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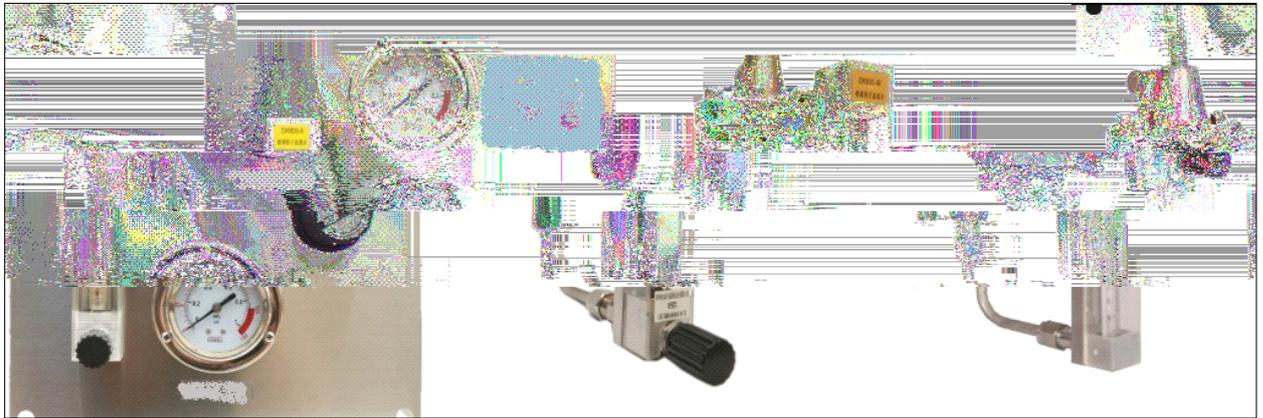
S - a a (G a a a)

S a

This purge sets are composed of metal tube rotameters or glass tube rotameters with constant flow valves, which can be used for the measurement and keep flow rate of gases or liquids constant output.

Float flowmeter featured with safe and reliable, measuring precise and steady, so that this series purge sets keep flow rates output constant even when the supply or load pressure changes, which can be widely used for the transmitters cleaning among the industries of petroleum processing, chemical, ethylene, fertilizer, steel, chemical fiber and textile and so on, also can be used among the processing control of differential pressure level measurement.

The design of this series products can be fulfill of the industrial control requirements, installation applicable condition also can be fulfill of the requirements of instrument measuring technology.



F a

- single-path, two-path, multipath (optional);
- single meter installation, panel mounting, cabinet installation (optional);
- 1/4 NPT, swagelok, screw, flange connection (optional);
- 6mm, 8mm, 10mm, 15mm, 25mm pipeline;
- Switch signal output, 4-20mA signal output (optional);
- Metal structure, simplicity, hardness, beauty;
- Can test processing temperature below 200 °C;
- Can test processing pressure below 6.4MPa;
- Flowrate, pressure (optional) indicate on-site;
- Adopts to our company LZ series float flowmeter;
- Precision micro needle valves are optional, convenient, flexible, applicable for flowrate field adjustment.

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Fa :86-519-85505269,86-519-85503588-8008 H :// . - .c

Learn from the measuring structure diagram(eg:constant inlet pressure) can know that:

The force upward elastic membrane is:
 P_2A+P_1a _____ (1)

The force upward elastic membrane is:
 P_3A+P_2a+F _____ (2)

When the pressure is in balance,means that (1)=(2)

$P_2A+P_1a=P_3A+P_2a+F$ _____ (3)

As the differential pressure of pressure regulator membrane P2-P3,we can get the equation as following:

