润伟自动化
RUNWAY AUTOMATION

Product Selection Guide

产品选型手册

济南润伟自动化有限公司
JiNan RunWay Automation Ltd.

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RUNWAY AUTOMATION

公司简介
Company profile

济南润伟自动化有限公司坐落于历史文化名城——中国山东省济南市。成立于2018年，是一家专注于传动控制产业，提供高品质自动化零部件和装置的民营企业。生产销售齿轮计量泵、液压泵、分流马达、流体系统附件、阀门以及定制加工服务。

公司拥有先进的生产、检测设备和高素质技术人才，成熟的工艺、质量控制技术和设计研发群体。

我们扎根于热爱的传动产业领域，关注良性的可持续发展的经营理念，打造一支专业的销售团队和技术队伍，服务客户。为客户提供可行的流体控制解决方案。

我们的企业宗旨“求新立异，品质至上，严谨求实，团结锐进。”

Jinan Runway Automation Co. Ltd. is located in the historical and cultural city of Jinan Shandong Province China. Founded in 2018 it is a private enterprise focusing on the transmission control industry and providing high-quality automation parts and devices. Production and sales of gear metering pumps hydraulic pumps shunt motors fluid system accessories valves and customized processing services.

The company has advanced production and testing equipment and high-quality technical personnel mature processes quality control technology and design and development groups.

We are rooted in the transmission industry we love focusing on the business philosophy of benign and sustainable development and building a professional sales team and technical team to serve customers. Provide customers with feasible fluid

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LZS-32
m³/h
6.0
5.0
4.0
3.0
2.0
1.0
0.6
WATER
UPVC
LZS-25
m³/h
1.6
1.2
0.8
0.4
0.2
0.16
WATER
UPVC
LZS-15
1000
800
600
400
200
100
WATER
L/h

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目 录
Catalog

济南润伟自动化有限公司
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RUNWAY AUTOMATION

● UPVC ● CPVC ● PVDF ● PP ● SUS316L

186 Type Safety Valve / Back Pressure Valve

Product Overview

Safety valve

The diaphragm and valve core are pressed against the valve seat by internal springs. When the pressure in the system pipeline exceeds the preset pressure, the diaphragm and valve core are lifted, and the medium leaks out to the return pipe and container. On site, the pressure can be set within the range of 0-1.0mpa by adjusting the screw with the help of the pressure gauge in the pipeline. The relief pressure is generally set 0.1-0.2mpa higher than the system pressure. The pressure regulating of the safety valve is not allowed to exceed the maximum pressure of the pump. It is generally installed as close as possible to the outlet of the pump. There should be no valve between the pump and the safety valve to protect the safety of the pump and the normal operation of the system.

Back pressure valve

Installed on the positive pressure discharge pipeline of the metering pump or diaphragm pump to prevent siphon phenomenon, eliminate the change in dosage caused by pressure fluctuations at the injection point, and ensure the accuracy of pump injection. Remove the protective cap on the adjustment screw on site, rotate the adjustment screw, and use the pressure gauge in the pipeline to adjust the required pressure. The back pressure can be set within the range of 0-0.6mpa by adjusting the screw. When used in conjunction with pulse dampers, it reduces the damage of water hammer to the system, maintains a certain constant pressure from the pump outlet to the back pressure valve, and keeps the system flow rate constant.

Functional Features

- ◆ Release pipeline pressure to ensure stable system pressure;
- ◆ Protect the safety of the pump and the normal operation of the system;
- ◆ Cooperating with pulse dampers to reduce the harm of water hammer to the system and achieve superior low vibration regulation effect;
- ◆ Reduce the peak value of flow rate fluctuations and protect the pipeline system from pressure fluctuations;
- ◆ The diaphragm adopts advanced PTFE+rubber composite technology, which is almost suitable for all corrosive fluids and has reliable and leak free sealing.

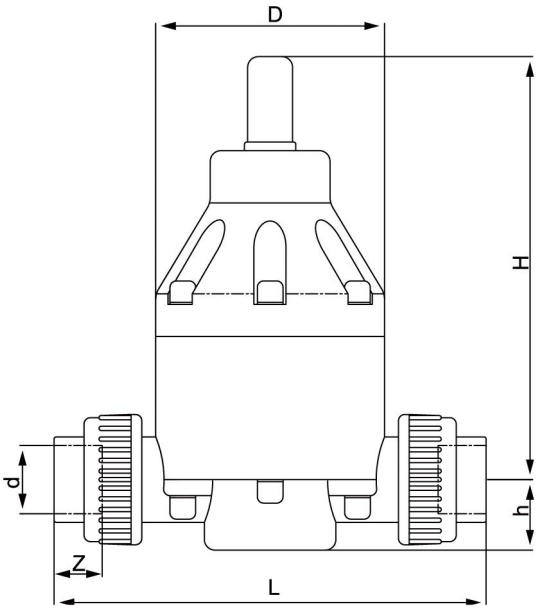
Technical Parameter

Materials: UPVC, PP, CPVC, PVDF, SUS304, SUS316L;
Work pressure: 0~1.0MPa, 0.02~1.6MPa
Caliber size: DN15, DN20, DN25, DN32, DN40, DN50, DN65;
Connection methods: bonding, hot melt welding, threading, flange;
Diaphragm material: PTFE+rubber composite

Size chart

model	spec	L	H	D	d	z	h
18615	DN15	166	165	82	20	18	25
18620	DN20	170	165	82	25	21	25
18625	DN25	212	173	107	32	26	35
18632	DN32	226	173	107	40	28	35
18640	DN40	292	225	148	50	37	58
18650	DN50	305	225	148	63	37	58
18665	DN65	390	225	148	75	42	58

Outline dimension diagram



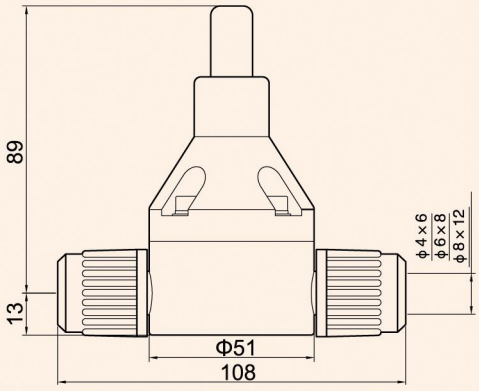
186 hose type safety valve/back pressure valve

material

UPVC、PP、CPVC、PVDF

Hose specifications

Φ6 、Φ8 、Φ12



186-F type flange safety valve/back pressure valve

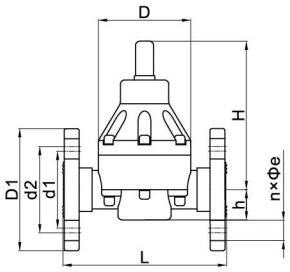
material

UPVC、PP、CPVC、PVDF

Size chart

model	spec	L	H	h	D	D1	d1	d2	n×Φ
18615-F	DN15	143	165	25	82	95	60.3	70	4 × Φ 14
18820-F	DN20	145	165	25	82	105	70	75	4 × Φ 14
18625-F	DN25	182	173	35	107	115	79	90	4 × Φ 14
18632-F	DN32	190	173	35	107	140	89	100	4 × Φ 18
18640-F	DN40	252	225	58	148	150	98	110	4 × Φ 18
18850-F	DN50	255	225	58	148	165	120	125	4 × Φ 18
18665-F	DN65	268	225	58	148	185	140	145	4 × Φ 18

Outline dimension diagram



186-C type direct insertion safety valve I back pressure valve

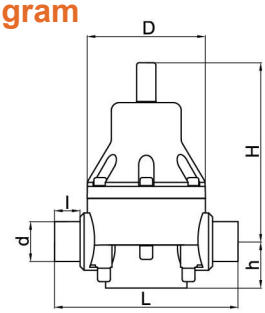
material

UPVC、PP、CPVC、PVDF

Size chart

model	L	H	h	D	d	l
DN15	125	165	25	82	20	15
DN20	127	165	25	82	25	18
DN25	163	173	35	107	32	21
DN32	170	173	35	107	40	25
DN40	231	225	58	148	50	27
DN50	232	225	58	148	63	32

Outline dimension diagram



186-BF stainless steel safety valve

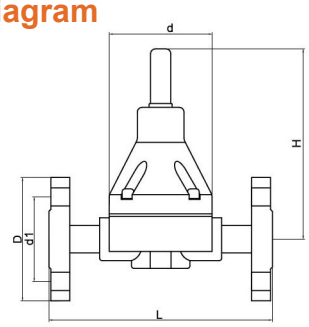
material

Stainless steel SUS304, SUS316L

Size chart

model	spec	d	H	L	D	d1	n×Φe
18615-BF	DN15	82	147	172	95	65.0	4 × Φ14
18620-BF	DN20	82	147	177	105	75	4 × Φ14
18625-BF	DN25	107	160	194	115	85	4 × Φ14
18632-BF	DN32	107	160	195	140	100	4 × Φ18
18640-BF	DN40	155	207	271	150	110	4 × Φ18
18650-BF	DN50	155	207	274	165	125	4 × Φ18
18665-BF	DN65	155	207	278	165	145	4 × Φ18

Outline dimension diagram



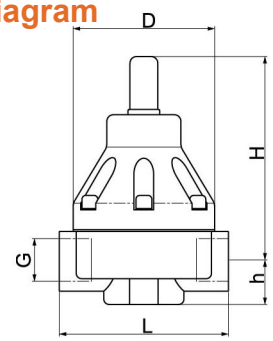
186-B type safety valve/back pressure valve

material

Size chart

model	spec	L	D	H	h	G
18615-B	DN15	95	82	147	23	G1/2"(内螺纹)
18620-B	DN20	95	82	147	23	G3/4"(内螺纹)
18625-B	DN25	119	107	160	26	G1"(内螺纹)
18632-B	DN32	119	107	160	26	G1 1/4"(内螺纹)
18640-B	DN40	181	155	207	32	G1 1/2"(内螺纹)
18650-B	DN50	181	155	207	32	G2"(内螺纹)

Outline dimension diagram



286 type articulated Y-shaped filter

Product Overview

Plastic Y-shaped filter is an indispensable device on pipelines for transporting fluids, usually installed at the inlet end of water pumps, valves or other equipment. Used to filter impurities in fluids to protect the normal use of valves, pumps, and equipment

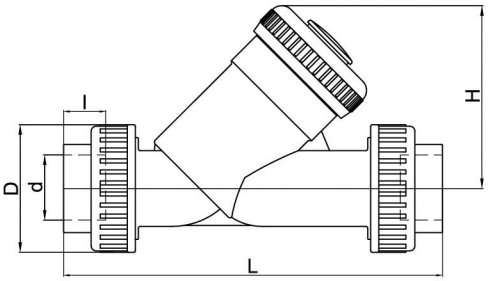
Material: UPVC, CPVC, PPH, PVDF, suS304, SUS316L

Filtration accuracy: 12 mesh, 20 mesh, 40 mesh

Functional Features

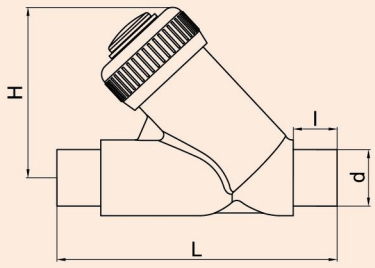
- ◆ High chemical stability, suitable for transporting acidic and alkaline chemicals;
- ◆ Easy to rinse, when too many impurities accumulate in the filter, the filter can be removed for cleaning;
- ◆ Transparent and visible, easy to observe.

Outline dimension diagram



Size chart

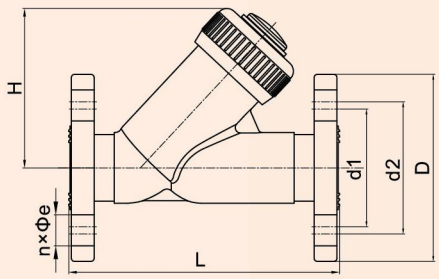
model	spec	L	H	l	d
28615	DN15	184	80	18	20
28620	DN20	187	80	21	25
28625	DN25	205	93	26	32
28632	DN32	252	120	28	40
28640	DN40	271	120	37	50
28650	DN50	305	143	37	63
28665	DN65	378	182	42	75
28680	DN80	440	236	50	90
286100	DN100	565	236	69	110



286 type direct insertion Y-shaped filter

Size chart

model	spec	L	H	d	l
28615-C	DN15	136	80	20	18
28620-C	DN20	138	80	25	19
28625-C	DN25	155	93	32	21
28632-C	DN32	190	120	40	26
28640-C	DN40	198	120	50	31
28650-C	DN50	235	143	63	32
28665-C	DN65	290	182	75	35
28680-C	DN80	283	182	90	33
286100-C	DN100	385	236	110	65



286 type flange Y-shaped filter

Size chart

model	spec	L	H	D	d1	d2	n×Φe
28615-F	DN15	151	80	95	60.3	70	4 × Φ 14
28620-F	DN20	157	80	105	70	75	4 × Φ 14
28625-F	DN25	174	93	115	79	90	4 × Φ 14
28632-F	DN32	205	120	140	89	100	4 × Φ 18
28640-F	DN40	214	120	150	98	110	4 × Φ 18
28650-F	DN50	254	143	165	120	125	4 × Φ 18
28665-F	DN65	305	182	185	140	145	4 × Φ 18
28680-F	DN80	312	182	200	150	160	8 × Φ 18
286100-F	DN100	400	236	220	175	191	8 × Φ 18
286125-F	DN125	430	236	258	210	210	8 × Φ 18

LGMZ type diaphragm pulse damper

product overview

Pulse dampers, also known as pulsation dampers or pulsation buffers, are commonly used components for eliminating pipeline pulsation and are essential accessories for metering pumps. Lige pulsation dampers can smooth out pipeline pulsation and water hammer phenomena caused by volumetric pumps such as metering pumps and diaphragm pumps. It is isolated from the liquid in the pipeline by a corrosion-resistant diaphragm, and the pipeline pulsation is smoothed by changes in the volume of the gas chamber.

Shell material: PVC, PP, PVDF, SUS304, SUS316L, etc.

Diaphragm Material: PTFE Composite, FPM (Fluororubber), EPDM (Ethylene Propylene Diene Monomer), NBR (Nitrile Nitrile)
Functional Features

Functional Features

◆ Reduce the harm of water hammer to the system.
◆ Reduce the peak value of flow velocity fluctuations.
◆ Protect pipelines, valves, and joints from the impact of pressure fluctuations.
◆ Create a favorable working environment for metering pumps and improve their performance.
◆ Allow the system to use smaller pipe diameters to reduce costs.
◆ When used in conjunction with back pressure valves, it can make the pressure fluctuations in the pipeline close to zero.
◆ Reduce the energy consumption of the system.

Volume selection of diaphragm dampers

The hourly flow rate of the pump ÷ 60 ÷ the number of strokes per minute of the pump × 15=the actual minimum volume required by the damper
The minimum volume of the damper required to reduce 90% of the pulse can be obtained by multiplying the metering capacity (ml) of each stroke of the metering pump (or diaphragm pump) by 15. Note: (This calculation method is applicable to single head pulse type pump bodies, multi head pumps are discussed separately.)

