



川 天

# 川天燃气输配装备选型手册

Leshan Chuantian Gas Equipment Co.,Ltd.

专注清洁能源 铸造民族品牌

Focus Clean Energy, Casting National Brands



## Company Introduction

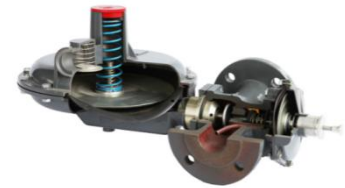
Leshan Chuantian Gas Equipment Co.,Ltd. is located in Leshan industry district, Sichuan province, with over 30 years experiences at gas equipment field and area over 40000 m<sup>2</sup> plant. We have more than 280 workers and 80 technicians. With the professional technical research capability, Chuantian company is specialized in design, manufacturing, sale of gas regulator equipment, pry-mounted station, LNG gas station, LNG bottle group station, CNG pressure reducing station, gas regulator, security protect device, gas purifying equipment, heat transfer equipment.

Our company own D1,D2 class pressure vessel design manufacturing license, A class element combination equipment manufacturing license, A2 class security accessories and protect device manufacturing license, GC2 pressure pipeline installation modification maintenance license issued by State Bureau of Quality Technical Supervision. The company has already got the ISO9001:2008 Quality Management System Certification, ISO14001:2004 Environment Management System Certification, OHSAS18001-2007 Occupational Health and Safety Management System Certification, 3 Patents for Invention. Chuantian is regarded as National High-tech enterprises, Sichuan Intellectual Property Right Pilot enterprises, Sichuan Enterprise Technical Centre, and award Sichuan Famous Brand Products, Sichuan Famous Trademark.

Our sale network spread all over the country and exporting to abroad. We are high quality supplier of China National Petroleum Corporation, China Petroleum & Chemical Corporation, China Resources Gas, PetroChina Kunlun Gas Ltd, Shenzhen Gas Corporation Ltd, Chengdu City Gas, Chongqing Gas Corporation Ltd. As good quality and service to became each gas group's training base for regulator equipment care and maintenance, set up good industry brand position.

## RTZ- FQD Series Regulator

RTZ-FQD series regulator is spring loaded direct acting middle and low pressure regulator, it is applicable to small and middle size users like civilian, residence, hotel, restaurant, it also can be used for low pressure gas fired boiler and small gas direct-fired machine.

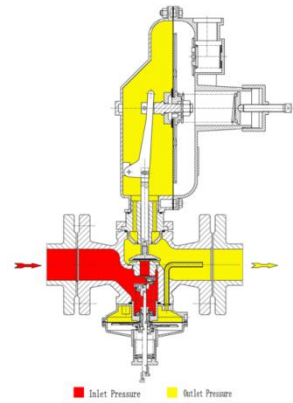


### Key Benefits

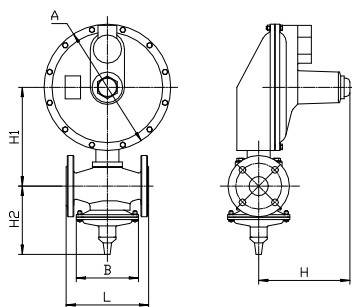
- Modular Structure Design
- Overpressure Automatic Shut-off
- With Pilot, Outlet Pressure Can Reach 0.1 MPa
- Easy Installation and Adjustment, Convenient Maintenance
- Online Maintenance

### Main Technical Characteristics

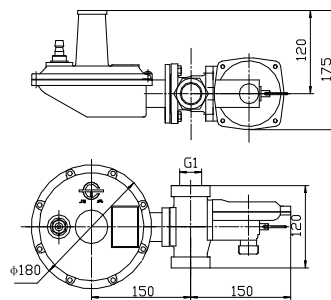
- Maximum Inlet Pressure: 0.4MPa
- Outlet Pressure Range: 1-10KPa/1-30KPa (only 50FQD)
- Accuracy Class: AC10
- Lock-up Pressure Class: SG15
- Working Temperature: -19 ~ +60°C
- Specs: DN25, DN40, DN50



### Structure Shape and Size



RTZ- $\times\times$ /0.4FQD



RTZ-25/0.4QD

TYPE	L	A	B	H <sub>1</sub>	H <sub>2</sub>	H
RTZ-25/0.4QD	120	180	116	150	150	123
RTZ-25/0.4FQD	185	180	116	150	150	123
RTZ-40/0.4FQD	222	225	116	160	150	130
RTZ-50/0.4FQD	215	325	135	250	188	176



Type	Spring Number	Range(KPa)	Color	Usage
25QD/25FQD	QD1002020025082	2<P2≤5	Blue	Spring Adjusting
	QD10025020025082	5<P2≤10	Red	
40FQD	FQL10030365058	2<P2≤5	Red	
	FQL100350365100	5<P2≤10	Black	
25QD/25FQD/40FQD	QT10012014040	3.5<Pt≤7.5	Red	Spring Cut Off
	QT10015013037	7.5<Pt≤16	Black	
50FQD	FQD1004045160	2<P2≤5	Gray	Spring Adjusting
	FQD10045045160	5<P2≤7.5	Yellow	
	FQD1005045160	7.5<P2≤10	Silver	
	FQD10055045160	10<P2≤15	Green	
	FQD1006045160	15<P2≤18	Black	
	FQD10065045160	18<P2≤30	Red	
	QDB10025025060	3.5<Pt≤8	Yellow	Spring Cut Off
	QDB1003025060	8<Pt≤16	Silver	
	QDB10035025060	16<Pt≤36	Red	

### Flowmeter

DN25					
P2 (KPa)	P1 (MPa)				
	0.05	0.1	0.2	0.3	0.4
1.5	18	26	40	53	65
2.5	20	26	42	53	65
3	22	30	45	58	70
5	22	30	45	58	70
10	23	32	45	58	70
DN40					
P2 (KPa)	P1 (MPa)				
	0.05	0.1	0.2	0.3	0.4
1.5	70	106	150	205	250
2.5	78	112	150	208	260
3	78	112	150	208	270
5	78	112	140	208	270
10	78	112	140	208	270
DN50					
P2 (KPa)	P1 (MPa)				
	0.05	0.1	0.2	0.3	0.4
1.5	115	190	300	370	403
2.5	123	198	300	378	403
3	123	198	300	378	403
5	123	198	300	378	403
15	123	198	300	378	403
30	40	125	280	365	400

Note: The flow data in the list is under standard state, natural gas relative density is 0.61, if the media changed, we need multiply by scaling factor: Manufactured Gas 1.17, Air 0.78, Propane 0.63, butane 0.55.