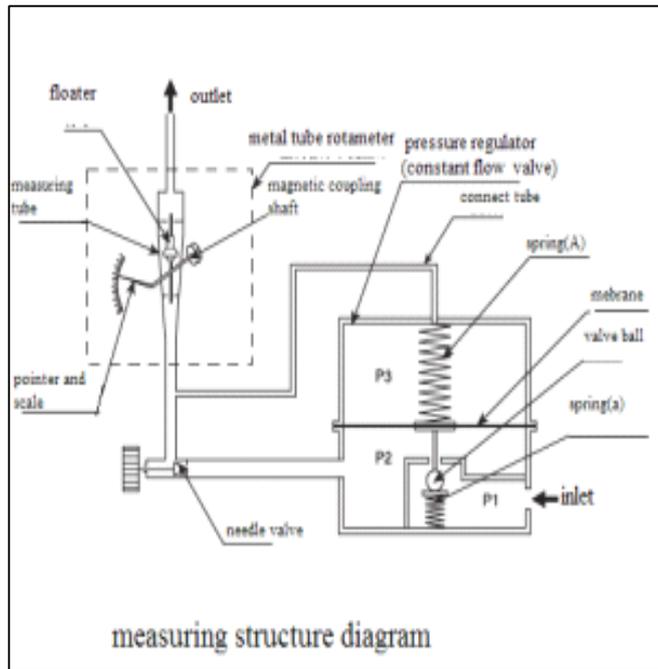
$P_2-P_3=F/A-a/A(P_1-P_2)$ _____ (4)

Because of $a < A$,the $a/A(P_1-P_2)$ can be negligible,as F and A are constant value,so:

$C(\text{constant value})=P_2-P_3$

When the measuring media is not compressed liquid,RE pressure regulator can be applicable for the outlet pressure changes.Said for (4),as P_1 is constant, P_3 is variational,when P_3 change to: P_3+
 P , P_2 change to: $P_2+ P$,so that:

$C(\text{constant value})=P_2-P_3$



T c ca Pa a

Meter T pe	LZB(equip with glass tube float flowmeter)	LZZ(equip with metal tube float flowmeter)
Measuring range(100%valve)		
Water:20	3-100l/h	25-4000l/h
Air:0.1MPa,20	50-3400l/h	0.7-80m ³ /h
Measuring range ratio	10:1	10:1
Accurac grade	4	1.5
Flow scale	Actual flow scale	Actual flow scale
Medium pressure	Max. 1.0MPa	Max.6.4MPa(special demand can order)
Medium temperature	-20 100	-20 200
Ambient temperature	-20 60	-20 60
Contact medium pressure	304,316	304,316
Bod	Plastic,PVC	Cast aluminium,epox resin coating
Process connection		
Swagelok	6mm, 8mm, 10mm	6mm, 8mm, 10mm
Screw	1/4"NPT,1/2"NPT	1/4"NPT,1/2"NPT
Flange	1/2"ANSI 150lb,DIN2501,HG,GB	1/2"ANSI 150lb,DIN2501,HG,GB
Special	According to users demand	According to users demand



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Calibration Conditions: Water 20 Air:20 0.1013MPa(abs),actual medium measuring range will change according to conditions.

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Tab 1

No.	Diameter of valve central spindle	Water l/h(100%)	Air l/h(100%)	Pressure loss(kPa)
QF005	1.0	—	50	1.2
QF010	1.0	3	100	1.4
QF015	1.0	5	150	1.5
QF040	2.5	10	400	1.8
QF080	2.5	25	800	3.5
QF125	2.5	40	1250	6.5
QF200	2.5	60	2000	13.0
QF300	2.5	80	2500	23.5
QF340	4.5	100	3400	40.0

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Tab 2

DN	No.	Water l/h(100%)	Air l/h(100%)	Pressure loss (kPa)
15	QF15.1	25	0.7	1.5
	QF15.2	40	1.0	1.5
	QF15.3	60	1.5	1.5
	QF15.4	100	2.2	1.5
	QF15.5	160	3.6	1.5
	QF15.6	250	5.5	3.0
	QF15.7	400	10	3.0
	QF15.8	630	14	3.5
25	QF25.0	630	14	1.5
	QF25.1	1000	22	1.5
	QF25.2	1600	35	1.5
	QF25.3	2500	50	3.0
	QF25.4	4000	80	3.5