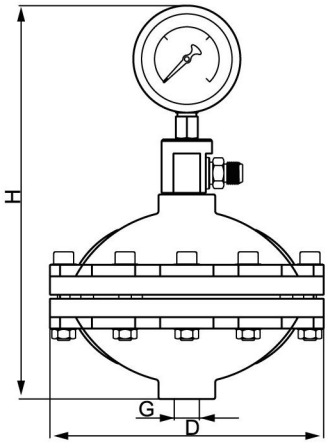
Working principle

According to Boyle's law $P_1V_1=P_2V_2$, the volume of a gas is inversely proportional to its pressure, and pipeline pulsation is smoothed by changing the volume of the gas. For systems with sinusoidal flow velocity, when the peak occurs, the volume of the air chamber decreases and the pulse damper absorbs excess liquid flow; When the valley is reached: the volume of the air chamber increases, releasing the stored liquid and achieving a smooth pulsation effect.

Size chart

model	volume (L)	tall H (mm)	diameter D(mm)	caliber	Rated pressure MPa	connection
LGMZ-0.35	0.35	218	Φ148	DN15	1.6	internal thread 1/2"
LGMZ-0.6	0.6	235	Φ171	DN20	1.6	internal thread 3/4"
LGMZ-1.0	1.0	260	Φ205	DN25	1.6	internal thread 1"
LGMZ-1.5	1.5	305	Φ230	DN25	1.6	internal thread 1"
LGMZ-2.0	2.0	316	Φ255	DN32	1.6	internal thread 1 1/4"
LGMZ-4.0	4.0	354	Φ301	DN40/ DN50	1.6	internal thread 1 1/2"、2"

Outline dimension diagram

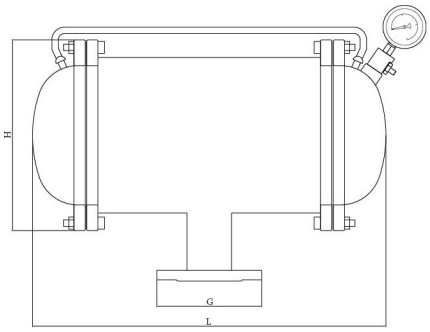


LGMZ type diaphragm pulse damper

Size chart

model	volume (L)	tall H (mm)	Length L (mm)	Caliber (G)	connection
LGMZ-12	12	271	460	DN40/50	flange
LGMZ-16	16	300	460	DN40/50	flange
LGMZ-20	20	300	560	DN50/65	flange

Outline dimension diagram



LGMQ airbag pulse damper

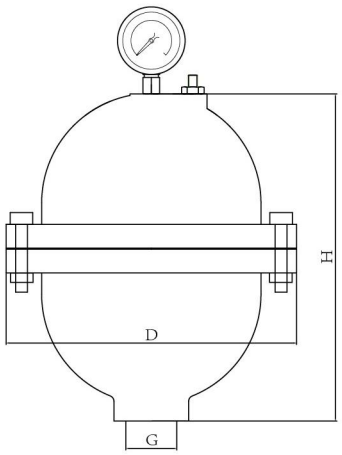
Shell material

UPVC、PP、PVDF、SUS304、SUS316L

Material of airbag

FPM (fluororubber), EPDM (ethylene propylene diene monomer), NBR (nitrile)

Outline dimension diagram



Size chart

model	volume(L)	tall H(mm)	diameter D(mm)	caliber d	connection
LGMQ-0.35	0.35	192	140	DN15	Union socket and spigot, threads flange
LGMQ-0.6	0.6	225	140	DN20	Union socket and spigot, threads flange
LGMQ-1.0	1.0	230	163	DN25	Union socket and spigot, threads flange
LGMQ-1.5	1.5	271	163	DN25	Union socket and spigot, threads flange
LGMQ-2.0	2.0	295	200	DN32	Union socket and spigot, threads flange
LGMQ-4.0	4.0	288	245	DN40	Union socket and spigot, threads flange
LGMQ-5.0	5.0	385	245	DN40/50	Union socket and spigot, threads flange
LGMQ-6.0	6.0	490	245	DN40/50	Union socket and spigot, threads flange
LGMQ-12.0	12.0	524	305	DN50/65/80	Union socket and spigot, threads flange

Volume selection of airbag dampers

The minimum volume of the damper required to reduce 90% of the pulse can be obtained by multiplying the metering capacity (ml) of each stroke of the metering pump (or diaphragm pump) by 12.

LGGY high-pressure stainless steel airbag damper

Shell material

SUS316L

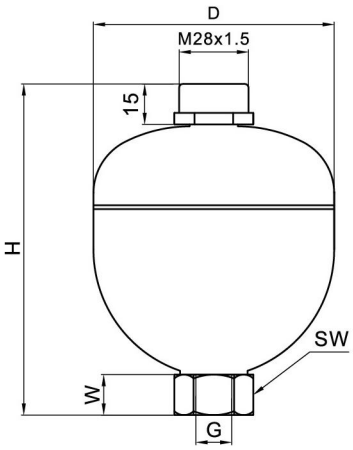
Material of airbag

HNBR (hydrogenated nitrile), EPDM (ethylene propylene diene monomer)

Size chart

model	Maximum service pressure	upper pressure limit	Nominal volume L	D	H	Port connection G	Maximum flow rate L	W	SW
LGGY0.16	100,200	8：1	0.16	75	117	G½"	38	17	32
LGGY0.32	100,200	8：1	0.32	95	137	G½"	95	17	32
LGGY0.5	100,200	8：1	0.5	101	152	G½"	95	21	32
LGGY0.75	100,200	8：1	0.75	125	156	G½"	95	21	32
LGGY1	100,200	8：1	1.0	142	181	G½"	95	21	32
LGGY1.4	100,200	8：1	1.4	157	210	G½"	95	21	32
LGGY2	100,200	8：1	2.0	173	231	G¾"	150	21	40
LGGY2.5	100,200	4：1	2.5	173	239	G¾"	150	21	40
LGGY2.8	100,200	4：1	2.8	173	267	G¾"	150	21	40

Outline dimension diagram



LGMK type air chamber pulse damper

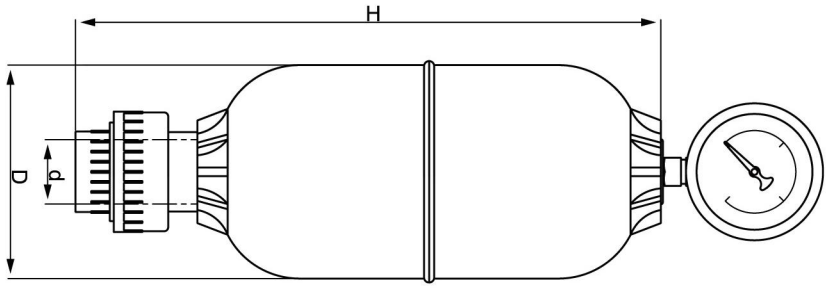
characteristic

- ◆ Simple structure, cost-effective
- ◆ UPVC material, superior corrosion resistance
- ◆ Attached diaphragm pressure gauge to prevent corrosion of the pressure gauge

Volume selection of air dampers

The minimum volume of the required pulse damper can be obtained by multiplying the metering capacity (ml) of each stroke of a metering pump (or diaphragm pump) by 26.

Outline dimension diagram



Size chart

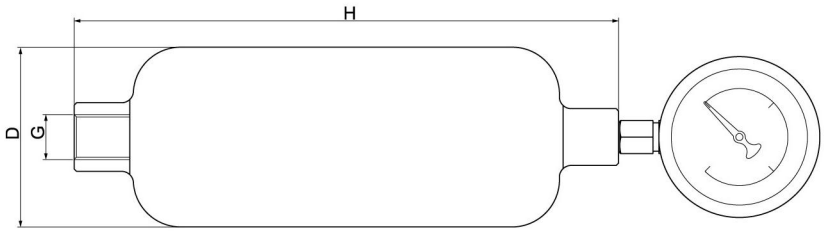
model	Volume (L)	caliber	d(mm)	D(mm)	H(mm)	Diaphragm type H (mm)	Rated pressure MPa
LGMK-0.6	0.6	DN15	20	85	266	330	1.0
LGMK-0.9	0.9	DN20	25	100	266	330	1.0
LGMK-1.2	1.2	DN25	32	110	286	351	1.0
LGMK-2.2	2.2	DN32	40	130	380	445	1.0
LGMK-3.2	3.2	DN40	50	162	398	465	1.0
LGMK-5.0	5.0	DN40	50	162	560	625	1.0
LGMK-10	10	DN50	63	162	925	1000	1.0

LGMK-B type air chamber pulse damper

material

SUS304、SUS316L

Outline dimension diagram



Size chart

model	Volume (L)	H(mm)	D(mm)	G	Pressure rating (MPA)
LGMK-B-0.8	0.8	250	76	G 1/2" (internal thread)	1.6
LGMK-B-1.2	1.2	260	89	G 3/4" (internal thread)	1.6
LGMK-B-2.0	2.0	300	114	G 1" (internal thread)	1.6
LGMK-B-3.0	3.0	290	133	G 1" (internal thread)	1.6
LGMK-B-3.5	3.5	340	133	G 1 1/4" (internal thread)	1.6
LGMK-B-4.0	4.0	370	133	G 1 1/2" (internal thread)	1.6

LGBD type flow calibration column

product overview

The flow calibration column is widely used in the flow calibration of metering pumps and dosing devices, which can accurately calibrate the output flow of metering pumps. The flow calibration column, also known as the flow calibration tube, is mainly made of transparent UPVC and PVDF (semi transparent) materials. The connection methods include internal thread, external thread, and flange.

Selection of flow calibration column

The selection of flow calibration column is determined based on the pump's flow rate and calibration time requirements. For example, if the flow rate of the pump is 60L/h and the customer needs to calibrate the flow rate for 0.5-1min, the calculated flow rate per minute should be 60L ÷ 60=1L. Therefore, a calibration column with a volume of 1L can be used. Press for 30 seconds to obtain a volume of 0.5L.

model	Capacity (ml)	Diameter (mm)	Height (mm)	Conventional connection method(Customizable)
LGBD-100	100	32	271	Internal thread 1/2"
LGBD-200	200	40	320	Internal thread 1/2"
LGBD-300	300	50	335	Internal thread 1/2"
LGBD-400	400	50	396	Internal thread 1/2"
LGBD-500	500	63	350	Internal thread 1/2"
LGBD-1000	1000	63	555	Internal thread 1/2"
LGBD-2000	2000	75	745	Internal thread 3/4"
LGBD-3000	3000	110	640	Internal thread 1"
LGBD-4000	4000	110	770	Internal thread 1"
LGBD-5000	5000	110	931	Internal thread 11/2"
LGBD-6000	6000	110	1054	Internal thread 11/2"
LGBD-8000	8000	140	964	Internal thread 11/2"
LGBD-10000	10000	140	1085	Internal thread 2"
LGBD-15000	15000	140	1450	Internal thread 2"

786 diaphragm pressure gauge

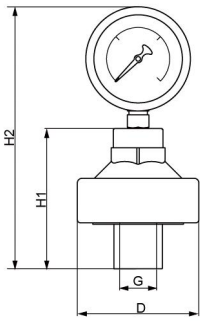
Structural principle

A diaphragm pressure gauge is a closed system consisting of a diaphragm body and a pressure gauge, filled with sealing fluid. When pressure is applied to the diaphragm, it undergoes deformation. The sealing fluid transmits force to the elastic component in the pressure gauge head, and the pressure value is displayed by the pressure gauge head. The force transmission of a diaphragm pressure gauge is completed by the liquid filled between the diaphragm body and the Bourdon tube. The elastic element is still the Bourdon tube, and the diaphragm plate isolates corrosive fluids from the pressure gauge, thereby preventing corrosion.

Size chart

model	Diaphragm material	Diaphragm material	D (mm)	H1(mm)	H2 (mm)	Interface size (G)
786-U	UPVC	FPM、PTFE	79	84	161	DN15, DN20, DN25 socket G1/2 ", G1/4", G 3/8 "(internal thread) M20 × 1.5 (external thread)
786-P	PP	FPM、PTFE	79	84	161	G1/2 ", G1/4", G 3/8 "(internal thread) M20 × 1.5 (external thread)
786-V	PVDF	PTFE	79	84	161	G1/2 ", G1/4", G 3/8 "(internal thread) M20 × 1.5 (external thread)
786-S	304/316	PTFE	74	77	155	G1/2 ", M20 × 1.5 (external thread)

Outline dimension diagram



Diaphragm joint

Introduction to the functions of the dosing system accessories

The accessories of the dosing system mainly include back pressure valves, safety valves, pulsation dampers, flow calibration columns, Y-shaped filters, check valves, bottom valves, etc.

Back pressure valve: Its main function is to stabilize pipeline pressure, prevent siphon, backflow, self flow and other phenomena, and balance flow.

Safety valve: used to protect pipeline systems and prevent overpressure of metering pumps and systems.

Pulse damper: used to reduce the pulsation generated during the operation of the metering pump, stabilize the pipeline pressure, and protect the precision of the instrument.

Flow calibration column: used to calibrate and detect the flow rate of metering pumps.

Y-shaped filter: used to filter impurities in the pipeline and prevent insufficient flow and pressure caused by impurities in the metering pump.

How to adjust the safety valve and back pressure valve

1、How to adjust the back pressure valve

1、Never exceed the maximum working pressure of the metering pump.
2、When there is pressure at the suction end of the metering pump, the pressure at the discharge end of the pump should be at least 1 bar higher than the pressure at the suction end.

2、How to set the pressure of the safety valve

The pressure of the safety valve can be adjusted within the rated working pressure range of the metering pump, and it is not allowed to exceed the maximum working pressure of the metering pump. Generally, the set pressure of the safety valve is 1-2 bar higher than that of the back pressure valve. The safety valve is designed to prevent overpressure operation of the metering pump.

Precautions for using pulse dampers

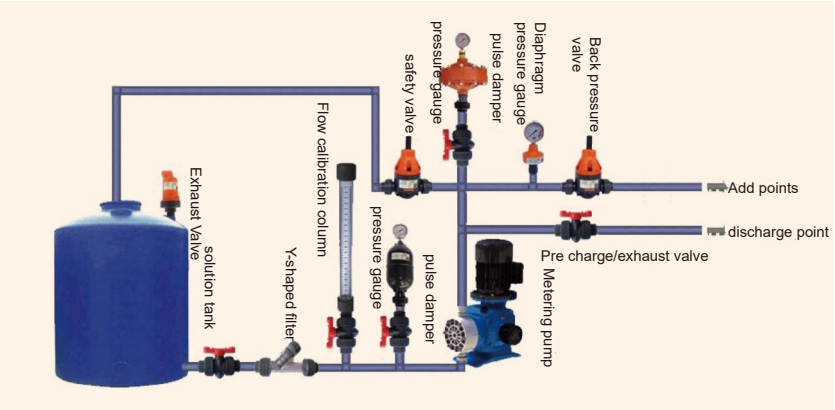
The maximum operating pressure of the diaphragm pulse damper is 1.6MPa for PVC PP material. Overpressure use is prohibited to avoid the danger of shell rupture. The optimal operating temperature is 10-45 °C . PVDF SUS304 can withstand higher temperatures and pressures.

During the installation process, collisions should be avoided. Sufficient space should be reserved around the pulsation damper during installation to facilitate pre filling of the damper with gas and future maintenance and adjustment. A shock-absorbing material should be placed between the pulsation damper and the fixed bracket to absorb the vibration energy of the pulsation damper housing and prevent co vibration.

Pre fill with inert gas (nitrogen or argon) before use, with a pressure of 50% -80% of the average system pressure. If installed at the pump outlet, it is recommended to pre charge with 50% pressure. If installed at the pump inlet, it is recommended to pre charge with 70% pressure. If not used for a long time, the pre charge gas should be released to extend the diaphragm life. It is best not to pre charge with oxidizing gas (such as oxygen), otherwise it will accelerate the oxidation rate of the diaphragm and reduce its service life.