## RTZ-N(Q) Series Regulator

RTZ-N(Q) series direct acting regulator is applicable to middle-low pressure gas pipeline. As pressure adjustment and stabilization equipment for residence and industrial commercial consumers, especially applying to industrial commercial direct fired machines' gas supply like middle-low pressure big industrial furnace, gas fired boiler, direct fired machines.

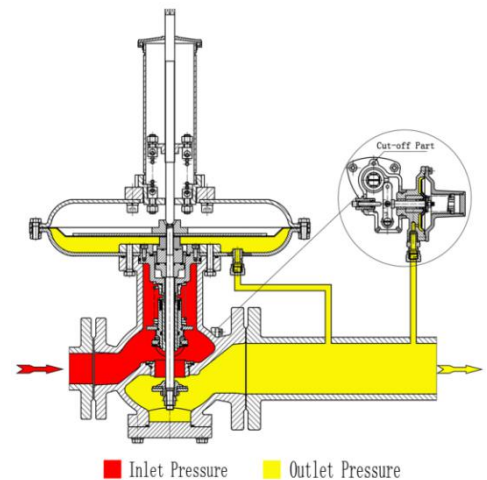
### Key Benefits

- Modular Structure Design
- Big Flow, Fast Response, High Accuracy
- Overpressure Shut-off
- Low Requirement of Gas Cleanliness
- Easy Installation and Adjustment, Convenient Maintenance
- Online Maintenance



### Main Technical Characteristics

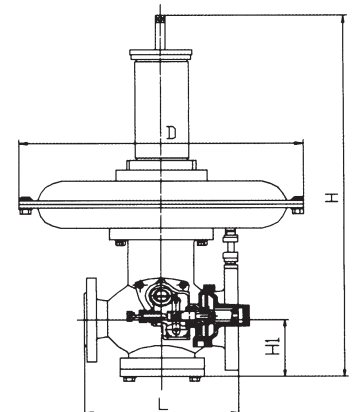
- Maximum Inlet Pressure: 1.0MPa
- Outlet Pressure Range: 1-100KPa
- Accuracy Class: AC10
- Lock-up Pressure Class: SG15
- Working Temperature: -19 ~ +60°C
- Specs: DN50, DN80, DN100, DN150



### Structure and Size

#### Size

TYPE	L	D	H <sub>1</sub>	H	Inlet/Outlet
RTZ-50/0.4NQ	254	470/330	113	713	DN50/DN80
RTZ-80/0.4NQ	298	510/330	165	810	DN80/DN100
RTZ-100/0.4NQ	352	510/435	170	885	DN100/DN150
RTZ-150/0.4NQ	480	610/435	216	9595	DN150/DN200





Spring Number	Range(KPa)	Color	Usage
NQ1006058066	1<P2≤5	Blue	Spring Adjusting
NQ1008058088	5<P2≤10	Gray	
NQ1009058099	10<P2≤30	Yellow	
NQ1010058110	30<P2≤50	Silver	
NQ1012058132	50<P2≤100	Red	
QDB100150250060	3.8<Pt≤6	White	Spring Cut Off
QDB100180250060	6<Pt≤8	Blue	
QDB1002025060	8<Pt≤14	Gray	
QDB10025025060	14<Pt≤27	Yellow	
QDB1003025060	27Pt≤48	Silver	
QDB10035025060	48<Pt≤100	Red	
QDB1004025065	100<Pt≤150	Black	

#### Flowmeter

DN50						
P2(Kpa )	P1 (MPa)					
	0.05	0.1	0.15	0.2	0.3	0.4
3	448	598	745	897	1196	1493
5	448	598	745	897	1196	1493
8	448	598	745	897	1196	1493
10	448	598	745	897	1196	1493
15	448	598	745	897	1196	1493
20	448	595	740	850	1153	1445
25	430	588	740	820	1100	1400
30	428	588	740	820	1100	1400
40	/	560	740	820	1100	1400

DN80						
P2(Kpa )	P1 (MPa)					
	0.05	0.1	0.15	0.2	0.3	0.4
3	485	648	810	975	1298	1622
5	485	648	810	975	1298	1622
8	485	648	810	975	1298	1622
10	485	648	810	975	1298	1622
15	485	648	802	975	1298	1622
20	460	638	802	975	1298	1622
25	452	630	796	975	1298	1622
30	443	623	796	975	1298	1622
40	400	623	796	975	4298	1622

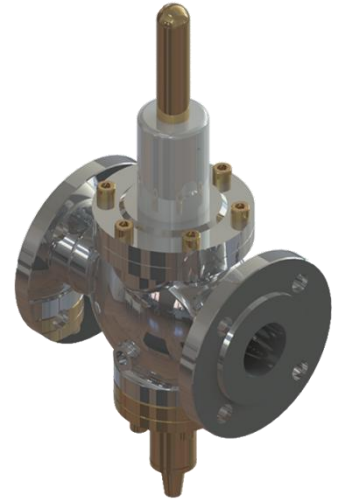


<b>DN100</b>						
P2(Kpa )	P1 ( MPa)					
	0.05	0.1	0.15	0.2	0.3	0.4
3	1050	1398	1746	2800	3196	3495
5	1050	1398	1746	2800	3196	3495
8	984	1398	1746	2800	3196	3495
10	976	1398	1746	2700	3090	3400
15	951	1385	1736	2700	3090	3400
20	940	1372	1730	2500	3000	3300
25	850	1363	1721	2500	3000	3300
30	826	1355	1710	2500	3000	3300
40	780	1365	1710	2500	3000	3300
<b>DN150</b>						
P2(Kpa )	P1 ( MPa)					
	0.05	0.1	0.15	0.2	0.3	0.4
3	2650	3990	4810	5300	7050	8800
5	2634	3886	4810	5300	7050	8800
8	2602	3880	4810	5300	7050	8800
10	2596	3886	4810	5300	7050	8800
15	2573	3860	4810	5300	7050	8800
20	2500	3800	4810	5300	7050	8800
25	2315	3745	4810	5300	7050	8800
30	1985	3705	4810	5300	7000	8000

Note: The flow data in the list is under standard state, natural gas relative density is 0.61, if the media changed, we need multiply by scaling factor: Manufactured Gas 1.17, Air 0.78, Propane 0.63, butane 0.55.

## RTZ-BQ Series Regulator

RTZ-BQ series regulator is fully balanced direct acting regulator. It combine functions of adjust pressure and shut off together. Using balanced structure valve element, it can adjust outlet pressure by adjusting the spring in the cover. This regulator is widely used at small industrial system like gas transmission system, gas pipe network, well site, gas boiler, industrial furnace.