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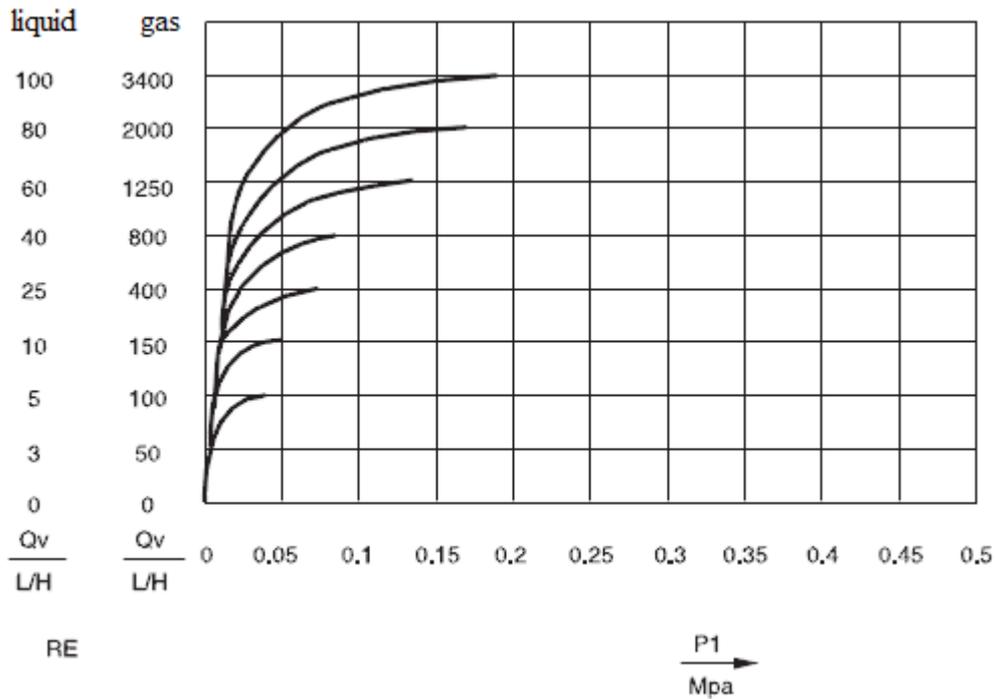


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E RE a RA c a a

Constant flow value	RE	RA
Applicable conditions	Constant inlet pressure change P1	Constant outlet pressure change P2
Medium state	Liquid or gas	Liquid or gas
Medium temperature		
Standard	80	80
Special	150	150
Medium pressure		
Standard	1.0MPa	1.0MPa
Special	6.4MPa(changeable according to demand)	6.4MPa(changeable according to demand)
Controllable pressure range	0.02-0.5MPa	
Differential pressure	0.02-0.045MPa	
Control accuracy	4.0%(equip with glass tube float flowmeter)	4.0%(equip with glass tube float flowmeter)
	1.5%(equip with metal tube float flowmeter)	1.5%(equip with metal tube float flowmeter)
Min. working pressure	0.005MPa(see curve table)	0.005MPa(see curve table)
Differential pressure under min.working pressure	0.002-0.004MPa(see curve table)	0.003-0.005MPa(see curve table)