When in use, the pressure gauge pointer should swing slightly. If the swing is too large, it indicates that the pre charge gas pressure is too low or the selection is too small. If it does not swing, it indicates that the pre charge gas pressure is too high or the pipeline is not connected.

Installation diagram of dosing system



386 type plastic intake and exhaust valve

product overview

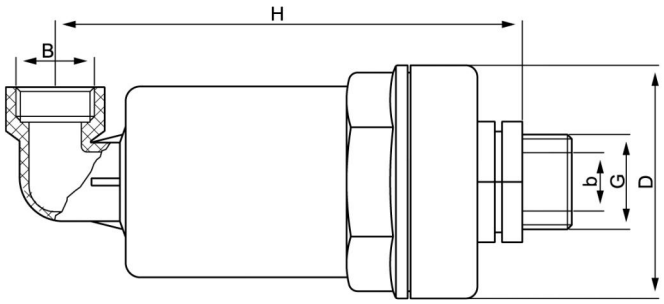
The air valve adopts a positive pressure exhaust and negative pressure intake design, with exhaust and intake functions. The exhaust valve automatically discharges a small amount of accumulated air inside the pipeline under pressure. When the negative pressure pipeline is emptied, it automatically introduces air to maintain smooth water flow. Especially under the condition of water column separation, it automatically opens and introduces air into the pipeline to eliminate vacuum.

Material: UPVC, PP, PA

Working principle

- System water injection: During the system water injection process, a large amount of air is discharged from the intake and exhaust ports. After water enters the air valve chamber, the floating ball closes the inlet and outlet as the liquid level rises. The valve body design that conforms to gas dynamics and the anti blowing design of the floating ball can prevent the floating ball from being blown by high-speed airflow before water enters the air valve, which may cause the exhaust port to close prematurely.
- System pressure state: When the system is under pressure, the intake and exhaust valves remain closed.
- System negative pressure state: When the system is emptied, a negative pressure difference is formed, and air pushes the float downwards. Air enters the air valve to avoid negative pressure in the system.

Outline dimension diagram



Size chart

model	spec	H	B	G	d	D
38615	DN15	165	G 3/4"	G 1/2"	12	85
38620	DN20	165	G 3/4"	G 3/4"	17	85
38625	DN25	165	G 3/4"	G 1"	20	85
38632	DN32	165	G 3/4"	G1 1/4"	20	85
38640	DN40	166	G 3/4"	G1 1/2"	40	85
38650	DN50	220	40	G2"	45	100

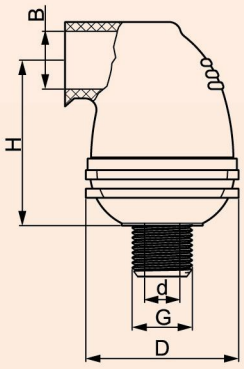
486 type vacuum breaking valve

product overview

The vacuum breaking valve can effectively solve the system damage caused by vacuum siphon phenomenon. When the vacuum in the system reaches a certain value, the valve automatically opens, introduces air, and eliminates the vacuum in the system, thereby protecting the equipment and system. The valve is always in a state of only intake and not exhaust.

Size chart

model	spec	H	B	G	d	D
48615	DN15	165	G 3/4"	G 1/2"	12	85
48620	DN20	165	G 3/4"	G 3/4"	17	85
48625	DN25	165	G 3/4"	G 1"	20	85
48632	DN32	165	G 3/4"	G1 1/4"	20	85
48640	DN40	166	G 3/4"	G1 1/2"	40	85
48650	DN50	220	40	G2"	45	100



387 type automatic exhaust valve

model	spec	H	B	G	d	D
38715	DN15	76	20	G1/2"	16.2	63
38720	DN20	76	25	G3/4"	18	63

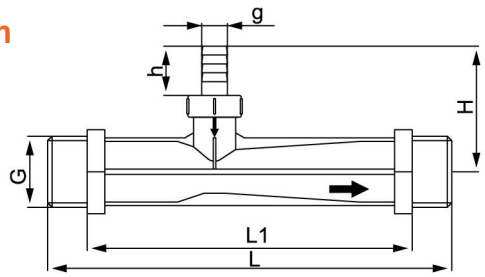
586 type jet injector

Working principle and purpose

Jet injector (Venturi), also known as water injector, consists of four parts: nozzle, suction chamber, diffuser, and one-way valve. It is an automatic gas filling and dosing device developed using the principle of jet negative pressure. The unique mixing chamber design creates a strong water flow that mixes and sprays gas (or medicine). Balanced refueling and dosing, high efficiency, compact product structure, easy management and maintenance, fast installation, reliable operation, can be started or stopped at any time, low energy consumption, and will not cause secondary pollution to the environment. Jet generators are widely used in industries such as water treatment, agricultural irrigation, ozone generators, chlorine disinfection equipment, chemical engineering, and aquaculture.

Material: UPVC, PP, PVDF.

Outline dimension diagram



Size chart

model	G	L	L1	h	H	g
58608	1/4 "outer thread	113	88	16	43	Connect 1/4 "hose
58615	G1/2 "outer thread or 20mm	141	111	28	63	G1/4 "external teeth and 1/4" hose connection
58620	G3/4 "outer thread or 25mm	152	111	28	63	G1/4 "external teeth and 1/4" hose connection
58625	G1 "outer thread or 32mm	227	183	37	88	G1/2 "external teeth and 3/8" hose connection
58632	G1 1/4 "outer thread or 40mm	232	187	37	88	G1/2 "external teeth and 3/8" hose connection
58640	G1 1/2 "outer thread or 50mm	261	210	37	89	G1/2 "outer teeth and 3/8" hose connection
58650	G2 "outer thread or 63mm	297	228	40	70	G1 1/4 "external teeth
58665	G2 1/2 "or DN65 flange	400	310	36	80	G1 1/4 "external teeth or DN32 flange
58680	DN80 flange	492	430	100	160	G1 1/2 "external teeth or DN40 flange

Note: The inner diameter of G1/4 "hose is 8mm, and the inner diameter of G3/8" hose is 12mm.

SK686 type pipeline mixer

product overview

SK type pipeline mixer, also known as static mixer, is an ideal equipment for instantaneous mixing of water and various chemicals. It has a very good effect on adding various coagulants, coagulants, ozone, liquid chlorine, acid-base neutralization, gas water mixing systems, etc.

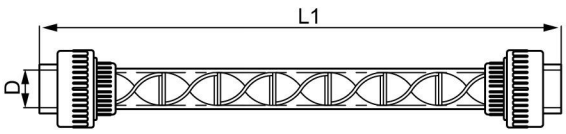
The product has the characteristics of fast and efficient mixing, simple structure, energy saving, and compact size. Without the need for external force, the water flow passes through 6-8 mixing units, intersecting and diverging with each other. At the same time, the vortex rotates in the opposite direction and continuously crosses and flows, achieving a very good mixing effect instantly, with a mixing efficiency of up to 90-95%.

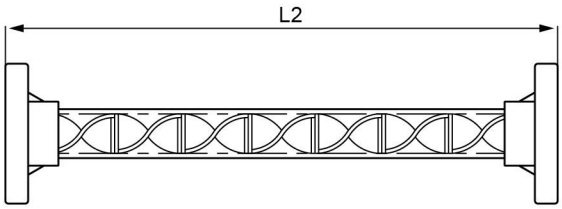
Material: UPVC, PP, CPVC, PVDF, SUS304, SUS316L

design reference

- The dosing position of various drugs should be at the front end of the pipeline mixer, and greater than 25cm, which is more effective when used in conjunction with a jet injector.
- The pipeline for adding chemicals can be designed according to water supply and drainage standards, with a flow velocity greater than 0.9m/s and an internal pressure of less than 1.6Mpa.
- The pipeline mixer is designed according to a specific diameter and water volume. Once the flow rate decreases, the head loss decreases significantly, which significantly affects the mixing effect.

Outline dimension diagram





Size chart

spec	Nominal diameter(DN)	D(mm)	L1(mm)	L2(mm)	Reference flow rate (m³/h)	Connection method
SK-68615	DN15 1/2"	20	265	292	0.3~0.6	Socket, thread, flange
SK-68620	DN20 3/4"	25	335	279	0.6~1.2	Socket, thread, flange
SK-68625	DN25 1"	32	430	358	0.9~1.8	Socket, thread, flange
SK-68632	DN32 1 1/4"	40	505	543	2.2~4.5	Socket, thread, flange
SK-68640	DN40 1 1/2"	50	585	491	2.2~4.5	Socket, thread, flange
SK-68650	DN50 2"	63	717	606	3.5~7	Socket, thread, flange
SK-68665	DN65 2 1/2"	75	1000	935	9~18	Socket, flange
SK-68680	DN80 3"	90	1018	872	9~18	Socket, flange
SK-686100	DN100 4"	110	990	995	14~28	Socket, flange
SK-686125	DN125 5"	140		962	22~44	flange
SK-686150	DN150 6"	160		965	31~64	flange
SK-686200	DN200 8"	225		912	56~110	flange
SK-686250	DN250 8"	280		1036	88~177	flange

986 electric ball valve

product overview

Electric actuator parameters		Valve body parameters	
power supply	AC110、220/380V/DC24/220V	Nominal Diameter	DN15-DN100
Output Torque	30N、50N、100N	nominal pressure	PN1.0MPa
optional feature	Switch type, contact type, opening signal, intelligent type	Valve shaft material	UPVC, CPVC, PP, ABS
Operating range	0~90° ±5°	body material	UPVC, CPVC, PPH, PP, ABS
Action time	15 seconds/30 seconds/60 seconds	Seat Tightness	EPDM, NBR, FPM, PTFE
ambient temperature	-30°~60°	temperature	UPVC<65°C PVDF<140°C CPVC<90°C PP<85°C
Manual operation	Comes with joystick operation	Applicable Medium	Water and various corrosive fluids
Limit	Electrical and mechanical dual limit	characteristic	Light weight, corrosion resistant, hygienic non-toxic, low flow resistance
protection grade	IP-67 (Explosion proof enclosure: Exd II BT4 P67 optional)	Connection method	Insert glue, flange, buckle
Input signal	0-10,1-5VDC/4-20mA (intelligent type)		
Signal feedback	Active signal S Passive signal		

Product Features

◆ Compact and aesthetically pleasing exterior structure
◆ Lightweight, easy to install, smooth inner wall, and low frictional resistance
◆ Material hygiene, non toxicity, aging resistance, corrosion resistance

886 type pneumatic ball valve

Technical parameters and performance

Actuator parameters		Valve body parameters	
type	Double acting piston type, spring reset type	Nominal Diameter	DN15-DN100
Mpa	Double acting: 2-8bar/Single acting: 4-8 bar	nominal pressure	PN1.0MPa
Output Torque	Double acting: 4N · M~10560N · M	Valve shaft material	UPVC, CPVC, PP, PVDF, ABS
	Single action: 7N · M~2668N · M	body material	UPVC, CPVC, PP, PVDF, ABS
operation temperature	Room temperature type: -20 °C ~80 °C (nitrile rubber O-ring)	Sphere material	UPVC, CPVC, PP, PVDF, ABS
	High temperature type: -20 °C ~160 °C (fluorine rubber O-ring)	Seat Tightness	PTFE, EPDM, FPM
Operating range	0~90° ±5°	temperature	UPVC<60°C PVDF<140°C CPVC<90°C PP<80°C
Interface thread	GTD40~GTD83/ATD50~ATD88 G1/8"	Connection method	Insert glue, flange, buckle
	GTD110~GTD350/ATD100~ATD200 G1/4"	Applicable Medium	Water and various corrosive fluids
Valve position signal	Positioner: 4~20mA/Answerer: Full open and full close signal	characteristic	Compact structure, small size, light weight, easy installation

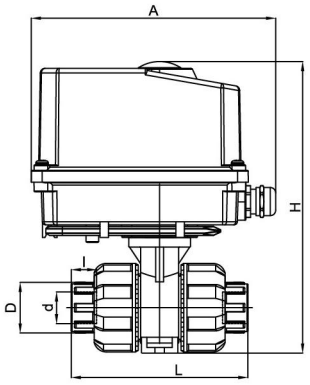
Product Features

- ◆ Gear type dual piston, large output torque, small volume
- ◆ The cylinder is made of aluminum alloy material, which is lightweight and has a beautiful appearance
- ◆ Excellent corrosion resistance and aging resistance

Outline dimension drawing of ball valve

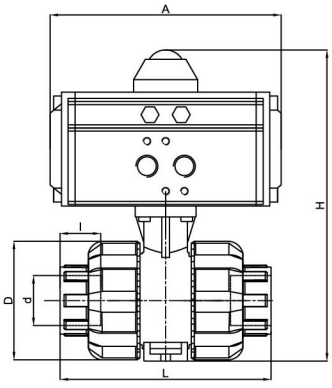
Electric ball valve size table

spec	A	d	I	D2	L	H	Model of actuator
DN15	155	20	20	53	112	184	03
DN20	155	25	26	60	120	198	03
DN25	155	32	28	71	135	210	03
DN32	155	40	31.5	83	150	217	03
DN40	155	50	34.5	95	167	234	03
DN50	155	63	38.5	116	180	255	03
DN65	160	75	40	145	241	318	05
DN80	160	90	64	164	295	346	05
DN100	200	110	59	188	331	375	15



Pneumatic Ball Valve Size Table

spec	A	d	I	D2	L	H	Model of actuator
DN15	149	20	20	53	112	173	52
DN20	149	25	26	60	120	187	52
DN25	149	32	28	71	135	200	52
DN32	169	40	31.5	83	150	233	63
DN40	169	50	34.5	95	167	239	63
DN50	182	63	38.5	116	180	273	75
DN65	182	75	40	145	241	326	75
DN80	205	90	64	164	295	355	83
DN100	262	110	59	188	331	387	92



987 type electric butterfly valve

Technical parameters and performance

Electric actuator parameters		Valve body parameters	
power supply	AC110、220/380V/DC24/220V	Nominal Diameter	DN50-DN300
Output Torque	50N、10ON、200N	nominal pressure	PN1.0MPa
optional feature	Switch type, contact type, opening signal, intelligent type	Valve shaft material	UPVC, CPVC, PP, ABS
Operating range	0~90±5°	body material	UPVC, CPVC, PPH, PP, ABS
Action time	15 seconds/30 seconds/60 seconds	Seat Tightness	EPDM, NBR, FPM, PTFE
ambient temperature	-30°~60°	temperature	UPVC<65°C PVDF<140°C CPVC<90°C PP<85°C
Manual operation	Comes with joystick operation	Applicable Medium	Water and various corrosive fluids
Limit	Electrical and mechanical dual limit	characteristic	Light weight, corrosion resistant, hygienic non-toxic, low flow resistance
protection grade	IP-67 (Explosion proof enclosure: Exd II BT4 IP67 optional)	Connection method	France
Input signal	0-10,1-5VDC/4-20mA (intelligent type)		
Signal feedback	Active signal S Passive signal		

Product Features

- ◆ Compact and aesthetically pleasing exterior structure
- ◆ Lightweight, easy to install, smooth inner wall, and low friction resistance
- ◆ Material hygiene, non toxicity, aging resistance, corrosion resistance

