#, A30: ANSI 300#, A60: ANSI 600#								A**			
	JIS J10: JIS 10K, J20: JIS 20K, J30: JIS 30K								J**			
	Others								O			
Protection Grade	IP65 Transmitter + IP65 sensor										1	
	IP65 Transmitter + IP68 sensor (remote)										2	
Transmitter	Square											A
	Round											B

WATER FLOW METER

Flow Range Table

Size	mm	Inch	0.1 m/s	0.2 m/s	0.5 m/s	1 m/s	4 m/s	10 m/s	12 m/s	15 m/s
DN3	3	1/8"	0.003	0.005	0.013	0.025	0.102	0.254	0.305	0.382
DN10	10	3/8"	0.008	0.016	0.04	0.079	0.314	0.785	0.942	1.178
DN15	15	1/2"	0.017	0.034	0.085	0.17	0.68	1.7	2.04	2.55
DN20	20	3/4"	0.031	0.063	0.157	0.314	1.256	3.141	3.77	4.71
DN25	25	1"	0.049	0.098	0.245	0.491	1.964	4.91	5.89	7.36
DN32	32	1 1/4"	0.079	0.157	0.393	0.785	3.14	7.85	9.42	11.78
DN40	40	1 1/2"	0.126	0.251	0.628	1.257	5.028	12.57	15.08	18.85
DN50	50	2"	0.196	0.393	0.982	1.963	7.854	19.63	23.56	29.45
DN65	65	2 1/2"	0.333	0.666	1.665	3.331	13.324	33.31	39.97	49.96
DN80	80	3"	0.503	1.005	2.512	5.027	20.11	50.27	60.33	75.4
DN100	100	4"	0.785	1.571	3.927	7.854	31.416	78.54	94.25	117.8
DN150	150	6"	1.766	3.532	8.83	17.66	70.66	176.66	211.99	264.99
DN200	200	8"	3.142	6.283	15.71	31.42	125.66	314.16	376.99	471.24
DN250	250	10"	4.91	9.82	24.55	49.1	196.35	491.06	589.27	736.58
DN300	300	12"	7.069	14.14	35.35	70.69	282.74	706.85	848.22	1060.3
DN400	400	16"	12.566	25.132	62.83	125.66	502.65	1256.6	1507.9	1884.9
DN500	500	20"	19.635	39.27	98.17	196.35	785.4	1963.5	2356.2	2945.3
DN600	600	24"	28.274	56.55	141.37	282.74	1130.97	2827.4	3393	4241.1
DN800	800	30"	50.27	100.53	251.32	502.65	2010.62	5026.55	6031.86	7539.82
DN1000	1000	40"	78.54	157.08	392.7	785.4	3141.59	7853.98	9424.78	11781.2
DN1200	1200	48"	113.1	226.2	565.5	1131.0	4523.94	11309.8	13571.7	16964.7
DN1400	1400	56"	153.94	307.88	769.7	1539.4	6157.6	15394	18472.8	23091
DN1600	1600	64"	201.06	402.12	1005.3	2010.6	8042.48	20106.2	24127.5	30159.4
DN2000	2000	80"	314.16	628.32	1570.8	3141.6	12566.4	31415.9	37699.1	47124.8
DN3000	3000	120"	706.86	1413.72	3534.3	7068.6	28274.4	70685.9	84823	106028.8

Please provide the following information when ordering:

1. Operating pressure, back pressure
2. Operating temperature
3. Type of connection
4. Flow
5. Size

• Please ask us for special sizes and customizations.

Contact Us



Ivory Coast
Mr. Rahul
Phone: +225 574654040
EMAIL :- rk@sphenomatic.net



Zambia
Mr. Jaskaran Singh
Phone: +260773579786
Email: jaskaran@sphenomatic.net





Uganda
Mr. Saurabh Patil
Phone: +256706046383
Email :- patil@sphenomatic.net



Head Office, Kenya
Mr. Nawzar Zarir Satarawala
Phone: +254 726 729812
Email : nawzar@sphenomatic.net



Tanzania
Mr. Mukul Anand
Phone: +255749502808
Email: mukul@sphenomatic.net

Disclaimer: All pictures in this document are a pictorial representation of the product. the actual product may vary. Technical data may vary from the data provided in this document.