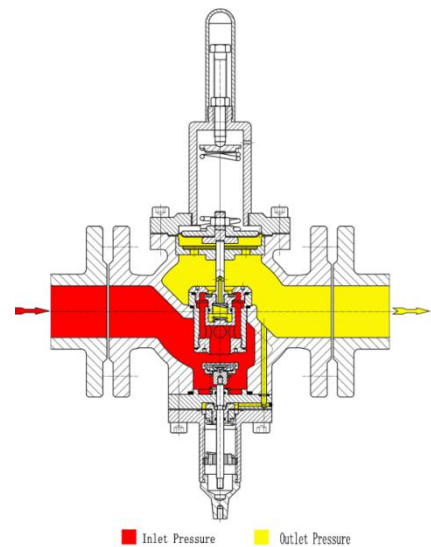


### Key Benefits

- Accuracy High, Good Lock-up Performance
- Big Flow, Fast Response, High Accuracy
- Overpressure Shut-off
- Low Requirement of Gas Cleanliness
- Easy Installation and Adjustment, Convenient Maintenance
- Online Maintenance

### Main Technical Characteristics

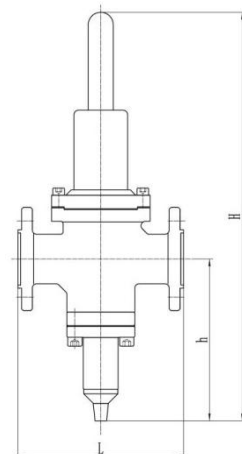
- Maximum Inlet Pressure: 3.6MPa
- Outlet Pressure Range: 0.03-3.5MPa(Without Shut Off Function When Over 0.8MPa)
- Accuracy Class: AC10
- Lock-up Pressure Class: SG15
- Working Temperature: -19 ~ +60°C
- Specs: DN25, DN40, DN50



### Structure and Size

#### Size

TYPE	L	h	H
RTZ-25BQ	185	180	455
RTZ-40BQ	185	180	455
RTZ-50BQ	215	200	494







<b>DN25</b>												
P2 (Mpa)	P1 (MPa)											
	0.05	0.1	0.3	0.4	0.6	0.8	1.2	1.6	2.4	3.0	3.3	3.6
0.03	30	75	150	250	380	528	776	1010	1495	1852	2200	2327
0.06	-	70	150	250	380	538	776	1015	1495	1852	2200	2327
0.1	-	-	140	250	380	538	776	1015	1495	1852	2200	2327
0.4	-	-	-	-	350	538	776	1015	1495	1852	2200	2327
0.8	-	-	-	-	-	-	645	1015	1495	1852	2200	2327
1.6	-	-	-	-	-	-	-	-	1272	1792	2224	2338
2.4	-	-	-	-	-	-	-	-	-	1280	1790	2061
3.0	-	-	-	-	-	-	-	-	-	-	1263	1642
3.5	-	-	-	-	-	-	-	-	-	-	-	1050
<b>DN40</b>												
P2 (Mpa)	P1 (MPa)											
	0.05	0.1	0.3	0.4	0.6	0.8	1.2	1.6	2.4	3.0	3.3	3.6
0.03	35	80	160	285	428	537	788	1025	1506	1863	2224	2338
0.06	-	75	160	318	428	542	788	1025	1506	1863	2224	2338
0.1	-	-	150	318	428	542	788	1025	1506	1863	2224	2338
0.4	-	-	-	-	343	542	788	1025	1506	1863	2224	2338
0.8	-	-	-	-	-	-	653	1025	1506	1863	2224	2338
1.6	-	-	-	-	-	-	-	-	1272	1792	2224	2338
2.4	-	-	-	-	-	-	-	-	-	1280	1790	2061
3.0	-	-	-	-	-	-	-	-	-	-	1263	1642
3.5	-	-	-	-	-	-	-	-	-	-	-	1050
<b>DN50</b>												
P2 (Mpa)	P1 (MPa)											
	0.05	0.1	0.3	0.4	0.6	0.8	1.2	1.6	2.4	3.0	3.3	3.6
0.03	100	155	453	592	880	1052	1815	2390	3521	4360	5180	5479
0.06	-	155	462	603	885	1067	1828	2390	3521	4360	5180	5479
0.1	-	-	462	603	885	1067	1828	2390	3521	4360	5180	5479
0.4	-	-	-	-	693	1067	1828	2390	3521	4360	5180	5479
0.8	-	-	-	-	-	-	1520	2390	3521	4360	5180	5479

Note: The flow data in the list is under standard state, natural gas relative density is 0.61, if the media changed, we need multiply by scaling factor: Manufactured Gas 1.17, Air 0.78, Propane 0.63, butane 0.55.

## RTZ-QG Series Regulator

RTZ-QG series regulator is spring loaded direct acting regulator. It combine functions of adjust pressure and shut off together. It can work as monitor adjustment in series. It has advantages of little space for installation, convenient online maintenance. This regulator is widely used at small industrial system like gas transmission and distribution system, gas pipe network, well site, gas boiler, industrial furnace.

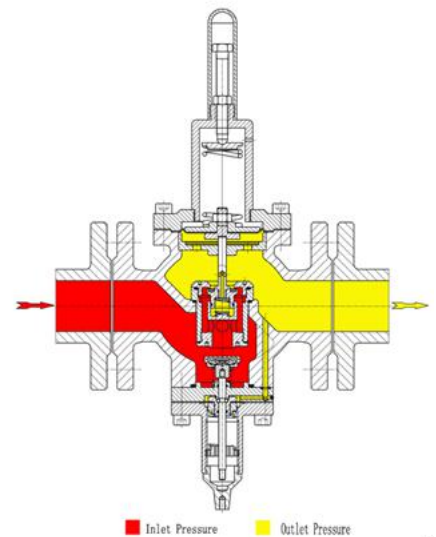


### Key Benefits

- Accuracy High, Fast Response, Good Lock-up Performance
- Simple Pressure Setting
- Overpressure Shut-off
- Easy Installation and Adjustment, Convenient Maintenance
- Online Maintenance

### Main Technical Characteristics

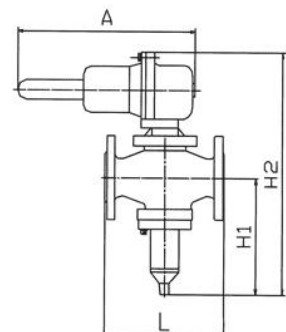
- Maximum Inlet Pressure: 3.6MPa
- Outlet Pressure Range: 0.03-3.5MPa (Without Shut Off Function When Over 0.8MPa)
- Accuracy Class: AC10
- Lock-up Pressure Class: SG15
- Working Temperature: -19 ~ +60°C
- Specs: DN25, DN40, DN50