887 type pneumatic butterfly valve

Technical parameters and performance

Actuator parameters		Valve body parameters	
type	Double acting piston type, spring reset type	Nominal Diameter	DN50-DN300
Mpa	Double acting: 2-8bar/Single acting: 4-8 bar	nominal pressure	PN1.0MPa
Output Torque	Double acting: 4N · M~10560N · M	Valve shaft material	UPVC, CPVC, PP, PVDF, ABS
	Single action: 7N · M~2668N · M	body material	UPVC, CPVC, PP, PVDF, ABS
operation temperature	Room temperature type: -20 °C ~80 °C (nitrile rubber O-ring)	Sphere material	UPVC, CPVC, PP, PVDF, ABS
	High temperature type: -20 °C ~160 °C (fluorine rubber O-ring)	Seat Tightness	PTFE, EPDM, FPM
Operating range	0~90°±5°	temperature	UPVC<60°C PVDF<140°C CPVC<90°C PP<80°C
Interface thread	GTD40~GTD83/ATD50~ATD88 G1/8"	Connection method	France
	GTD110~GTD350/ATD100~ATD200 G1/4"	Applicable Medium	Water and various corrosive fluids
Valve position signal	Positioner: 4~20mA/Answerer: Full open and full close signal	characteristic	Compact structure, small size, light weight, easy installation

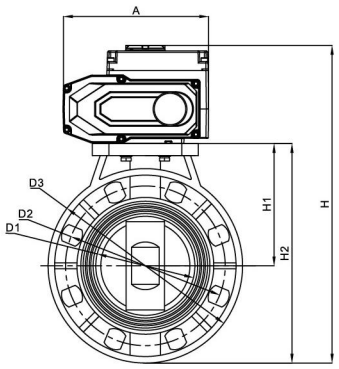
Product Features

- ◆ Gear type dual piston, large output torque, small volume
- ◆ The cylinder is made of aluminum alloy material, which is lightweight and has a beautiful appearance
- ◆ Excellent corrosion resistance and aging resistance

Outline dimension drawing of butterfly valve

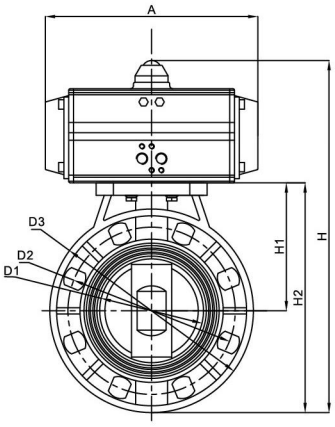
Electric Butterfly Valve Size Table

spec	D1	D2	D3	H	H1	H2	A	Model of actuator
DN50	48	125	160	267	100	180	160	05
DN65	63	145	180	277	112	202	160	05
DN80	78	160	196	294	120	218	160	05
DN100	98	180	228	316	140	254	160	05
DN125	122	210	258	351	168	297	200	10
DN150	146	240	287	367	181	325	200	10
DN200	200	295	343	428	242	413	200	15
DN250	245	350	395	450	322	467	200	15
DN300	291	400	483	497	341	558	235	20
DN350	340	470	533	500	344	608	235	20
DN400	399	515	597	526	370	677	235	20



Pneumatic butterfly valve size table

spec	D1	D2	D3	H	H1	H2	A	Model of actuator
DN50	48	125	160	243	100	180	149	52
DN65	63	145	180	269	112	202	169	63
DN80	78	160	196	298	120	218	182	75
DN100	98	180	228	329	140	254	205	83
DN125	122	210	258	366	168	297	262	92
DN150	146	240	287	398	181	324.5	266	105
DN200	200	295	343	481	242	413	298	125
DN250	245	350	395	642	322	467	298	125
DN300	291	400	483	750	341	558	394	140
DN350	340	470	533	825	344	608	454	160
DN400	399	515	597	894	370	677	454	160



LZS type float flowmeter/LG65 type flow alarm switch

overview

The bistable switch can meet various usage requirements. This switch is located on the dovetail guide rail of the measuring tube, and the flow value can be set. Easy to install, reliable, and easy to install on existing equipment.

Application and Function

LG650 upper limit
When the magnetic float is in the set position of the alarm switch, the contacts close. When the magnetic float is above the set position of the alarm switch, the contacts remain closed. When the magnetic float is below the set position of the alarm switch, the contact opens.

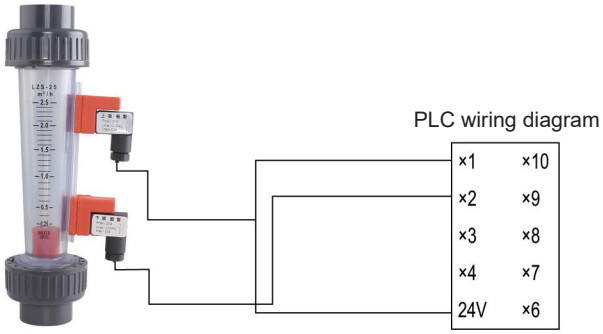
LG651 lower limit
When the magnetic float is in the set position of the alarm switch, the contacts close. When the magnetic float is below the set position of the alarm switch, the contacts remain closed. When the magnetic float is above the set position of the alarm switch, the contact opens.

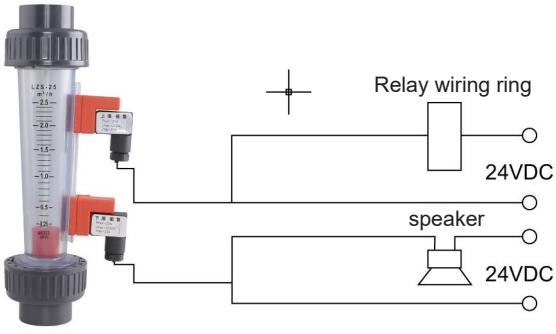
Related parameters

Working voltage: Umax=220VAC
Umax=24VDC
Working current: Imm=0.5A
Imm=0.1A
Working power: Pmax=10VA
Pmax=1VA

Positive resistance:<200mQ
Insulation impedance:>10⁹ m Ω
Working temperature: 0°C ~55°C
Protection level: IP65
Lag distance: 4mm
Size: 42 × 23 × 45mm

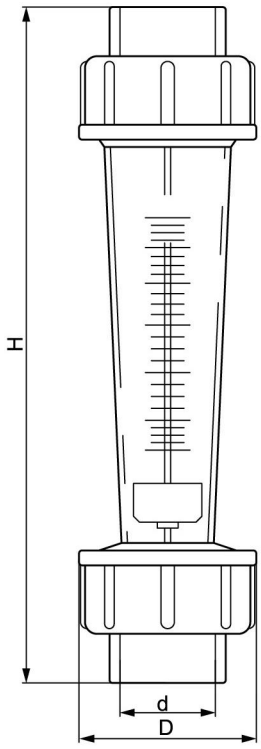
Installation Example





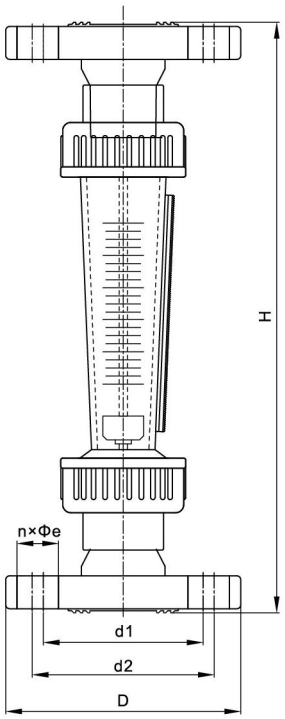
LZS type float flowmeter size diagram

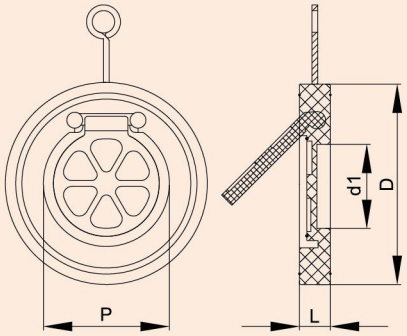
model	Interface diameter	measuring range	D	d	H
LZS-15	DN15	4-40l/h	53	20	230
		6-60l/h			
		10-100l/h			
		16-160l/h			
		25-250l/h			
		40-400l/h			
		60-600l/h			
		100-1000l/h			
LZS-20	DN20	4-40l/h	53	25	225
		6-60l/h			
		10-100l/h			
		16-160l/h			
		25-250l/h			
		40-400l/h			
		60-600l/h			
		100-1000l/h			
LZS-25	DN25	100-1000l/h	62	32	230
		160-1600l/h			
		250-2500l/h			
		300-3000l/h			
LZS-32	DN32	0.4-4m^3/h	73	40	287
		0.6-6m^3/h			
LZS-40	DN40	0.4-4m^3/h	103	50	340
		0.6-6m^3/h			
		1-10m^3/h			
		1.6-16m^3/h			
LZS-50	DN50	0.4-4m^3/h	104	63	345
		0.6-6m^3/h			
		1-10m^3/h			
		1.6-16m^3/h			
LZS-65	DN65	4-16m^3/h	127	75	425
		5-25m^3/h			
		8-40m^3/h			
		12-60m^3/h			
LZS-80	DN80	4-16m^3/h	150	90	440
		5-25m^3/h			
		8-40m^3/h			
		12-60m^3/h			
LZS-100	DN100	12-60m^3/h	215	110	555
		18-90m^3/h			
		20-120m^3/h			
		25-150m^3/h			
		30-180m^3/h			
		40-200m^3/h			



Flange flowmeter

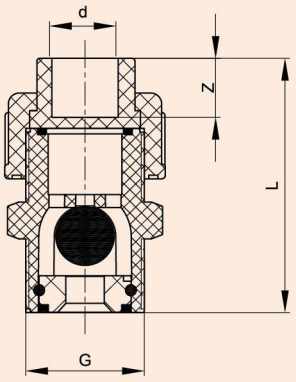
model	Interface diameter	measuring range	D	d1	d2	H	L
LZS-F-15	DN15	4-40l/h	95	60.3	70	4 × Φ14	286
		6-60l/h					
		10-100l/h					
		16-160l/h					
		25-250l/h					
		40-400l/h					
		60-600l/h					
		100-1000l/h					
LZS-F-20	DN20	4-40l/h	105	70	75	4 × Φ14	286
		6-60l/h					
		10-100l/h					
		16-160l/h					
		25-250l/h					
		40-400l/h					
		60-600l/h					
		100-1000l/h					
LZS-F-25	DN25	100-1000l/h	115	79	90	4 × Φ14	290
		160-1600l/h					
		250-2500l/h					
		300-3000l/h					
LZS-F-32	DN32	0.4-4m³/h	140	89	100	4 × Φ18	357
		0.6-6m³/h					
LZS-F-40	DN40	0.4-4m³/h	150	98	110	4 × Φ18	415
		0.6-6m³/h					
		1-10m³/h					
		1.6-16m³/h					
LZS-F-50	DN50	0.4-4m³/h	165	120	125	4 × Φ18	425
		0.6-6m³/h					
		1-10m³/h					
		1.6-16m³/h					
LZS-F-65	DN65	4-16m³/h	185	140	145	4 × Φ18	525
		5-25m³/h					
		8-40m³/h					
		12-60m³/h					
LZS-F-80	DN80	4-16m³/h	200	150	160	8 × Φ18	588
		5-25m³/h					
		8-40m³/h					
		12-60m³/h					
LZS-F-100	DN100	12-60m³/h	220	175	191	8 × Φ18	690
		18-90m³/h					
LZS-F-125	DN125	20-120m³/h	250	210	-		585
		25-150m³/h					
LZS-F-150	DN150	30-180m³/h	280	240	-		585
		40-200m³/h					
LZS-F-200	DN200	20-200m³/h	341	295		8 × Φ22	829
		25-250m³/h					
		30-300m³/h					
		40-400m³/h					





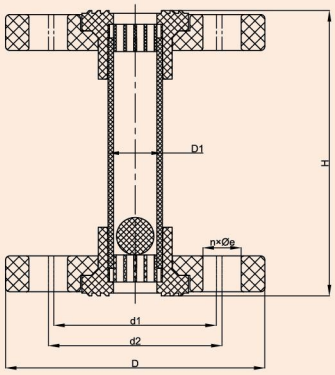
Wafer Check Valves

spec	d1	D	P	L
DN40	23	82	36	18
DN50	27	108	44	21
DN65	40	127	58	22
DN80	54	142	10	23
DN100	70	165	89	25
DN125	92	192	115	28
DN150	112	217	131	30
DN200	150	270	179	34
DN250	190	328	230	39
DN300	216	378	260	44



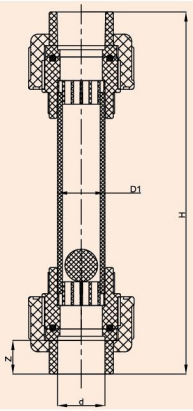
Measurement pump inlet and outlet one-way valve

spec	L	d	Z	G
DN15-M22	66	20	18	M22*2
DN15-1"	69	20	18	1"
DN25-1½"	105	32	22.5	1½ “



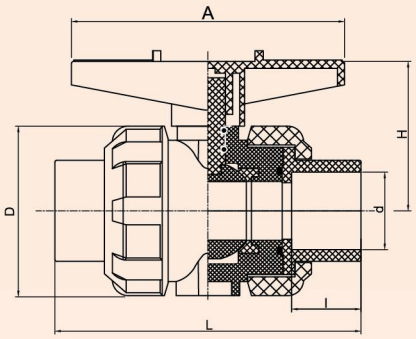
Flange style mirror

spec	D	H	D1	d1	d2	n×Φe
DN15	95	110	20	60.3	70	4 × Φ14
DN20	105	105	25	70	75	4 × Φ14
DN25	115	122	32	79	90	4 × Φ14
DN32	140	148	40	89	100	4 × Φ18
DN40	150	178	50	98	110	4 × Φ18
DN50	165	180	63	120	125	4 × Φ18



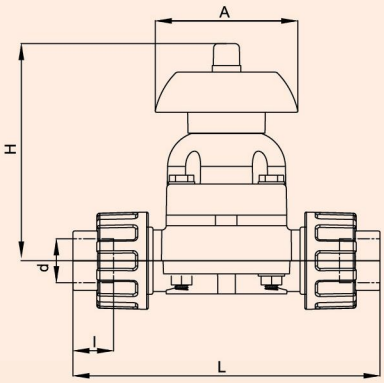
Articulated mirror

spec	L	H	I	D1	d
DN15	97	99	18	20	20
DN20	101	99	21	25	25
DN25	124	136	26	32	32
DN32	132	136	28	40	40
DN40	175	178	37	50	50
DN50	185	178	37	63	63



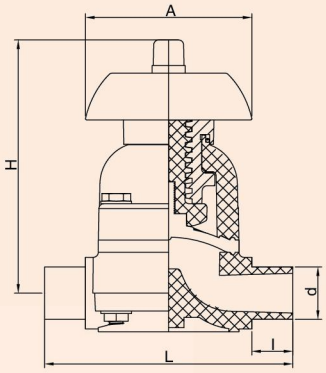
True Union Ball Valve

Nominal Diameter	d(Φ)	I	H	A	L	D
DN15	Φ20	20	48	85	102	53
DN20	Φ25	26	53	90	116	60
DN25	Φ32	28	65	105	128	71
DN32	Φ40	31.5	75	116	146	83
DN40	Φ50	34.5	87	128	162	95
DN50	Φ63	38.50	99	140	177	116
DN65	Φ75	40	128	209	229	145
DN80	Φ90	64	140	204.5	292	164
DN100	Φ110	59	160	209	310	188