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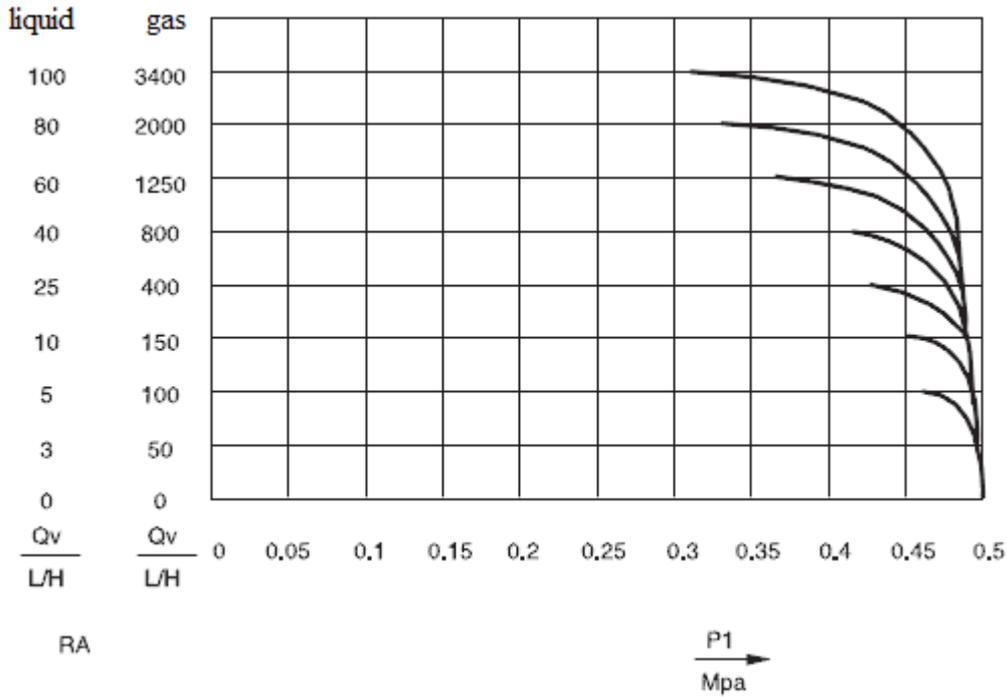
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RA

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RA

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Mpa

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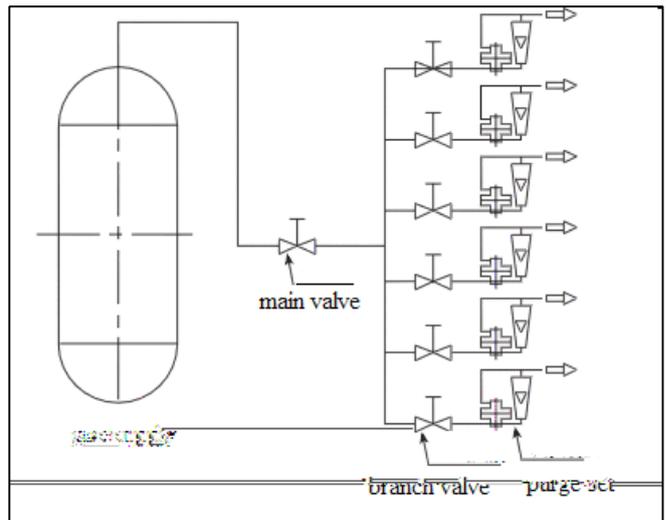
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As shown to the right: According to needs separate the main pipeline supplied gas into man branches. When close or adjust somen of branches gas flow can cause the change of suppl gas pressure in main pipeline. The single-path purge set fixed in branch can measure flow precisel and keep the output flow constantl .

Recommended products model:

LZB-()DK/RE ... Equip with glass tube flowmeter purge set

LZZ-()/RE ... Equip with metal tube flowmeter purge set



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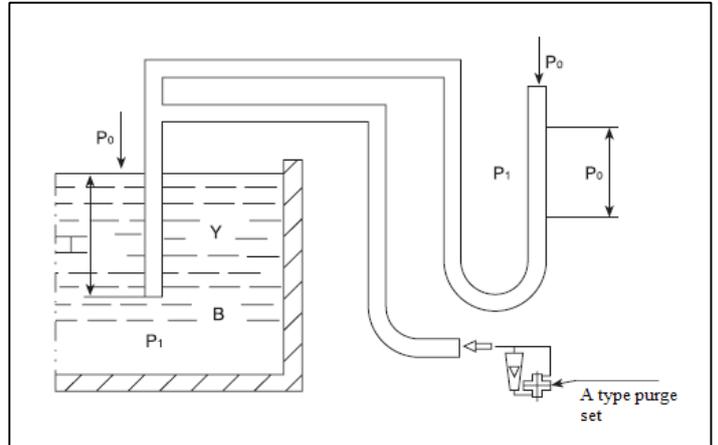
As shown to the right: when A with constant flow gas, the gas will discharge the medium insert in liquid pipeline and form into steady bubble, meanwhile the pressure between pipe A and B will be equal with liquid pressure on port B.