### Structure and Size

#### Size

TYPE	L	A	H1	H2
RTZ-25QG	195	295	165	195
RTZ-40QG	235	354	198	235
RTZ-50QG	267	354	220	255





## Flowmeter

<b>DN25</b>						
P2 (Mpa)	P1 (MPa)					
	0.2	0.4	0.8	1.6	2.5	4.0
0.1	140	280	420	470	520	550
0.2		300	440	500	550	550
0.4			450	510	550	600
0.6			450	513	580	620
0.8				540	620	620
1.6					620	650
2.5						650

<b>DN40</b>						
P2 (Mpa)	P1 (MPa)					
	0.2	0.4	0.8	1.6	2.5	4.0
0.1	200	350	520	600	660	700
0.2		370	530	630	680	730
0.4			550	660	710	740
0.6			550	670	720	750
0.8				670	720	770
1.6					720	770
2.5						770

<b>DN50</b>						
P2 (Mpa)	P1 (MPa)					
	0.2	0.4	0.8	1.6	2.5	4.0
0.1	220	692	1252	2390	3521	5479
0.2		553	1207	2390	3521	5479
0.4			1200	2200	3521	5479
0.6			1100	2100	3500	5479
0.8				2000	3500	5100
1.6					2800	4500
2.5						4000

Note: The flow data in the list is under standard state, natural gas relative density is 0.61, if the media changed, we need multiply by scaling factor: Manufactured Gas 1.17, Air 0.78, Propane 0.63, butane 0.55.

## RTJ-MQ Series Regulator

RTJ-MQ series regulator is indirect acting regulator, especially applicable to pressure regulating station, gas holder station, and some big industry consumers. It can reduce noise 10-20dB(A) by putting silencer inside the regulator body. The internal balance compensation mechanism ensures that the outlet pressure remains stable under conditions of large inlet pressure fluctuations. At the same time, a high-precision rapid-response pilot valve is used, it will have high regulating accuracy and fast response feature.

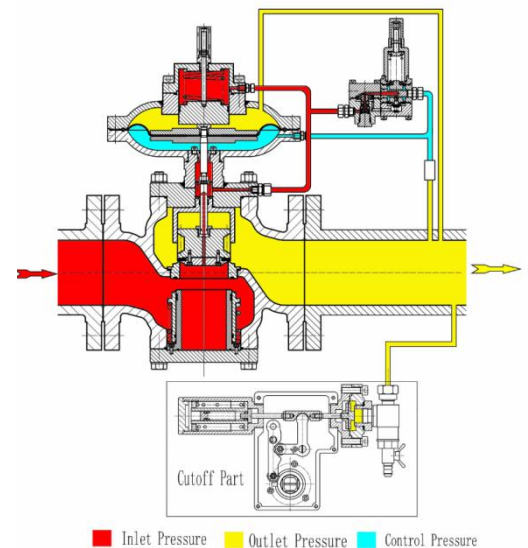


### Key Benefits

- Modular Structure Design
- Big Flow, Fast Response, High Accuracy
- With Over Pressure Shut-off Display, also Optional Remote Control Function
- With Pressure Regulating Display, Optional Valve Remote Transmission Function
- Easy Installation and Adjustment, Convenient Maintenance
- Online Maintenance

### Main Technical Characteristics

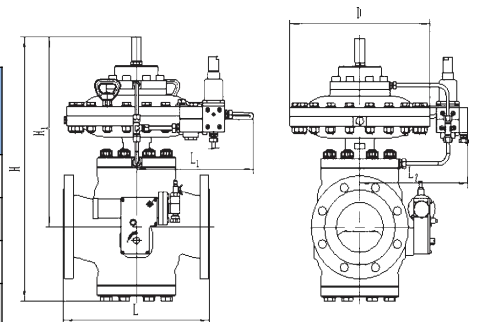
- Maximum Inlet Pressure: 4.0MPa
- Outlet Pressure Range: 0.05-3.9MPa
- Accuracy Class: AC2.5
- Lock-up Pressure Class: SG3
- Working Temperature: -19 ~ +60°C
- Specs: DN25, DN50, DN80, DN100, DN150



### Structure and Size

#### Size

Name Type	D	L	L1	L2	H	H1
DN25	240	225	290	300	460	350
DN50	275	267	290	300	510	370
DN80	380	320	290	310	650	480
DN100	380	350	290	310	650	480
DN150	430	450	350	350	770	550





## Flowmeter

<b>DN25</b>										
P2 (Mpa)	P1 (MPa)									
	0.1	0.2	0.4	0.6	0.8	1.0	1.4	2.0	3.0	4.0
0.05	220	456	773	1030	1370	1672	2263	3180	4705	6210
0.1	-	400	760	1065	1370	1672	2268	3210	4713	6223
0.2	-	-	650	1065	1370	1672	2283	3210	4713	6240
0.4	-	-	-	830	1350	1672	2283	3210	4713	6246
0.8	-	-	-	-	-	963	1756	3210	4713	6246
1.4	-	-	-	-	-	-	-	2175	4710	6246
2.0	-	-	-	-	-	-	-	-	3425	6246
2.4	-	-	-	-	-	-	-	-	2740	4893

<b>DN50</b>										
P2 (Mpa)	P1 (MPa)									
	0.1	0.2	0.4	0.6	0.8	1.0	1.4	2.0	3.0	4.0
0.05	987	1458	2436	3421	4230	5425	7430	10620	15625	20832
0.1	-	1532	2550	3573	4563	5523	7561	10706	15810	20960
0.2	-	-	2132	3573	4590	5610	7658	10776	15810	20960
0.4	-	-	-	2279	4597	5610	7662	10776	15810	20960
0.8	-	-	-	-	-	3065	5893	10776	15810	20960
1.4	-	-	-	-	-	-	-	7289	15810	20960
2.0	-	-	-	-	-	-	-	-	11493	20960
2.4	-	-	-	-	-	-	-	-	9182	16187

<b>DN80</b>										
P2 (Mpa)	P1 (MPa)									
	0.1	0.2	0.4	0.6	0.8	1.0	1.4	2.0	3.0	4.0
0.05	2610	3920	6426	9100	11770	14367	19600	27505	40490	53660
0.1	-	3920	6530	9100	11700	14367	19600	27505	40490	53600
0.2	-	-	5412	8800	11200	14367	19000	27505	40400	53600
0.4	-	-	-	5837	8500	14367	19000	24500	40400	53000
0.8	-	-	-	-	-	7842	15091	24500	40200	53000
1.4	-	-	-	-	-	-	-	18665	40200	51200
2.0	-	-	-	-	-	-	-	-	29428	51200
2.4	-	-	-	-	-	-	-	-	23510	41445