Double driven diaphragm valve

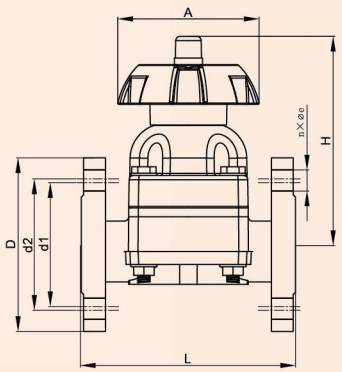
Nominal Diameter	d¢	A	L	I	H
DN15	¢ 20	65	140	18.5	99
DN20	¢ 25	65	142	21	99
DN25	¢ 32	94	176	26	136
DN32	¢ 40	94	184	28	136
DN40	¢ 50	118	245	37	178
DN50	¢ 63	118	258	37	178
DN65	¢ 75	189	343	42	240
DN80	¢ 90	189	365	50	240
DN100	¢ 110	239	530	69	277



D

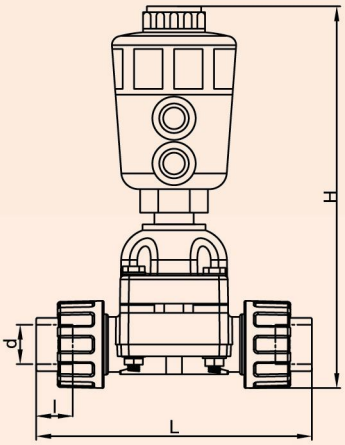
Direct insertion diaphragm valve

Nominal Diameter	d ₵	A	L	I	H
DN15	₵ 20	65	97	16	99
DN20	₵ 25	65	101	18	99
DN25	₵ 32	94	124	22	136
DN32	₵ 40	94	132	26	136
DN40	₵ 50	118	175	27	178
DN50	₵ 63	118	200	32	178
DN65	₵ 75	189	270	44	240
DN80	₵ 90	189	284	50	240
DN100	₵ 110	239	340	61	277



Flange type diaphragm valve

Nominal Diameter	₵	D	A	L	H	d1	d2	n×Φe
DN15	₵ 20	95	65	116	99	60.3	70	4 × Φ14
DN20	₵ 25	105	65	121	99	70	75	4 × Φ14
DN25	₵ 32	115	94	144	136	79	90	4 × Φ14
DN32	₵ 40	140	94	147	136	89	100	4 × Φ18
DN40	₵ 50	150	118	197	178	98	110	4 × Φ18
DN50	₵ 63	165	118	222	178	120	125	4 × Φ18
DN65	₵ 75	185	189	285	240	140	145	4 × Φ18
DN80	₵ 90	200	189	309	240	150	160	8 × Φ18
DN100	₵ 110	220	239	366	277	175	191	8 × Φ18



889 type pneumatic diaphragm valve

Working principle

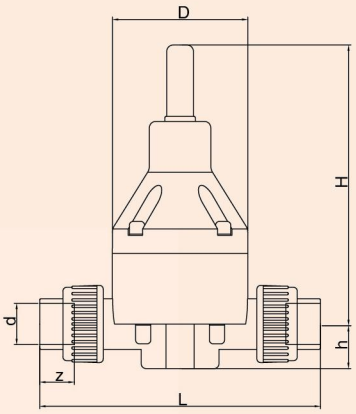
◆ Pneumatic diaphragm valve consists of a piston actuator and a diaphragm valve.

◆ Powered by compressed air at 0.6MPa, the normally closed intake valve opens and automatically resets (closes) when the air is cut off; Normally open shut-off valve opens, and the intake automatically resets (closes); Double acting upper intake closing valve, lower intake opening valve; Simple structure and easy operation.

Technical parameters and performance

Pneumatic actuator parameters		Valve body parameters	
material	PA, Aluminum alloy, stainless steel	body material	UPVC、CPVC、PP、PVDF、ABS
Action form	Normally closed/normally open/double acting	Nominal Diameter	DN15-DN100
Air driven	Compressed air 0.6MPa	nominal pressure	1.0MPa
air connection	GTD40~GTD83/ATD50~ATD88 G1/8"	Diaphragm material	EPDM、FPM、PTEE
	GTD110~GTD350/ATD100~ATD200 G1/4"	Applicable Medium	Water and various corrosive fluids
colour	Orange, black	Connection method	Socket adhesive, flange, thread

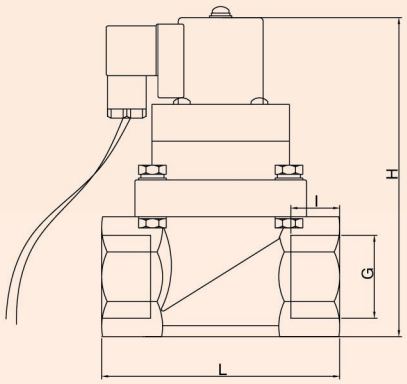
Nominal Diameter	d	I	L	H
DN15	20	21	140	194
DN20	25	21	142	196
DN25	32	26	176	262
DN32	40	28	180	272
DN40	50	37	245	380
DN50	63	37	258	390
DN65	75	42	343	394
DN80	90	50	365	406
DN100	110	60	568	487



pressure reducing valve

Installation and usage instructions		Valve body parameters	
install	The flow direction is consistent with the arrow direction on the valve body	body material	UPVC、PP
Check the valve body pressure	Check the pressure using a neutral medium, such as water.	Nominal diameter	DN15-50
	Detecting pressure<allowable equipment pressure	nominal pressure	1.0MPa
	Detecting pressure<1.5PN	Diaphragm material	PTFE+rubber composite
	Check if the valve is sealed when the pressure is less than PN+5bar.	Connection method	Bonding, hot melting, threading, flanges
setting pressure	Factory default value: Other preset values can also be agreed upon with the manufacturer for 1 bar. The pressure limiting valve must be set under the same environmental conditions as future use. Suggestion for setting: Install a diaphragm sealed pressure gauge before the pressure limiting valve. 1. Remove the protective cover of the adjusting bolt and loosen the bottom locking nut. 2. Rotate the adjusting bolt counterclockwise until the compression spring is clearly felt to be completely released. 3. Start the device and rotate the adjusting bolt clockwise until the desired device pressure is reached. 4. Use a plum blossom wrench to fix the adjusting bolt and tighten the locking nut, then install the protective cover. 5. If necessary, lead sealing can be applied to the adjusting bolt to prevent unauthorized adjustment	Output pressure	1-9bar
		Maintenance and repair	
		maintenance	Normal operation status remains unchanged, with no changes in sealing performance. No abnormal operating noise or vibration, tightening torque of shell bolts. Clean the valve with a damp cloth as needed.
		maintenance	Prepare personal protective equipment as required, collect media safely, and dispose of them in an environmentally friendly manner. Dismantle the valve to ensure that the equipment has been emptied, the equipment is in a pressure free state, the equipment has cooled down, and the equipment will not restart. Remove the valve from the pipeline. If necessary, disassemble the valve and be aware that dead corners in the valve may still contain media.

model	spec	L	H	D	d	z	h
18815	DN15	170	172	82	20	21	27
18820	DN20	170	172	82	25	21	27
18825	DN25	212	202	107	32	26	35
18832	DN32	226	202	107	40	28.5	35
18840	DN40	292	259	148	50	37	58
18850	DN50	305	259	148	63	37	58



solenoid valve

Working principle

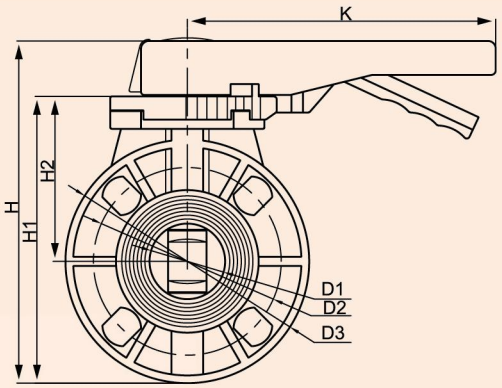
◆ This series of two position two-way anti-corrosion solenoid valves are switch components in automatic control systems, which can be used for the on/off of pipelines using acid and alkali liquids as working media for chemical and electrochemical corrosion. They are widely used for the automation control of various pipelines in industries such as chemical, metallurgical, textile, pharmaceutical, dyeing, brewing, and environmental protection.

◆ UPVC and CPVC are pilot piston structures with high pressure, rapid opening and closing, and excellent performance. All products come standard with low-temperature coils, and the opening and closing frequency should not be too high.

Technical parameters and performance of solenoid valves

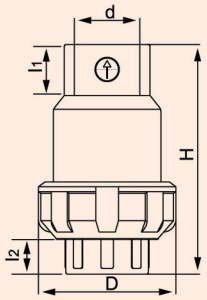
Valve body parameters	
body material	UPVC、CPVC
Nominal diameter	DN15-50
Working pressure	0.3bar~6bar (normally closed type), 0.3bar~5bar (normally open type)
Sealing material	FPM.EPDM
Connection method	Threads
structure	Pilot piston structure
coil	cryogenic coil
working voltage	AC220V DC24V

Nominal Diameter	I	H	L	G
DN15	13	124	74	G1/2"(internal thread)
DN20	16	129	79	G3/4"(internal thread)
DN25	20	139	99	G1"(internal thread)
DN32	20	163	119	G1 1/4"(internal thread)
DN40	26	171	129	G1 1/2"(internal thread)
DN50	29	224	170	G2"(internal thread)

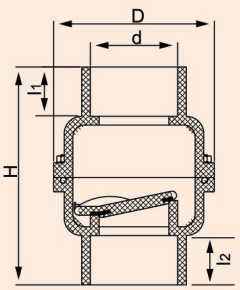


butterfly valve

Nominal Diameter	D1	D2	D3	H	H1	H2	K
DN50	48	125	160	225	145	100	190
DN65	63	145	180	245	155	112	190
DN80	78	160	196	270	172	120	240
DN100	98	180	228	308	194	140	240
DN125	122	210	258	352	223	168	310
DN150	146	240	287	382	239	181	310
DN200	200	295	343	470	300	242	310



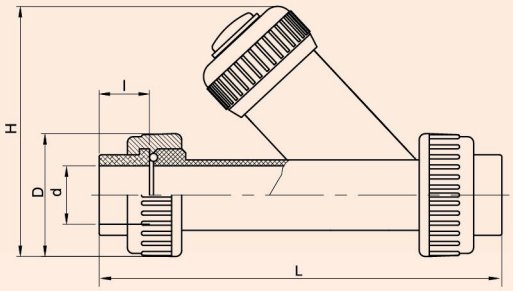
DN15-DN65



DN80-DN150

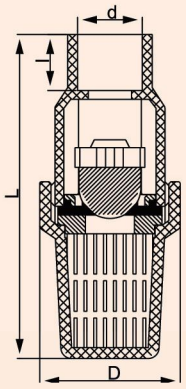
check valve

Nominal Diameter	dΦ	D	H	l1	l2
DN15	Φ20	53	88	20	20
DN20	Φ25	60	108	25.5	25.5
DN25	Φ32	72	124	28	28
DN32	Φ40	83	143	31	31
DN40	Φ50	96	150	34	34
DN50	Φ63	117	169	36	36
DN65	Φ75	146	226	52	52
DN80	Φ90	172	221	53	53
DN100	Φ110	205	264	61	61
DN150	Φ160	282	379	90	90



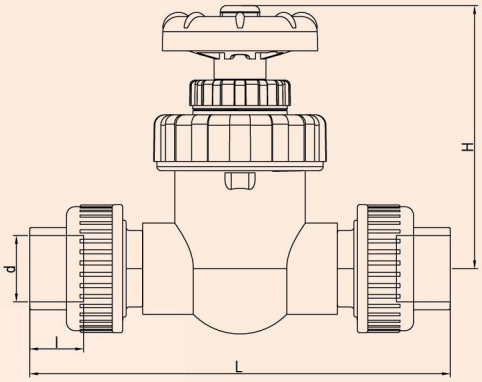
Y-shaped check valve (angle seat one-way valve)

model	spec	L	H	I	d
28615	DN15	184	80	18	20
28620	DN20	187	80	21	25
28625	DN25	205	93	26	32
28632	DN32	252	120	28	40
28640	DN40	271	120	37	50
28650	DN50	305	143	37	63
28665	DN65	378	182	42	75
28680	DN80	440	236	50	90
286100	DN100	565	236	69	110



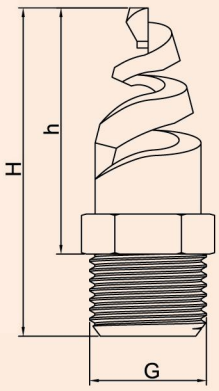
bottom valve

Nominal Diameter	dΦ	D	L	I
DN15	Φ20	53	119	20
DN20	Φ25	60	137.5	25.5
DN25	Φ32	72	162	28
DN32	Φ40	83	182	31
DN40	Φ50	96	203	34
DN50	Φ63	117	233	36
DN65	Φ75	146	302	50
DN80	Φ90	167	327	69
DN100	Φ110	202	406	74
DN150	Φ160	290	445	86.5



Gate valve

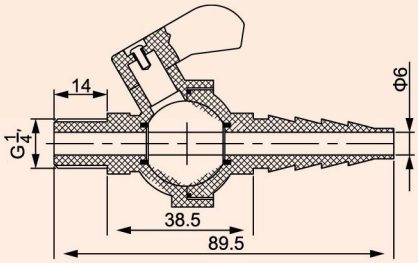
spec	D	I	L	H
DN15	20	21	164	104
DN20	25	21	167	104
DN25	32	26	204	132
DN32	40	28.5	228	132
DN40	50	37	267	162
DN50	63	37	280	175



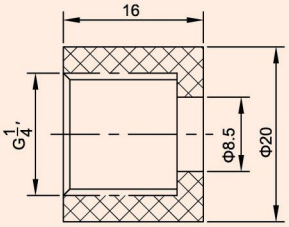
Spiral nozzle

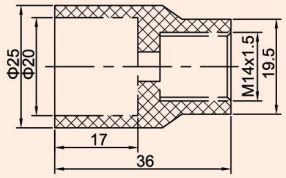
Specification and model	H	h	G	colour	material
2 points	45	35	G1/4"outer thread	White, orange, gray	UPVC、PP、PVDF、SUS316
3 points	45	35	G3/8"outer thread	White, orange, gray	UPVC、PP、PVDF、SUS316
7 points	63	47	G1/2"outer thread	White, orange, gray	UPVC、PP、PVDF、SUS316
6 points	66	52	G3/4"outer thread	White, orange, gray	UPVC、PP、PVDF、SUS316
1 inch	90	68	G1"outer thread	White, orange, gray	UPVC、PP、PVDF、SUS316

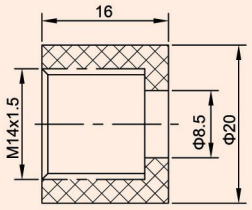
Sampling Valve

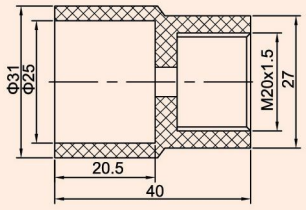


Instrument connector

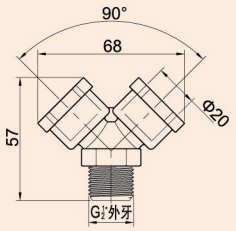


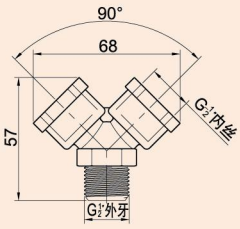


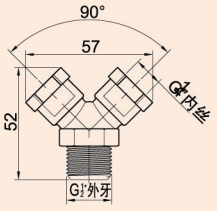




Y-shaped tee







three-way valve

Type 885 Y-shaped diaphragm valve

Working principle

Closing the valve: Connect the control pressure source (water or gas source, pressure equal to or greater than the incoming water pressure) to the control chamber on the diaphragm. The diaphragm pushes the valve seat through the valve stem, thereby cutting off the incoming water and closing the valve.