If the pressure of B is P_1 , air pressure is P_0 ,
 So: $P_1 - P_0 = \rho h$, meanwhile
 $P_1 = \rho h + P_0$, so
 $P_1 - P_0 = \rho h = \rho P$

So on the condition of knowing medium density measure P with differential pressure transmitter or pressure meter, then can measure the liquid level h .

Recommended products model:

- LZB-()DK/RA... Equip with glass tube flowmeter purge set
- LZZ-()RA ... Equip with metal tube flowmeter purge set



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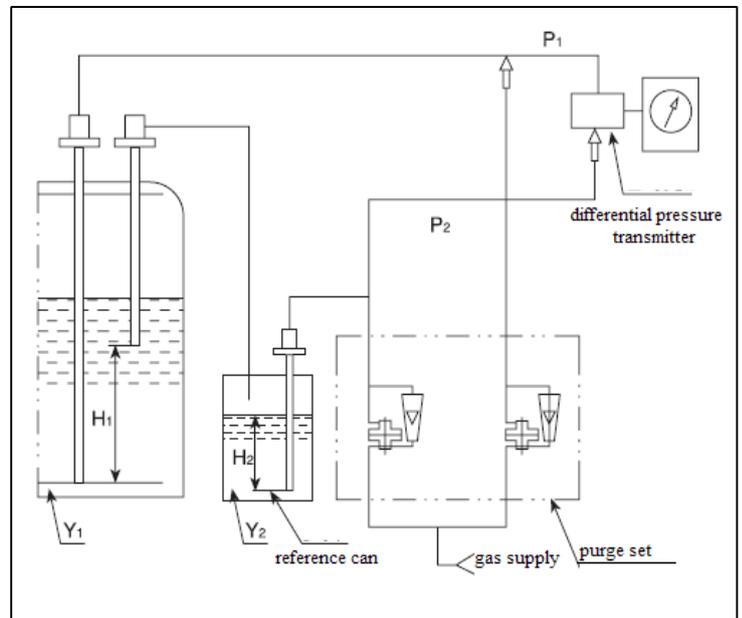
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As shown to the right: If we have known the measuring medium liquid level H_1 and reference medium liquid level H_2 , also know reference medium density ρ_2 , measure differential pressure with differential pressure transmitter, then can measure the medium density ρ_1 .

Recommended products model:

- LZB-()DK/RA ... Equip with glass tube flowmeter purge set
- LZZ-()RA ... Equip with metal tube flowmeter purge set



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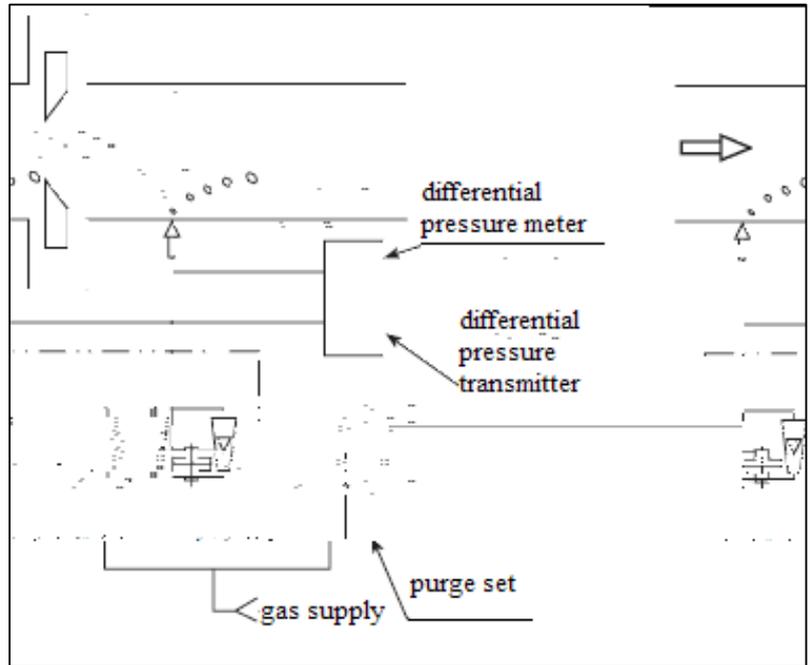
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When measure corrosive liquid or liquid with solid particle or gas flow with dust, the lead pressure capillary may be clogged. Adopt with dual-circuits purge set to wash the two pressure ports, which can make sure the solid particle or dust will not clog the pressure port or lead pressure tube.