<b>DN100</b>										
P2 (Mpa)	P1 (MPa)									
	0.1	0.2	0.4	0.6	0.8	1.0	1.4	2.0	3.0	4.0
0.05	3650	5768	9600	13450	17300	21100	28800	40500	59500	78900
0.1	-	5768	9600	13220	16500	21000	28800	40500	59500	78900
0.2	-	-	8114	13110	16500	20100	28500	40500	58550	78900
0.4	-	-	-	8581	15300	20100	27800	39560	58550	78900
0.8	-	-	-	-	-	11537	22186	39560	57502	78900
1.4	-	-	-	-	-	-	-	27440	57502	78900
2.0	-	-	-	-	-	-	-	-	43264	78900
2.4	-	-	-	-	-	-	-	-	34565	60935

<b>DN150</b>										
P2 (Mpa)	P1 (MPa)									
	0.1	0.2	0.4	0.6	0.8	1.0	1.4	2.0	3.0	4.0
0.05	6015	9421	15680	21960	28200	34020	47109	66200	97200	128000
0.1	-	9400	15250	21900	28200	34020	47109	65200	97200	128000
0.2	-	-	13210	21900	25600	33200	47109	65200	9700	128000
0.4	-	-	-	14016	23200	33200	47109	64000	97000	125000
0.8	-	-	-	-	-	18843	36238	64000	96200	125000
1.4	-	-	-	-	-	-	-	44818	96200	112000
2.0	-	-	-	-	-	-	-	-	70661	112000
2.4	-	-	-	-	-	-	-	-	56456	99523

Note: The flow data in the list is under standard state, natural gas relative density is 0.61, if the media changed, we need multiply by scaling factor: Manufactured Gas 1.17, Air 0.78, Propane 0.63, butane 0.55.

## RTJ-EQ Series Regulator

RTJ-EQ series of pressure regulators are widely used in gas pressure transmission and distribution systems, gas pipelines and industrial gas pressure regulating systems for medium and high pressure regulation. The main valve adopts a fully-balanced structure valve core, and the internal passage is designed according to a cage structure, and is provided with a plurality of “bar-shaped holes”, which can suppress the influence of the change of inlet pressure to improve the regulation accuracy, and the main valve can reduce noise 10 -20dB(A). Outlet pressure is adjusted by the pilot and has high adjustment accuracy. At the same time it has the characteristics of direct acting regulator, the response speed is extremely fast.

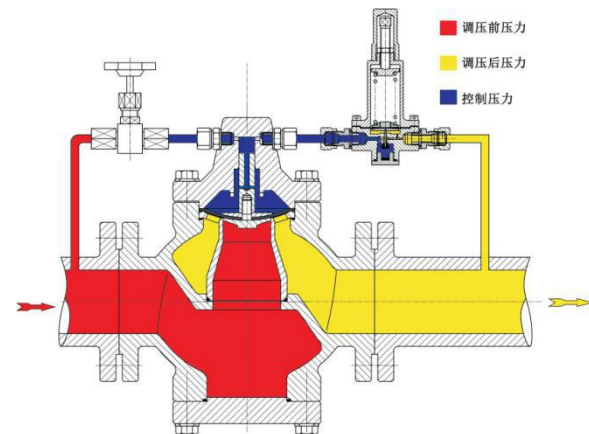


### Key Benefits

- Big Flow, Fast Response, High Accuracy, Good Lock-up Performance
- Wide Range of Outlet Pressure Adjustment
- Small Size, Small Installation Space
- Easy Installation and Adjustment, Convenient Maintenance
- Online Maintenance

### Main Technical Characteristics

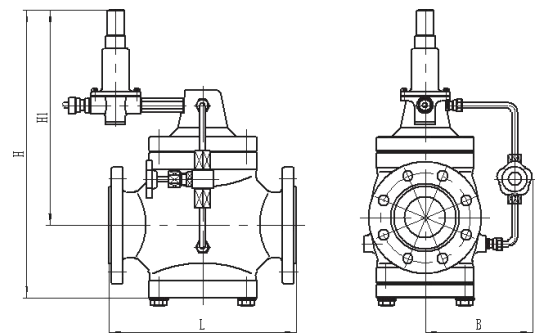
- Maximum Inlet Pressure: 6.0MPa
- Outlet Pressure Range: 0.05-5.5MPa
- Accuracy Class: AC2.5
- Lock-up Pressure Class: SG3
- Working Temperature: -19 ~ +60°C
- Specs: DN25, DN50, DN80, DN100, DN150



### Structure and Size

#### Size

Size	L	H	H1	B
DN25	225	375	300	150
DN50	267	438	352	175
DN80	320	490	375	200
DN100	350	552	412	215
DN150	450	648	465	245





## Flowmeter

DN25										
P2 (Mpa)	P1 (MPa)									
	0.1	0.3	0.5	1.0	2.0	3.6	4.5	5.5	6.0	8.0
0.05		550	800	1820	3400	5600	7000	9500	11000	12000
0.1	-	550	800	1820	3400	5600	7000	9500	11000	12000
0.4	-	-	700	1720	3000	5200	7000	9500	11000	12000
0.8	-	-	-	1500	3000	5200	7000	9500	10000	12000
1.2	-	-	-	-	2500	4500	6500	9000	9000	10500
2.2	-	-	-	-	-	4000	6000	8000	8500	10500
4.0	-	-	-	-	-	-	4000	7000	7500	10000
5.0	-	-	-	-	-	-	-	5500	7500	10000

DN50										
P2 (Mpa)	P1 (MPa)									
	0.1	0.3	0.5	1.0	2.0	3.6	4.5	5.5	6.0	8.0
0.05	-	900	1500	3020	6500	10600	13500	16000	18000	20000
0.1	-	900	1500	3020	6500	10600	13500	16000	18000	20000
0.4	-	-	-	3020	6000	10000	13500	16000	18000	20000
0.8	-	-	-	-	6000	10000	13000	16000	17000	19000
1.2	-	-	-	-	5800	8500	12500	14000	17000	18500
2.2	-	-	-	-	-	7000	12000	14000	16500	18500
4.0	-	-	-	-	-	-	10000	12000	16500	18000
5.0	-	-	-	-	-	-	-	10500	13500	17000