Open the valve: When the pressure in the upper chamber of the diaphragm is released, the incoming water pushes open the valve stem through its own pressure, and the valve opens to form a through chamber, allowing fluid to pass through.

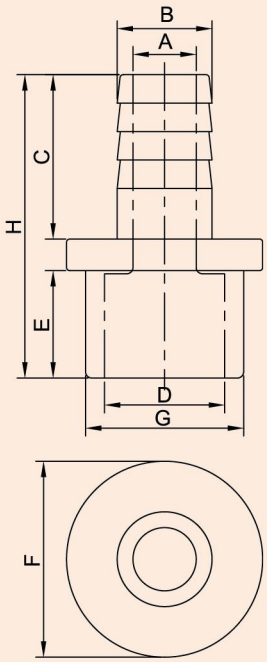
FEATURES

Adopting an upper and lower dual chamber design, the water flow is controlled independently of the fluid chamber. Through the upper and lower pressure source ends, the valve switch can be flexibly controlled to achieve normally open or normally closed at will. There is also more diversity in the selection of pressure sources, which can be hydraulic or pneumatic.

Work pressure: 0.1-0.8MPA
Working temperature: 4-50 ℃
Valve body material: PA, UPVc, caliber: DN15-DN100
Connection method: DN15-DN50 (flexible connection)
DN65-DN100 (flange connection)

Hose connector (threaded type)

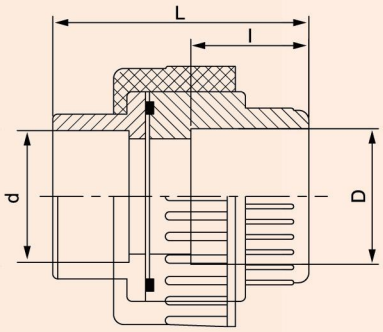
Thread size (BSP outer thread)	Pagoda size (mm)	A	B	C	D	E	F	H	G
G1/2" (20mm)	Φ8	5	8	22	12	13.5	22	44	G1/2"outer thread
	Φ10	6	10	22	12	13.5	22	44	G1/2"outer thread
	Φ12	8	12	25	12	13.5	22	47	G1/2"outer thread
	Φ14	10	14	25	12	13.5	22	48	G1/2"outer thread
	Φ16	12	16	26	15	14	22	49	G1/2"outer thread
G3/4" (25mm)	Φ12	8	12	25	15	14	27	48	G3/4"outer thread
	Φ14	10	14	26	15	14	27	49	G3/4"outer thread
	Φ16	11	16	26	15	14	27	50	G3/4"outer thread
	Φ20	15.5	20	27	19	14	27	51	G3/4"outer thread
G1" (32mm)	Φ16	10	16	27	19	17	34	54	G1"outer thread
	Φ20	14	20	30	19	17	34	57	G1"outer thread
	Φ25	18	25	34	19	17	34	62	G1"outer thread
	Φ30	23	30	35	24	17	34	63	G1"outer thread
G1+1/4" (40mm)	Φ32	23	32	40	27	20	43	71	G1+1/4"outer thread
G1+1/2" (50mm)	Φ40	30	40	44.5	33	21	48	78	G1+1/2"outer thread
G2" (63mm)	Φ50	40	50	50	44	23	60	86	G2"outer thread



Hose connector (socket type)

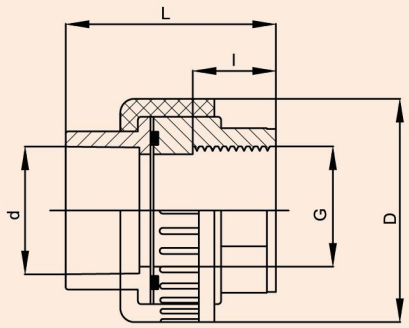
interface size	Pagoda size (mm)	A	B	C	D	E	F	H	G
DN15 (20mm)	Φ8	5	8	22	15	14	26	42	20
	Φ10	6	10	22	15	14	26	42	20
	Φ12	8	12	25	15	14	26	44.5	20
	Φ14	10	14	26	15	14	26	44.5	20
	Φ16	12	16	26	15	14	26	45	20
DN20 (25mm)	Φ12	8	12	25.5	19	17	31	47	25
	Φ14	10	14	26	19	17	31	48	25
	Φ16	11.5	16	27	19	17	31	49	25
	Φ20	14.5	20	27	19	17	31	50	25
DN25 (32mm)	Φ16	10.5	16	27	24	21	39	54	32
	Φ20	14	20	30	24	21	39	57	32
	Φ25	18	25	35	24	21	39	62	32
	Φ30	23	30	36	21	21	39	63	32
DN32 (40mm)	Φ32	23.5	32	40	31	23.5	47	69.5	40
DN40 (50mm)	Φ40	29	40	43	39	27	57	78	50
DN50 (63mm)	Φ50	40	50	50	43	24	66	86	63

loose joint



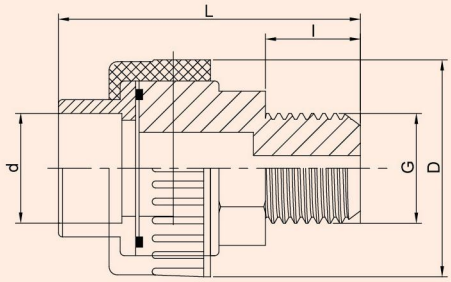
Nominal Diameter	d	D	l	L
DN15	Φ20	45	16	47
DN20	Φ25	53	18	52
DN25	Φ32	62	22	62
DN32	Φ40	73	26	70
DN40	Φ50	84	31	85
DN50	Φ63	104	38	96
DN65	Φ75	127	43	105
DN80	Φ90	151	51	124
DN100	Φ110	192	68	173

Internal thread joint



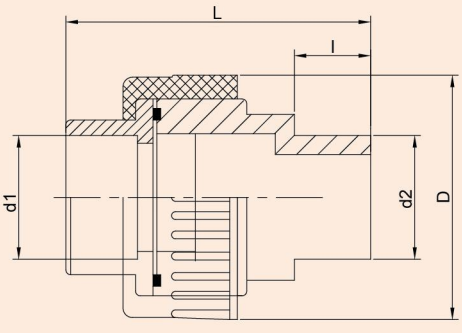
Nominal Diameter	d	G1	D	l	L
DN15	¢ 20	1/2"	45	18	50
DN20	¢ 25	3/4"	53	20	54
DN25	¢ 32	1"	62	24	64
DN32	¢ 40	1+1/4"	73	29	73
DN40	¢ 50	1+1/2"	84	32	88
DN50	¢ 63	G2"	104	40	98

External thread joint



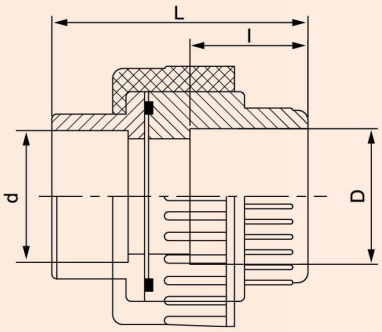
Nominal Diameter	d	D	G	l	L
DN15	Φ20	45	1/2"	16	62.5
DN20	Φ25	53	3/4"	17	65
DN25	Φ32	62	1"	21	79
DN32	Φ40	73	1+1/4"	24	88
DN40	Φ50	84	1+1/2"	26	103
DN50	Φ63	104	G2"	30	112

Plug in connector



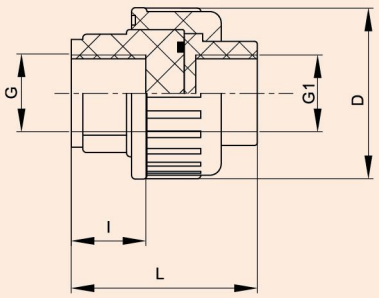
Nominal Diameter	d1/d2	D	l	L
DN15	Φ20	45	16	62.5
DN20	Φ25	53	17	65
DN25	Φ32	62	19	73
DN32	Φ40	73	25	88
DN40	Φ50	84	27	103
DN50	Φ63	104	33	112

Variable diameter joint



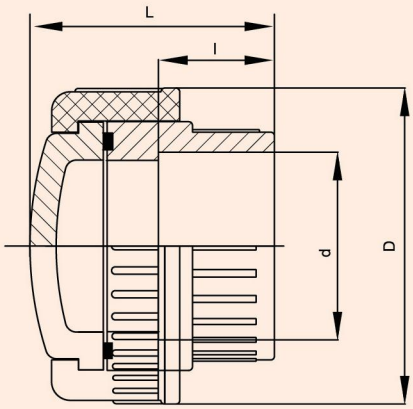
Nominal Diameter	Φ	D	d	l	L
DN15-4×6Flexible hose joint	ϕ20/4*6	25	4×6	16	77
DN15-6×8Flexible hose joint	ϕ20/6*8	25	6×8	16	77
DN15-8×12Flexible hose joint	ϕ20/8*32	25	8×12	16	77
DN20-15	Φ25/20	25	20	18	51
DN25-20	Φ32/25	32	25	22	63
DN32-25	Φ40/32	40	32	26	68
DN40-32	Φ50/40	50	40	31	79
DN50-40	Φ63/50	63	50	39	96
DN65-50	Φ75/63	75	63	43	107
DN40-15	Φ50/25	20	50	15	78

Double inner wire union



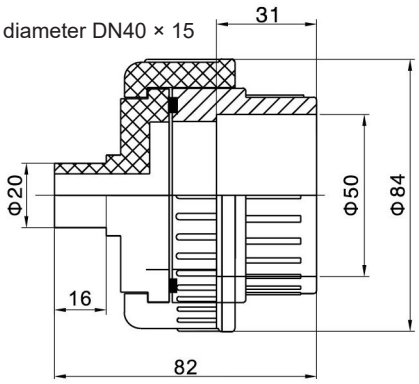
Nominal Diameter	G	G1	D	l	L
DN15	1/2"	1/2"	45	18	50
DN20	3/4"	3/4"	53	20	54
DN25	1"	1"	62	24	64
DN32	1+1/4"	1+1/4"	73	29	73
DN40	1+1/2"	1+1/2"	84	32	88
DN50	G2"	G2"	104	40	98

Articulated pipe cap

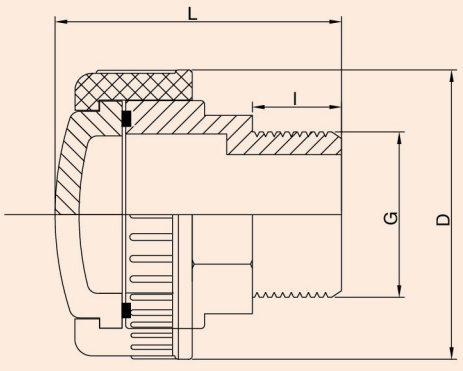


Nominal Diameter	d	D	l	L
DN15	¢ 20	45	16	40
DN20	¢ 25	53	18	42
DN25	¢ 32	62	22	50
DN32	¢ 40	73	26	56
DN40	¢ 50	84	31	65
DN50	¢ 63	104	38	78

Flexible variable diameter DN40 × 15

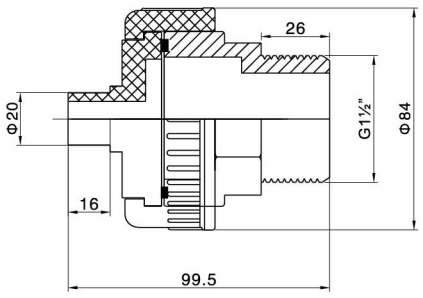


Flexible external thread tube cap

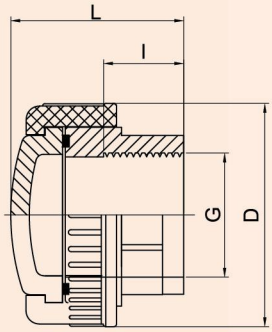


Nominal Diameter	G	D	l	L
DN15	1/2"	45	16	55
DN20	3/4"	53	17	56
DN25	1"	62	19	68
DN32	1+1/4"	73	21	76
DN40	1+1/2"	84	26	83
DN50	2"	104	30	94

Variable diameter of flexible outer thread G1½"×15

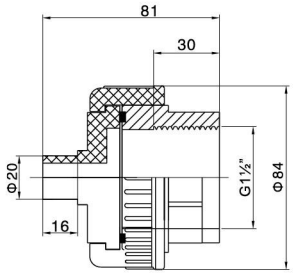


Articulated inner thread cap

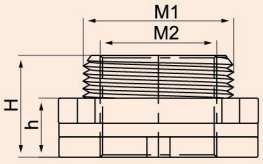


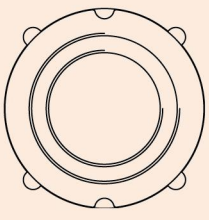
Nominal Diameter	G	D	I	L
DN15	1/2"	45	16	41
DN20	3/4"	53	17	44
DN25	1"	62	21	51
DN32	1+1/4"	73	24	59
DN40	1+1/2"	84	28	66
DN50	G2"	104	30	79

Variable diameter internal wire G1½"×15



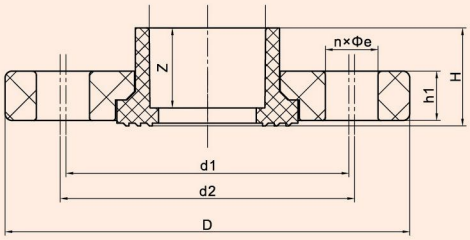
UPVC container interface (water tank joint)





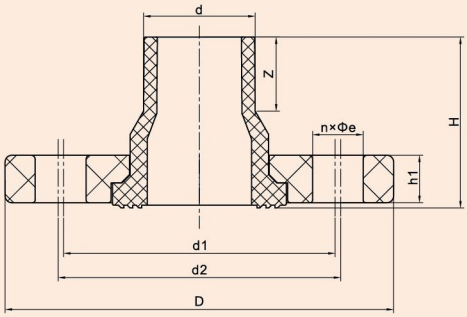
caliber	h (mm)	M1 (mm)	M2 (Undertaking interface mm)	M2 (Internal thread interface mm)	H(mm)	Water tank opening (mm)
1/2" DN15	31	34.5	20	G ½"	54	35
3/4" DN20	48	37.5	25	G¾"	57	38
1" DN25	49	44.5	32	G1"	64	45
1+1/4" DN32	47	64.5	40	G1¼"	90	65
1+1/2" DN40	47	64.5	50	G 1½"	90	65
2" DN50	53	77.5	63	G 2"	103	78
2+1/2" DN65	74	98	75	G 2½"	136	99
3" DN80	75	109	90	G3"	145	110
4" DN100	77	135.5	110	G4"	171	136

Lap Joint



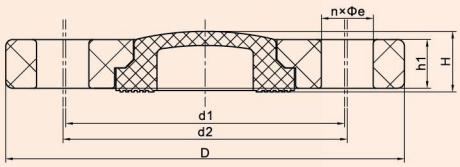
Nominal Diameter	d	H	h1	Z	D	d1	d2	n×Φe
DN15	ϕ 20	25	14	20	95	60.3	70	4 × Φ14
DN20	ϕ 25	28	14	23	105	70	75	4 × Φ14
DN25	ϕ 32	31.5	16	25	115	79	90	4 × Φ14
DN32	ϕ 40	34.5	17.5	28	140	89	100	4 × Φ18
DN40	ϕ 50	38	18	31	150	98	110	4 × Φ18
DN50	ϕ 63	44	20	38	165	120	125	4 × Φ18
DN65	ϕ 75	51	23	44	185	140	145	4 × Φ18
DN80	ϕ 90	64	27	54	200	150	160	8 × Φ18
DN100	ϕ 110	74	28	61	220	175	191	8 × Φ18
DN125	ϕ 140	86	30	72	250	210		8 × Φ18
DN150	ϕ 160	97	31	86	285	240		8 × Φ18
DN200	ϕ 225	129	35	116	341	295		8 × Φ22