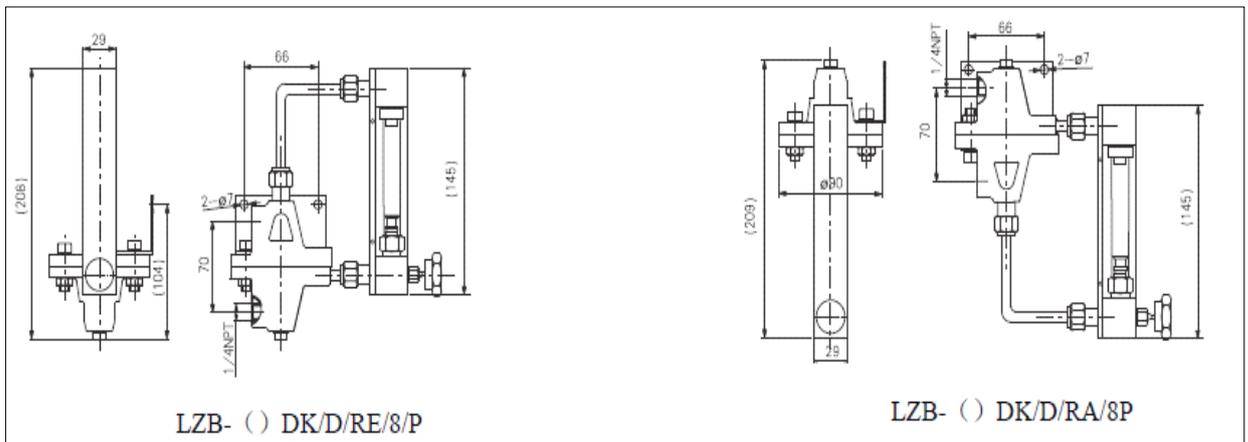
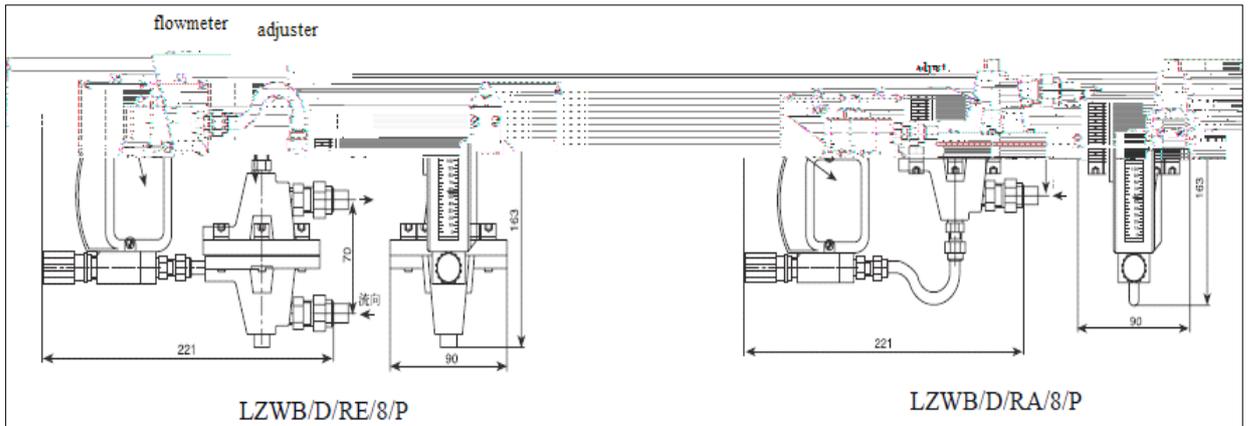
Recommended products model:

LZB-()DK/RE ... Equip with glass tube flowmeter purge set

LZZ-()/RE ... Equip with metal tube flowmeter purge set



O a S



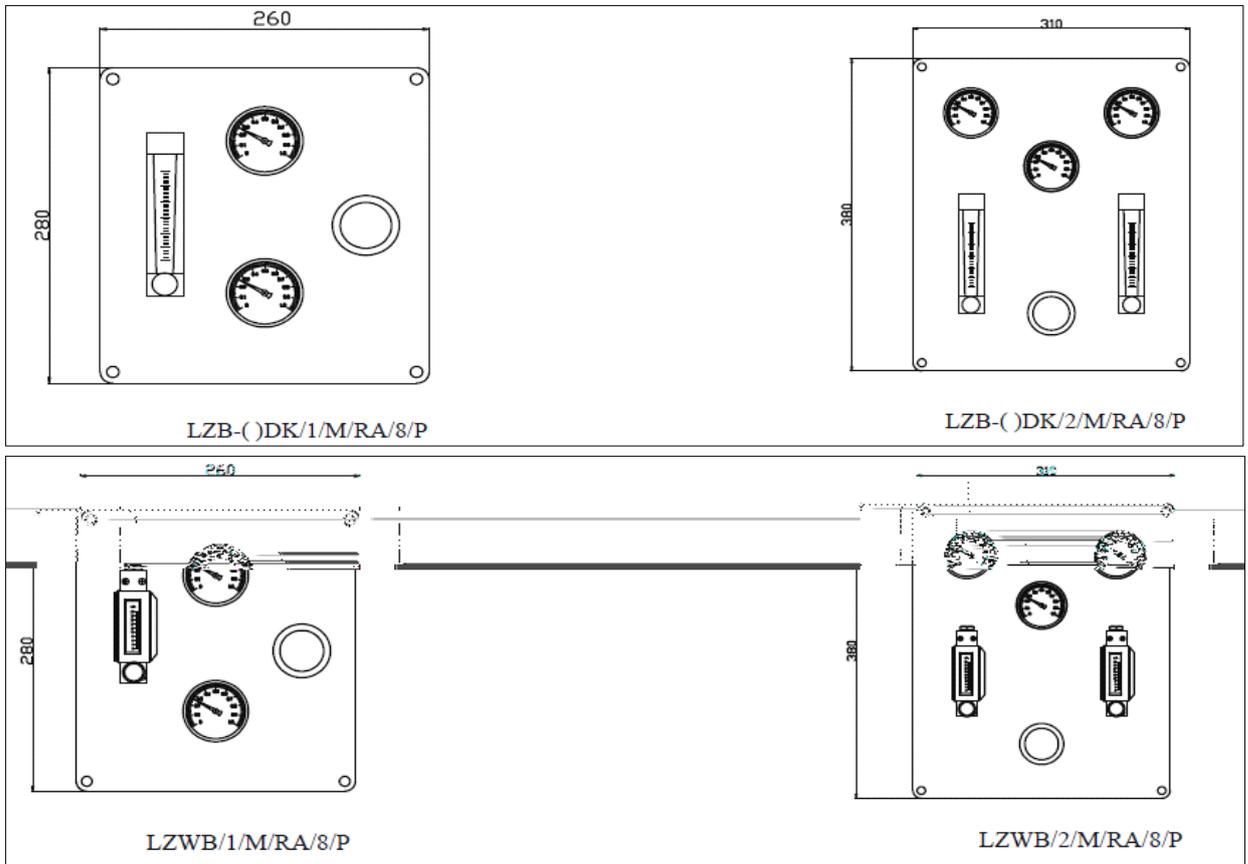
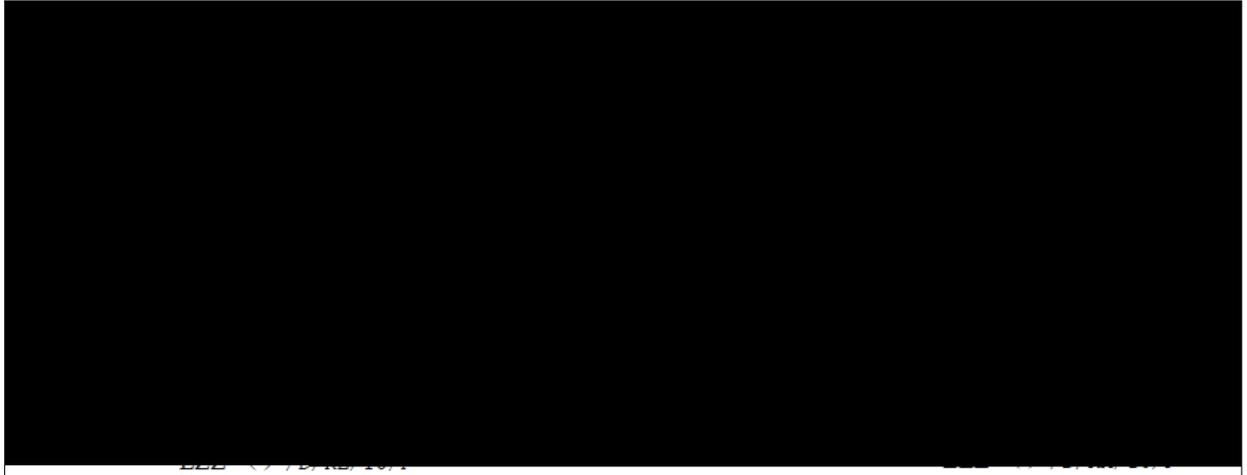
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- Please instal purge set in proper position,to make sure that debug,clean and repair convenientl .
- Because of instal magnetic coupling transfer s stem in purge set floater,to make sure that the disturbing magnetic field from other equipment during operation will not influence the flowmeter measuring result.
- When instal,please add fixed support in proper position in order to keep the purge set stead .
- Install si e shall not exceed the given si e more or less,to avoid the pressure from stretch or