DN80										
P2 (Mpa)	P1 (MPa)									
	0.1	0.3	0.5	1.0	2.0	3.6	4.5	5.5	6.0	8.0
0.05	-	3000	5020	10020	20500	30620	43500	56000	68000	80500
0.1	-	3000	5020	10020	20500	30620	43500	56000	68000	80500
0.4	-	-	-	10020	20000	30000	43500	56000	68000	80500
0.8	-	-	-	-	20000	30000	43000	56000	67000	75000
1.2	-	-	-	-	18000	25000	40500	54000	67000	73500
2.2	-	-	-	-	-	20000	40000	54000	56500	73500
4.0	-	-	-	-	-	-	35000	52000	56500	70000
5.0	-	-	-	-	-	-	-	40500	53500	70000



<b>DN100</b>										
P2 (Mpa)	P1 (MPa)									
	0.1	0.3	0.5	1.0	2.0	3.6	4.5	5.5	6.0	8.0
0.05	-	5000	8120	17020	34500	60620	73500	92100	118000	120500
0.1	-	5000	8120	17020	34500	60620	73500	92100	118000	120500
0.4	-	-	-	17020	30000	60300	73500	92000	118000	120500
0.8	-	-	-	-	30000	60300	73000	92000	117000	115000
1.2	-	-	-	-	28000	55000	70500	90000	117000	113500
2.2	-	-	-	-	-	50000	70000	90000	106500	113500
4.0	-	-	-	-	-	-	65000	88000	96500	110000
5.0	-	-	-	-	-	-	-	87500	93500	100000

<b>DN150</b>										
P2 (Mpa)	P1 (MPa)									
	0.1	0.3	0.5	1.0	2.0	3.6	4.5	5.5	6.0	8.0
0.05	-	10000	16120	31020	64500	120620	143500	172100	218000	240500
0.1	-	10000	16120	31020	64500	120620	143500	172100	218000	240500
0.4	-	-	-	31020	60000	120300	143500	172000	218000	240500
0.8	-	-	-	-	60000	120300	133000	172000	217000	215000
1.2	-	-	-	-	54000	105000	130500	160000	217000	213500
2.2	-	-	-	-	-	100000	110000	160000	206500	213500
4.0	-	-	-	-	-	-	95000	158000	186500	210000
5.0	-	-	-	-	-	-	-	147500	173500	200000

Note: The flow data in the list is under standard state, natural gas relative density is 0.61, if the media changed, we need multiply by scaling factor: Manufactured Gas 1.17, Air 0.78, Propane 0.63, butane 0.55.

## CTZ Series Regulator

CTZ regulator is a type of self-operated regulator with pilot, which is especially suitable for pressure regulating gate stations, storage and distribution stations and places where large and medium-sized industrial users need to adjust pressure. Its internal channel is axial flow type, tightly sealed and has large circulation capacity. A built-in muffler can be installed near the pressure regulator valve port, which can reduce noise by 10-20dB(A), the unique balance compensation mechanism inside the pilot ensures the pressure at the inlet. In the case of large fluctuations, the export pressure remains stable, with high adjustment accuracy and quick response.

This type of pressure regulator can be used in series as a monitoring regulator. The monitoring regulator is the most reliable and common method for gas safety protection. It is usually used in series with the main regulator. When the main regulator fails, the outlet pressure exceeds the setting. When pressure is applied, the monitor regulator can be adjusted. It does not cause unnecessary loss due to stoppage or damage to the equipment or product due to stoppage. During normal operation, decompression is performed by the main regulator, and the pressure at the outlet of the regulator is slightly higher than the main regulator (usually 4 to 6 psi), so the monitoring regulator remains fully open.

Applicable medium: natural gas, liquefied petroleum gas, air, etc.

Adopted the invention patent technology, patent number: 200910263525.3

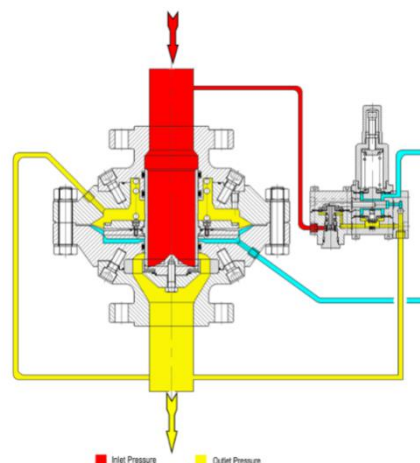
## Key Benefits

- Axial Flow Type Design
- High Accuracy Pressure Control
- Small Start Pressure Difference
- Fast Response
- Simple Structure, Convenient Maintenance
- With Valve Position Display



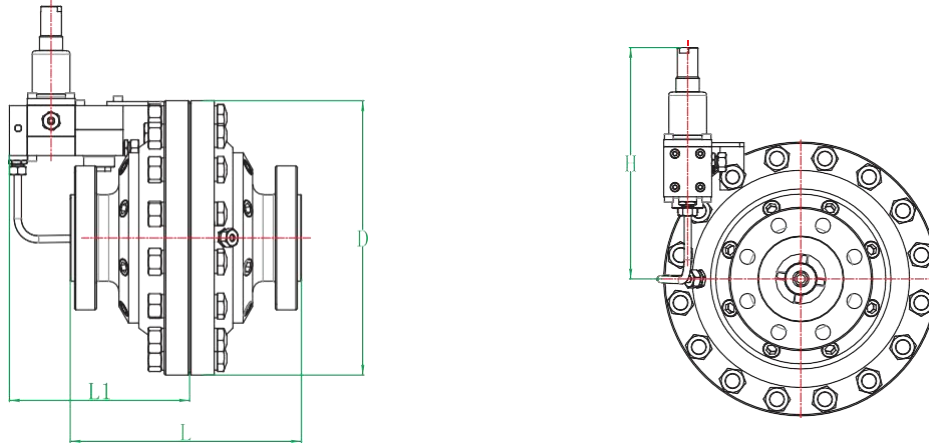
## Main Technical Characteristics

- Maximum Inlet Pressure: 10.0MPa
- Outlet Pressure Range: 0.1-8.0MPa
- Accuracy Class: AC2.5
- Lock-up Pressure Class: SG3
- Working Temperature: -19 ~ +60°C
- Specs: DN25, DN50, DN80, DN100, DN150





## Structure and Size



## Size

SIZE	L			L1	D	H
DN25	225	225	225	200	225	250
DN50	254	267	287	240	288	280
DN80	300	317	338	260	400	330
DN100	353	368	394	290	485	370
DN150	452	472	508	340	652	450

## Flow Coefficient C<sub>g</sub>

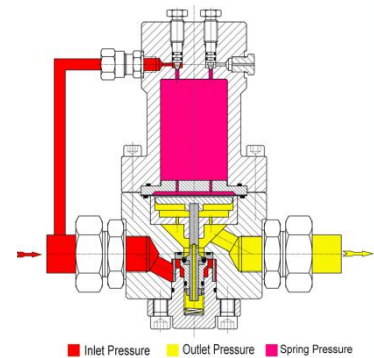
DN	25	50	80	100	150	200
C <sub>g</sub>	530	2150	4850	7800	16600	31000
C <sub>1</sub>	28.5	27.2	28.8	26.5	28	28.3

## RTZ-CP Series Regulator

RTZ-CP series pressure regulator is gas pressure balanced direct acting regulator without spring. Its valve element uses balanced structure and has wide range for outlet pressure. It is widely used at CNG station.