Insert flange



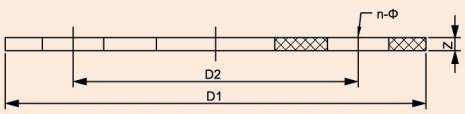
spec	d	H	h1	Z	D	d1	d2	n×Φe
DN15	ϕ 20	46	14	20	95	60.3	70	4 × Φ14
DN20	ϕ 25	50	14	20	105	70	75	4 × Φ14
DN25	ϕ 32	57	16	25	115	79	90	4 × Φ14
DN32	ϕ 40	63	17.5	27	140	89	100	4 × Φ18
DN40	ϕ 50	74	18	32	150	98	110	4 × Φ18
DN50	ϕ 63	82	20	37	165	120	125	4 × Φ18
DN65	ϕ 75	84	23	45	185	140	145	4 × Φ18
DN80	ϕ 90	102	27	50	200	150	160	8 × Φ18
DN100	ϕ 110	117	28	60	220	175	191	8 × Φ18

Flexible blind flange



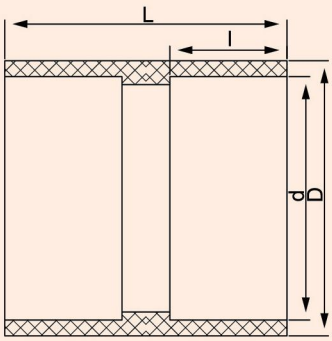
spec	H	h1	D	d1	d2	n×Φ14
DN15	16.5	14	95	60.3	70	4 × Φ14
DN20	18.5	14	105	70	75	4 × Φ14
DN25	21	16	115	79	90	4 × Φ14
DN32	21.5	17.5	140	89	100	4 × Φ18
DN40	23	18	150	98	110	4 × Φ18
DN50	24.5	20	165	120	125	4 × Φ18

flange gasket



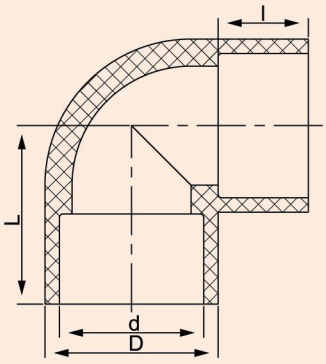
Nominal Diameter	d	D1	D2	Z	n-Φ
DN15	Φ20	95	65	3	4-Φ14
DN20	Φ25	105	75	3	4-Φ14
DN25	Φ32	115	85	3	4-Φ14
DN32	Φ40	140	100	3	4-Φ18
DN40	Φ50	150	110	3	4-Φ18
DN50	Φ63	165	125	3	4-Φ18
DN65	Φ75	185	145	3.5	4-Φ18
DN80	Φ90	200	160	3.5	8-Φ18
DN100	Φ110	220	180	3.5	8-Φ18
DN125	Φ140	250	210	4	8-Φ18
DN150	Φ160	285	240	4	8-Φ18
DN200	Φ225	340	295	4.5	8-Φ22

straight through



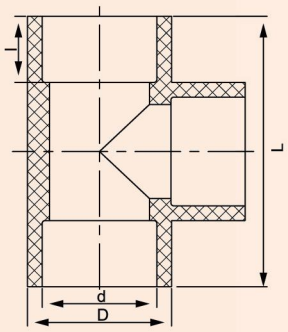
Nominal Diameter	d	D	l	L
DN15	Φ20	27	16	35
DN20	Φ25	32	19	40
DN25	Φ32	40	22	47
DN32	Φ40	50	26	55
DN40	Φ50	61	31	65
DN50	Φ63	75	39	83
DN65	Φ75	90	44	91
DN80	Φ90	108	51	107
DN100	Φ110	133	61	130
DN125	Φ140	161	76	159
DN150	Φ160	189	84	178
DN200	Φ225	252	119	243

90° elbow



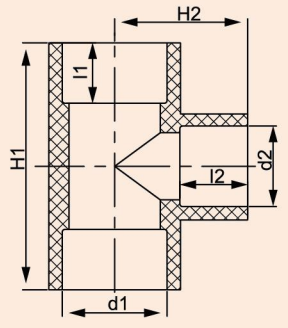
Nominal Diameter	d	D	l	L
DN15	Φ20	27	18	28
DN20	Φ25	32	19	33
DN25	Φ32	40	22	40
DN32	Φ40	50	27	50
DN40	Φ50	60	30	58
DN50	Φ63	75	38	72
DN65	Φ75	90	44	84
DN80	Φ90	107	51	101
DN100	Φ110	129	61	120
DN125	Φ140	162	76	155
DN150	Φ160	184	86	161

three direct links



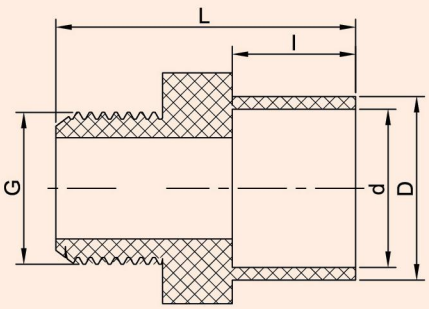
Nominal Diameter	d	D	l	L
DN15	Φ20	27	16	54
DN20	Φ25	33	19	64
DN25	Φ32	41	22	78
DN32	Φ40	50	26	95
DN40	Φ50	61	31	114
DN50	Φ63	75	40	144
DN65	Φ75	90	43	168
DN80	Φ90	106	51	191
DN100	Φ110	129	61	236
DN125	Φ140	161	76	293
DN150	Φ160	184	86	332
DN200	Φ225	252	119	468

reducing tee



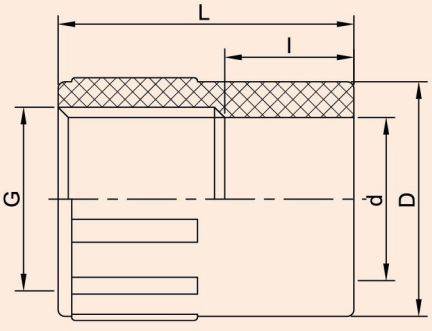
Nominal Diameter	d1/d2	l1	l2	H1	H2
DN40-15	Φ50/20	31	16	103	50
DN40-20	Φ50/25	31	20	103	50
DN40-25	Φ50/32	31	22	103	50
DN50-40	Φ63/50	39	26	115	60
DN50-25	Φ63/32	39	22	115	58
DN50-20	Φ63/25	39	20	115	58
DN50-15	Φ63/20	39	16	106	58
DN100-80	Φ110/90	61	38	222	111
DN100-50	Φ110/63	61	51	192	96
DN125-50	Φ140/63	76	40	226	113

Outer wire joint



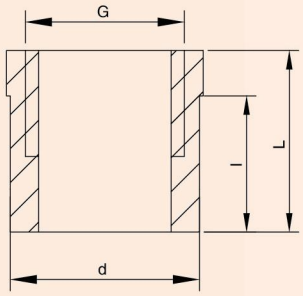
Nominal Diameter	d	D	l	L	G"
DN15	Φ20	25	19	35	1/2"
DN20	Φ25	31	20	45	3/4"
DN25	Φ32	38	25	50	1"
DN32	Φ40	49	28	56	1-1/4"
DN40	Φ50	59	33	65	1-1/2"
DN50	Φ63	74	39	72	2"
DN65	Φ75	87	44	80	2-1/2"
DN80	Φ90	105	51	100	3"
DN100	Φ110	124	61	110	4"

Inner wire joint



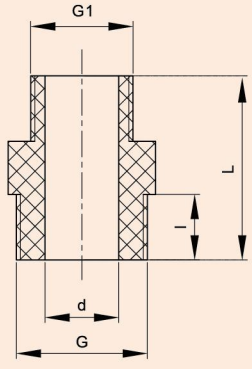
Nominal Diameter	d	D	l	L	G"
DN15	Φ20	27	18	40	1/2"
DN20	Φ25	35	19	43	3/4"
DN25	Φ32	43	23	50	1"
DN32	Φ40	52	26	52	1-1/4"
DN40	Φ50	62	32	60	1-1/2"
DN50	Φ63	76	38	70	2"
DN65	Φ75	87	44	80	2-1/2"
DN80	Φ90	105	51	95	3"
DN100	Φ110	125	61	105	4"

Inner thread repair core



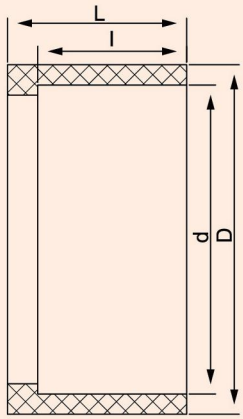
Nominal Diameter	Φ	d	G	l	L
DN15-1/4"	Φ20-1/4"	20	1/4"	14	16
DN15-M14 × 1.5	Φ20-M14 × 1.5	20	M14 × 1.5	14	16
DN15-3/8"	Φ20-3/8"	20	3/8"	14	16
DN20-1/2"	Φ25-1/2"	25	1/2"	18	25
DN25-½	ϕ32-½"	32	½"	21	28
DN25-M20*1.5	ϕ32- M20*1.5	32	M20*1.5	21	28
DN25-3/4"	Φ32-3/4"	32	3/4"	21	28
DN32-1"	Φ40-1"	40	1"	25	32
DN40-1+1/4"	Φ50-1+1/4"	50	1+1/4"	30	36
DN50-1+1/2"	Φ63-1+1/2"	63	1+1/2"	37	43
DN65-2"	ϕ75-2"	75	2"		42

Double headed outer wire joint



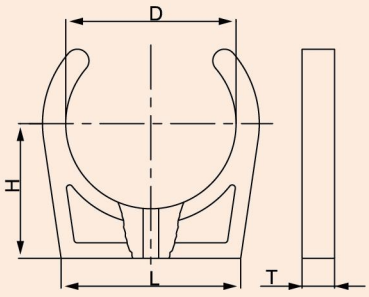
spec	G	G1	d	l	L
DN8	¼"	¼"	6	13	32
DN15	½"	½"	12	15	42
DN20	¾"	¾"	18	16	45
DN20x15	¾"	½"	15	45	18
DN25	1"	1"	22	22	56
DN32	1¼"	1¼"	30	21	58
DN40	1½"	1½"	35	21	58
DN50	2"	2"	44	25	65

Flat shrinkage joint (core repair)



Nominal Diameter	Φ	D	d	l	L
DN20-15	Φ25/20	25	20	17	19
DN25-20	Φ32/25	32	25	20	22
DN32-25	Φ40/32	40	32	23	26
DN40-32	Φ50/40	50	40	27	31
DN50-40	Φ63/50	63	50	32	38
DN65-50	Φ75/63	75	63	39	44
DN80-55	Φ90/75	90	75	45	51
DN100-50	Φ110/63	110	63	39	61
DN100-80	Φ110/90	110	90	52	61
DN125-100	Φ140/110	140	110	62	76
DN150-100	Φ160/110	160	110	62	86
DN150-125	Φ160/140	160	140	77	86
DN200-150	Φ225/160	225	160	87	112

Flat shrinkage joint (core repair)



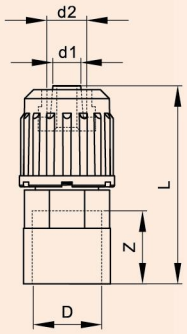
pipe clamp	D	T	H	L
DN15	Φ20	16	35	22
DN20	Φ25	16	37	29
DN25	Φ32	16	41	35
DN32	Φ40	16	45	46
DN40	Φ50	16	50	55
DN50	Φ63	16	57	66
DN65	Φ75	16	62	85
DN80	Φ90	20	70	99
DN100	Φ110	21	87	116

UPVC Plastic Pipe Support Data Sheet

spec	Φ	20	25	32	40	50	63	75	90	110	140	160	225	280	315
Support spacing (M)	20℃	1.2	1.3	1.4	1.6	1.7	1.8	1.9	2.2	2.4	2.5	2.9	3.2	3.4	4.2
	50℃	0.8	1.0	1.1	1.2	1.2	1.3	1.3	1.5	1.8	1.8	2.0	2.2	2.4	3.7

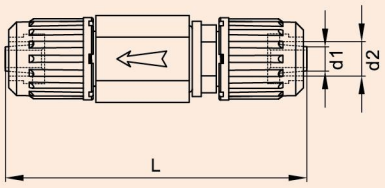
Note: The above data applies to fluid media with a density of 1.0g/cm ³, low vibration, and horizontal pipeline laying. If the vibration is large, the spacing should be appropriately reduced.

Flexible hose adapter



spec	D	Z	L	d1	d2
DN15-4 × 6	20	21	57	4	6
DN15-6 × 8	20	21	57	6	8
DN15-8 × 12	20	21	57	8	12