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compress work in purge set.

- When there are iron magnetic particles in liquid medium,must filter the magnetic particles before installing purge set.
- Must make sure the flow direction of medium same as the requirement of flow purge set,when instal flowmeter please close all of the fine-tune needle valves.
- Before operation,please empt and clean pipeline to avoid impact force,shall open valve slowl adjust to working pressure,shall change flowrate from adjust open of valves,avoid impact force to floater which can cause measuring parts damage.

T S c

LZ series purge set	
1.Flowmeter model:LZ	
2.Class model	
B	Equip with glass tube flowmeter(select DK series in general)
Z	Equip with metal tube flowmeter
WB	Equip with micro flow metal tube flowmeter
3.Purging form(If one meter,this code shall not select)	
1	Single-wa purge
2	Double-wa purge
3	Multi-wa purge(Special demand can order)
4.Instal t pe	
D	Single meter t pe
M	Faceplate t pe
5.Pressure adjustment	
RE	Inlet pressure adjustment
RA	Outlet pressure adjustment
6.Procedure connection	
F	Flange connction
S	Screw connection
6	6mm sleeve chuck
8	8mm sleeve chuck
10	10mm sleeve chuck
Others	According to customers' demand
7.Materials	
P	304
R	316
others	According to bu ers' demand
8.Others	
L	With pressure indicator
G	With magnetic filter

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