### Key Benefits

- Big Flow, Fast Response, High Accuracy
- Good Lock-up Ability
- Wide Outlet Pressure Range
- Wide Range of Applicable Flow
- Easy Installation and Adjustment, Convenient Maintenance
- Online Maintenance
- Using Patented Technology: No. ZL200920082373.2

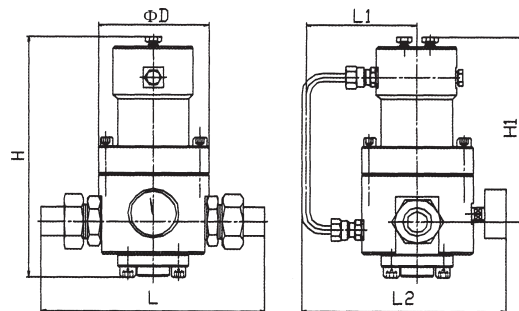


### Main Technical Characteristics

- Maximum Inlet Pressure: 25MPa
- Outlet Pressure Range: 0.1-6.3MPa
- Accuracy Class: AC10
- Lock-up Pressure Class: SG15
- Max Flow: 2000Nm<sup>3</sup>/h
- Working Temperature: -19 ~ +60°C
- Specs: DN15, DN20, DN25
- Connection: Welding

### Structure and Size

#### Size



SPEC	D	L	L1	L2	H	H1	In/Out
DN15	95	200	110	200	210	155	DN15/DN15
DN20	130	265	130	240	285	220	DN20/DN20
DN25	130	265	130	240	285	220	DN25/DN25

## HD Series Regulator

HD series regulator is indirect acting regulator without spring. Its valve element uses gas pressure balanced structure and especially suitable for high fluctuation inlet pressure. The pilot adopts two-stage adjustment structure. The delivery pressure can be easily adjusted by replacing the adjustment spring on the pilot. It is widely used at CNG station.

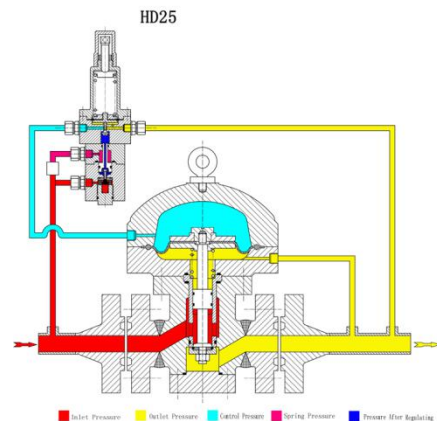
### Key Benefits

- Big Flow, Fast Response, High Accuracy
- Good Lock-up Ability
- Wide Outlet Pressure Range
- Wide Range of Applicable Flow
- Easy Installation and Adjustment, Convenient Maintenance
- Online Maintenance
- Using Patented Technology: No. ZL200820063920.8

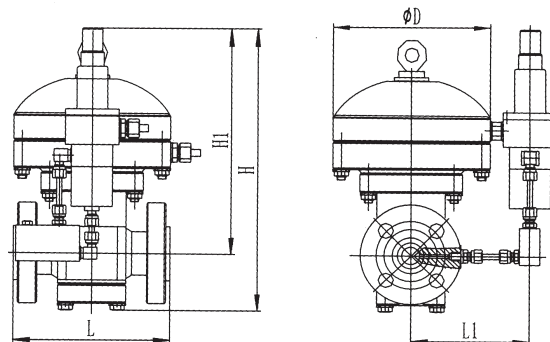


### Main Technical Characteristics

- Maximum Inlet Pressure: 25MPa
- Outlet Pressure Range: 0.1-6.3MPa
- Accuracy Class: AC5
- Lock-up Pressure Class: SG10
- Max Flow: 5000Nm<sup>3</sup>/h
- Working Temperature: -19 ~ +60°C
- Specs: DN25
- Connection: Flange



### Structure and Size



### Size

TYPE	D	L	L1	H	H1	In/Out
HD25	230	230	175	400	330	DN25/DN25

## RTZ-L Indoor Regulaor

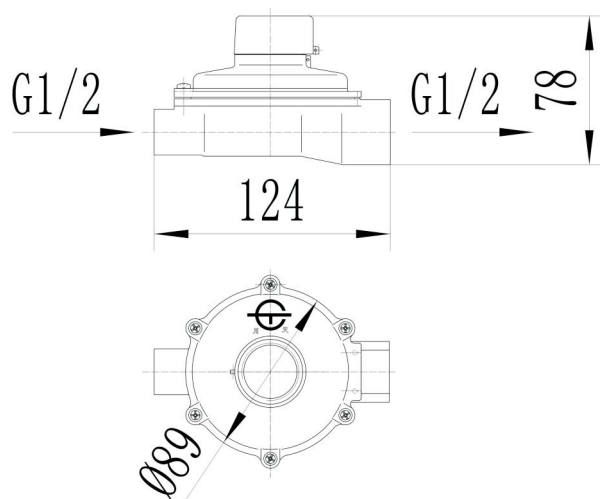
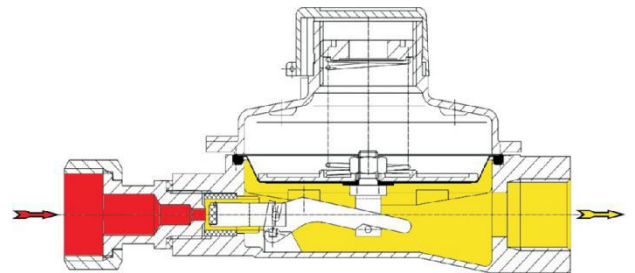
This indoor regulator is suitable for the stable pressure regulation of the town before the medium-pressure gas enters the household, and can also be used for the regulation of the additional pressure head of the high-rise building.