Hose check valve



spec	L	d1	d2
4 × 6	100	4	6
6 × 8	100	6	8
8 × 12	100	8	12

reducer

Two position three-way valve

Curved joint

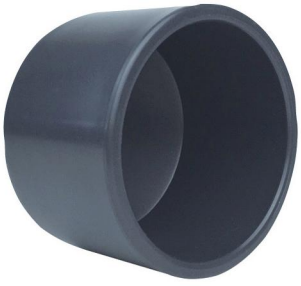
Three way ball valve

Conversion connector

American standard
to national standard

injector

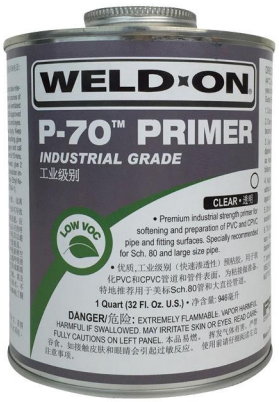
Pipe cap



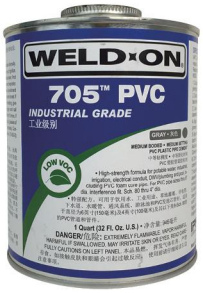
plastic welding rod

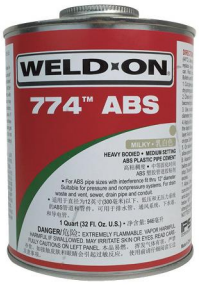
Material: CPVC, UPVC/ABS

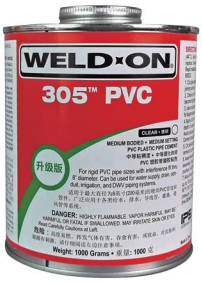
Pre adhesive series



Adhesive series







Common Unit Conversion Table

length		
1 kilometer (km)=0.621 miles (mile)	1 meter (m)=3.281 feet (ft)=1.094 yards (yd)	1 centimeter (cm)=0.394 inches (in)
1 mile=1.609 kilometers (km)	1 foot (ft)=0.348 meters (m)	1 inch (in)=2.54 centimeters (cm)
1 nautical mile=1.852 kilometers (km)	1 yard (yd)=0.9144 meters (m)	1 foot (ft)=12 inches (in)
1 yard (yd)=3 feet (ft)	1 mile=5280 feet (ft)	1 nautical mile=1.156 miles

weight		
1 ton (t)=1000 kilograms (kg)=2205 pounds (lb)	1 kilogram (kg)=2.205 pounds (lb)	1 kilogram (kg)=1 kilogram=2 catties
=1.102 short tons (sh. ton)=0.934 long tons (long. ton)	1 pound (lb)=0.454 kilograms (kg)	1 ounce (oz)=28.350 grams (g)
1 long ton=1.016 tons		

density	
1 kg/m ³ (kg/m ³)=0.001 g/cm ³	1 pound per foot ³ (lb/ft ³)=16.02 kilograms per meter ³ (kg/m ³)
1 pound per inch ³ (lb/in ')=27679.9 kilograms per meter ³ (kg/m ³)	(g/m ³)=0.0624 pounds per foot ³ (lb/ft ³)
1 pound per gallon (lblgal)=99.776 kilograms per meter ³ (kg/m ³)	
1 pound per barrel of petroleum (lb/bbl)=2.853 kilograms per meter (kg/m³)	
1 pound per US gallon (lblgal)=119.826 kilograms per meter ³ (kg/m ³)	API=141.5/15.5 °C specific gravity -131.5
Specific gravity at density of 140/15.5 °C -130	

pressure			
1 megapascal (Mpa)=145 pounds per square inch (psi)	1 pound per square inch (psi)=0.006895 megapascals (Mpa)		
1 bar=0.1 megapascal (Mpa)	=10.2 kg/cm ² (kg/cm ²)	=0.0703 kg/cm ² (kg/cm ²)	=14.503 pounds per square inch (psi)
=10 bar=9.8 atmospheres (atm)	=0.0689 bar=0.068 atmospheres (atm)	=1.0197 kg/cm ² (kg/cm ²)	
1 atmosphere (atm)=0.11325 megapascals (Mpa)	=0.987 atmospheres (atm)		
=14.696 pounds per inch ² (psi)=1.0333 kilograms per centimeter ² (kg/cm ²)		=1.0133 bar	

area		
1 square kilometer (k ㎡)=100 hectares (ha)	1 square meter (㎡)=10.764 square feet (ft ²)	1 acre=100 square meters (㎡)
=247.1 acres=0.386 square miles	1 square mile (mile ²)=2.590 square kilometers (k ㎡)	1 acre=0.4047 hectares (ha)
1 hectare (ha)=10000 square meters (㎡)=2.471 acres (acre)	1 square inch (in ²)=6.452 square centimeters (㎡)	
=40.47 * 10-3 square kilometers (km ²)	1 square foot (ft ²)=0.093 square meters (㎡)	
=4047 square meters (㎡)	1 square yard (yd ²)=0.8361 square meters (㎡)	

Dynamic viscosity		
1 berth (p)=0.1 Pa · s	1 centipoise (cp)=10-3 pascals per second (pa · s)	1 kilogram force second/m2=9.80505 Pa · s
1 pound force second per square foot (1bf · s/ft2)=47.8803 Pa · s		

Common Unit Conversion Table

power		
1 Newton (N)=0.225 pounds force (1bf)=0.102 kilograms force (kgf) 1 kilogram force (kgf)=9.81 Newton (N)		
1 pound force (1bf)=4.45 Newton (N)	1 dyn=10-5 newtons (N)	

temperature		
K (Kelvin degree) 5/9 (° F+459.67)	K=℃ +273.15	n°F=[(n-32)*5/9]℃
N ℃ (Celsius)=(5/9 · n+32) n ° F	1 ° F (Fahrenheit)=5/9 ℃ (temperature difference)	

power	
1 kilogram force · meter/second (kgfm/s)=9.80665 watts (W) 1 meter horsepower (hp)=735.499 watts (W)	
1 card per second (cal/s)=4.1868 watts (W)	1 British thermal unit per hour (Btu/h)=0.293071 watts (w)

thread
NPT thread: Conical pipe thread The tooth profile angle is 60 ° Taper 1:16
PT thread: Conical pipe thread with a profile angle of 55 ° Taper 1:16
RC thread: Conical pipe thread with a profile angle of 55 ° Taper 1:16
G thread: 55 ° non sealed pipe thread with a profile angle of 55 ° The taper is 0

Standard Code		
ISO (International)	GB (China)	DIN (Germany)
NF (France)	JIS (Japan)	GOST (Russia)
ASME (USA)	BS (UK)	

Material Code		
Polyvinyl chloride(PVC)	Chlorinated Polyvinyl Chloride(CPVC)	Polyphenylene ether(PPO)
Polyformaldehyde(POM)	polystyrene(PS)	Polyphenylene Sulfide(PPS)
polyurethane(PU)	polycarbonate(PC)	Polybutylene terephthalate(PBT)
polyethylene(PE)	polyamide(PA)	Polyvinylidene fluoride(PVDF)
polypropylene(PP)	polysulfone(PSF)	Nitrile butadiene styrene copolymer(ABS)
polyvinyl fluoride(ETFE)	Polytetrafluoroethylene(PTFE)	Fluorinated Ethylene Propylene(F46)
Natural rubber(NR)	Perfluoroalkoxy Alkane(PFA)	Fluororubber(FPM)
Nitrile rubber(NBR)	Butyl Rubber(IIR)	Ethylene Propylene Diene Monomer(EPDM)
chloroprene rubber(CR-M)		

Pipeline Size Comparison Table

National standard (DIN)	Nominal Diameter	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
	Pipe OD (mm)	Φ20	Φ25	Φ32	Φ40	Φ50	Φ63	Φ75	Φ90	Φ110	Φ140	Φ160	Φ225	Φ280	Φ315
	inch	1/2"	3/4"	1"	11/4"	11/2"	2"	21/2"	3"	4"	5"	6"	8"	10"	12"
American Standard (ANSI)	Pipe OD (mm)	21.34	26.67	33.4	42.16	48.26	60.33	73.03	88.9	114.3	141.3	168.28	219.08	273.05	323.85
Japanese Standard JIS	Pipe OD (mm)	22	26	32	38	48	60	76	89	114	140	165	216	267	318
British Standard (BS)	Pipe OD (mm)	21.25	26.75	33.5	42.25	48	60	75.5	88.5	114	140	165	219	273	325

Comparison Table of Flange Sizes

DIN PN10 \ JIS 10K \ ANSI 150LBS flange size comparison table															
size		1/2"	3/4"	1"	11/4"	11/2"	2"	21/2"	3"	4"	5"	6"	8"	10"	12"
Socket diameter	DIN	20	25	32	40	50	63	75	90	110	140	160	225	250	315
	ANSI	21.3	26.7	33.4	42.1	48.2	60.3	73	88.9	114.3	141.3	168.3	219.1	273.1	323.9
	JIS	22	26	32	38	48	60	76	89	114	140	165	216	267	318
Screw hole distance	DIN	65	75	85	100	110	125	145	160	180	210	240	295	350	400
	ANSI	60.3	70	79	89	98	121	140	152	191	215.9	241	298	362	432
	JIS	70	75	90	100	105	120	140	150	175	210	240	290	355	400
Number of screw holes/ diameter	DIN	4-14			4-18				8-18			8-23		12-23	
	ANSI	4-16					4-19			8-19	8-22			12-24	12-25
	JIS	4-15		4-19					8-19		8-23		12-23	12-25	16-25
Outer diameter of flange	DIN	95	105	115	140	150	165	185	200	220	250	285	340	396	445
	ANSI	89	98	108	117	127	152	178	191	229	254	284	343	406	481
	JIS	95	100	125	135	140	155	175	185	210	250	280	330	400	445

Remarks: DIN (National Standard/German Standard), ANSI (American Standard), JIS (Japanese Standard)

Filter accuracy comparison table

mesh	micron(μm)	mesh	micron(μm)	mesh	micron(μm)	mesh	micron(μm)
2	8000	28	600	100	150	250	58
3	6700	30	550	115	125	270	53
4	4750	32	500	120	120	300	48
5	4000	35	425	125	115	325	45
6	3350	40	380	130	113	400	38
7	2800	42	355	140	109	500	25
8	2360	45	325	150	106	600	23
10	1700	48	300	160	96	800	18
12	1400	50	270	170	90	1000	13
14	1180	60	250	175	86	1340	10
16	1000	65	230	180	80	2000	6.5
18	880	70	212	200	75	5000	2.6
20	830	80	180	230	62	8000	1.6
24	700	90	160	240	61	10000	1.3

Note: 1mm=1000 μ m

Volume conversion

1 cubic meter (m3)=1000 liters (L)=35.315 cubic feet (ft3)=6.29 barrels (bbl)
1 cubic foot (ft3)=0.0283 cubic meters (m3)=28.31 liters (L)
1 barrel (bbl)=0.159 cubic meters (m3)=42 US gallons (gal)
1 gallon (gal)=4.546 liters (L)
1 Meiji ear (gi)=0.118 liters (L)
1 US pint (pt)=0.473 liters (L)
1 US quart (qt)=0.946 liters (L)
1 US gallon (gal)=3.785 liters (L)

Flow Rate

1 gallon 1 minute (GPM)=0.272m ³/h=272L/h=4.53L/min

General chemical resistance of raw materials and sealing materials

Raw material name	abbreviation	General chemical resistance	Maximum operating temperature	
			long period of time	short time
polyvinyl chloride	PVC	Can resist general acidic, alkaline, and oxidizing solutions, but can be corroded by aromatic agents, hydrocarbons, ketones, esters, and other chemical substances.	55°C	60°C
CPVC	CPVC	Its physical properties are similar to hard PVC, but it has better chemical corrosion resistance, high temperature resistance, and mechanical properties than PVC, making it particularly suitable for the chlor alkali chemical industry.	95°C	100°C
Polyvinylidene fluoride	PVDF	It has good high temperature resistance, can resist strong acids, strong bases, and organic chemicals, and is almost suitable for any fluid, but it will be corroded by sulfuric acid gas and strong alkaline ammonia.	140°C	150°C
polypropylene	PP	Suitable for acidic and alkaline fluids, not suitable for strong acids such as concentrated nitric acid and chromic acid mixtures, but can be corroded by chlorine containing solvents, aliphatic and other chemicals.	90°C	100°C
Acrylic nitrile butadiene styrene resin	ABS	Can resist alkalinity, dilute organic acids, inorganic acids, and fatty acids, but can be corroded by aromatic and ketone ether compounds. Its anti-corrosion performance is average, and it is prone to aging under ultraviolet radiation.	60°C	70°C
Teflon (polytetrafluoroethylene)	PTFE	Commonly known as the plastic king, it has superior corrosion resistance and will not dissolve or change in general solvent media. It will be corroded by high-temperature molten alkali metal fluorine and chlorine trifluoride.	250°C	350°C
EPDM rubber	EPDM	Compared with ketones and esters, EPDM has excellent ozone resistance, chemical resistance, acid and alkali resistance, but cannot resist aliphatic compounds.	90°C	120°C
VITON	FPM	Among rubber products, FPM has the best chemical resistance, with good resistance to strong oxidizing acids such as concentrated sulfuric acid and nitric acid. In addition, FPM also has good chemical resistance to aliphatic, aromatic, and oil compounds; But it will be corroded by ketones, ammonia, and concentrated sodium hydroxide.	150°C	200°C
Nitrile rubber	NBR	Has good chemical resistance to petroleum and oils, but is not suitable for oxidizing media.	90°C	120°C
Natural rubber	NR	Good elasticity and can be used for general drinking water, but its chemical resistance is the worst among all rubber types and is not suitable for oxidizing media. Mostly used for tires, shoe materials, etc	60°C	90°C

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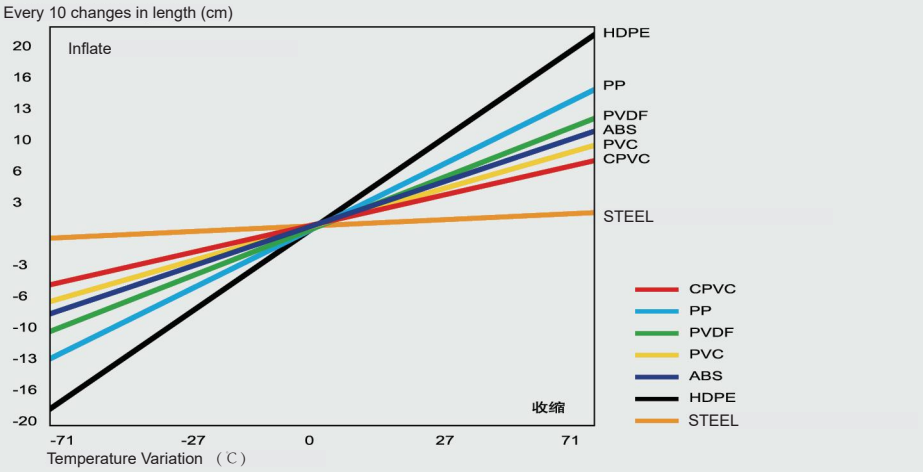
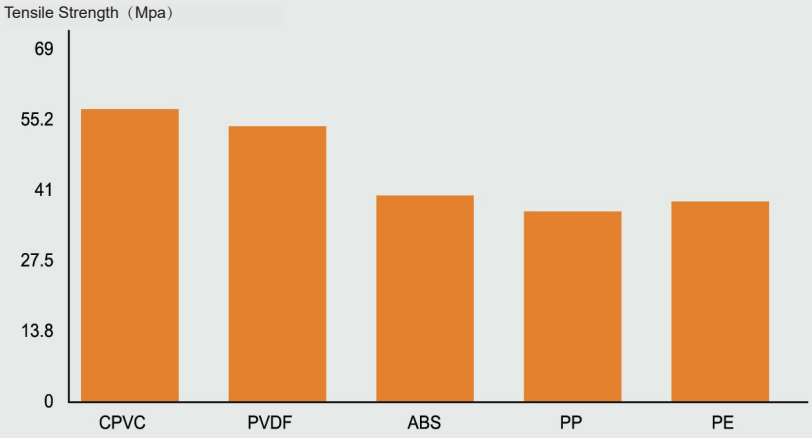
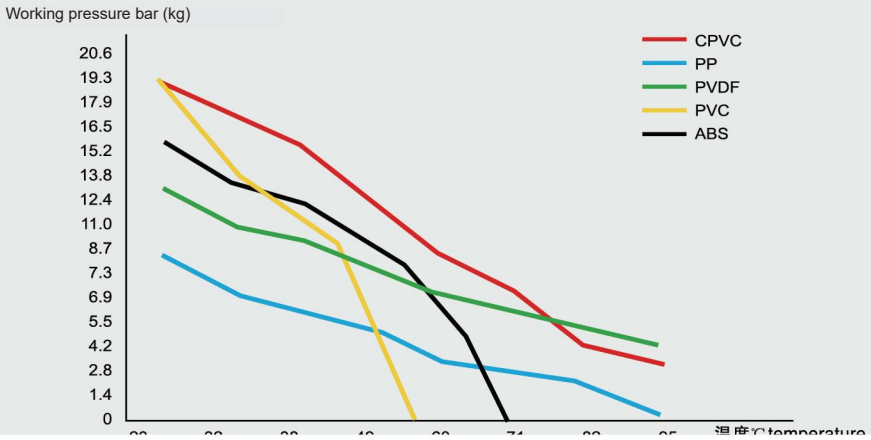
Comparison diagram of thermal expansion of pipeline system



Mechanical properties of commonly used pipelines



Mechanical properties of commonly used pipelines



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济南润伟自动化有限公司
JiNan RunWay Automation Ltd.

联系人：刘小姐
电话：86 531 88893182　18766159620
电子邮件：info@cnrwflow.com
网址：www.cnrwflow.com