## Main Technical Characteristics

- Maximum Inlet Pressure: 0.005-0.2MPa
- Outlet Pressure Range: 1-3KPa
- Accuracy Class: AC10
- Lock-up Pressure Class: SG15
- Max Flow: 10Nm<sup>3</sup>/h
- Working Temperature: -19 ~ +60°C
- Connection: G1/2

## Structure and Size



## AF/RF Relief Valve

The AF/RF Relief Valve is a gas safety device that is often used downstream to provide over pressure protection for downstream systems of the regulator.

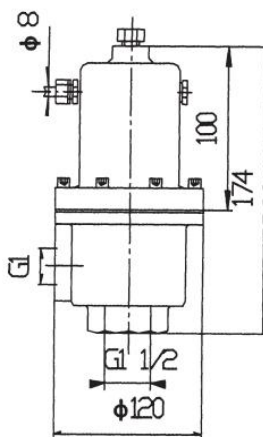
Low pressure type: RF type is suitable for the maximum release pressure of 50Kpa.

Medium pressure type: AF type is suitable for  $50\text{Kpa} \leq \text{release pressure} \leq 0.4\text{MPa}$ .

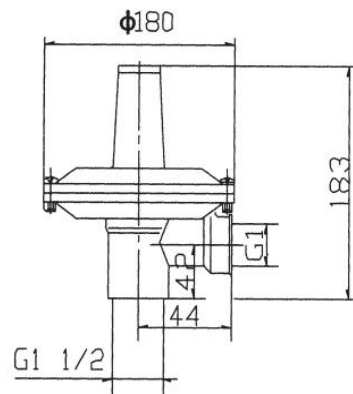
## Main Technical Characteristics

- Maximum Inlet Pressure: 0.6MPa
- Operating Pressure: 0.003 ~ 0.4MPa
- Motion accuracy:  $\pm 10\%$
- Working Temperature:  $-19 \sim +60^{\circ}\text{C}$
- Connection: Threaded, Flanged

## Structure and Size



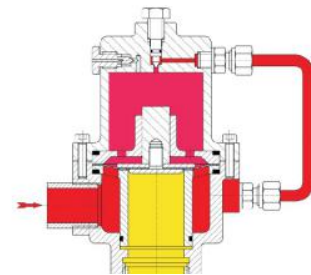
**AF- Middle Pressure**



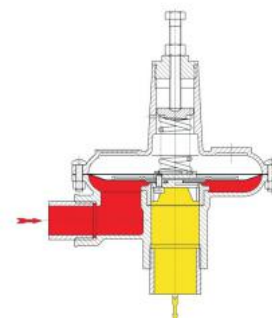
**RFL- Low Pressure**



**AFL Middle Pressure**



**RFL Low Pressure**



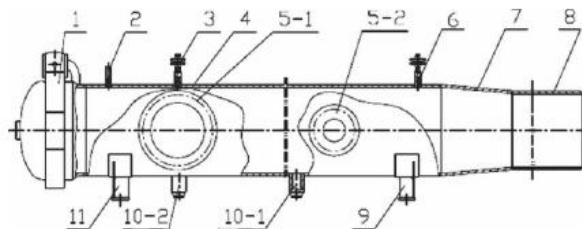
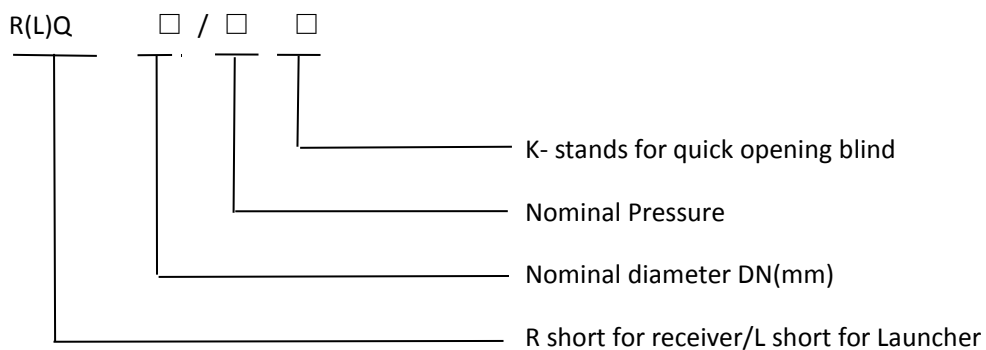


### Pig Launcher and Receiver

The pig launcher and receiver, which is suitable for receiving or sending the pigging equipment when the oil pipeline, gas and other pipelines are cleaned. It is installed at both ends of the pipeline, mainly composed of a cylinder body, a quick opening blind plate, a reducer pipe, a support, a short pipe, etc., and has a simple structure, a quick switch, good sealing performance, simple operation, good corrosion resistance, Safe and reliable.



### Model Description



1---Quick opening closure    2---Pressure gauge    3---Safety Valve    4---Barrel    5---Gas inlet and outlet  
 6--- Release valve    7---Reducing pipe    8---Take over    9---Back bracket    10---Sewage valve

### Main Usage

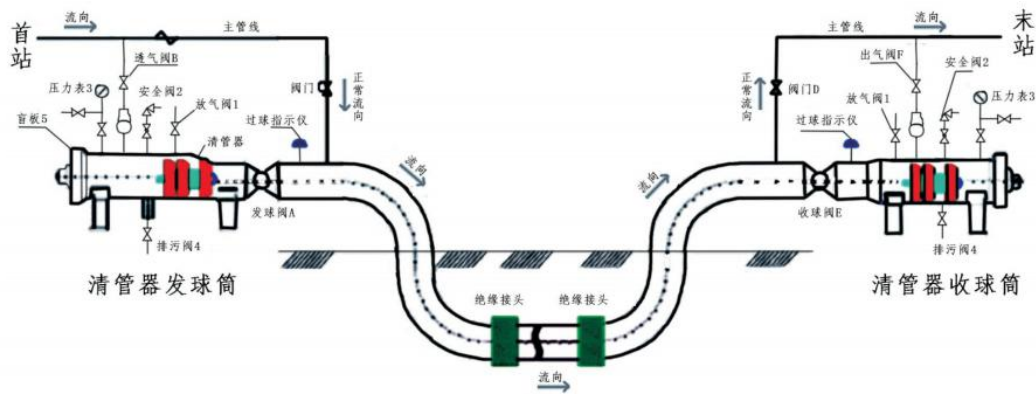
Before the construction of the new pipeline is completed, use a pig to sweep the line and remove all the residues in the pipeline to make the pipeline unblocked.

Exhaust gas before pipeline hydrostatic test and water removal after hydrostatic test.

Separation of natural gas, nitrogen and air between pipelines before they are put into production

Regular dewatering of pipelines already in operation to improve pipeline capacity.

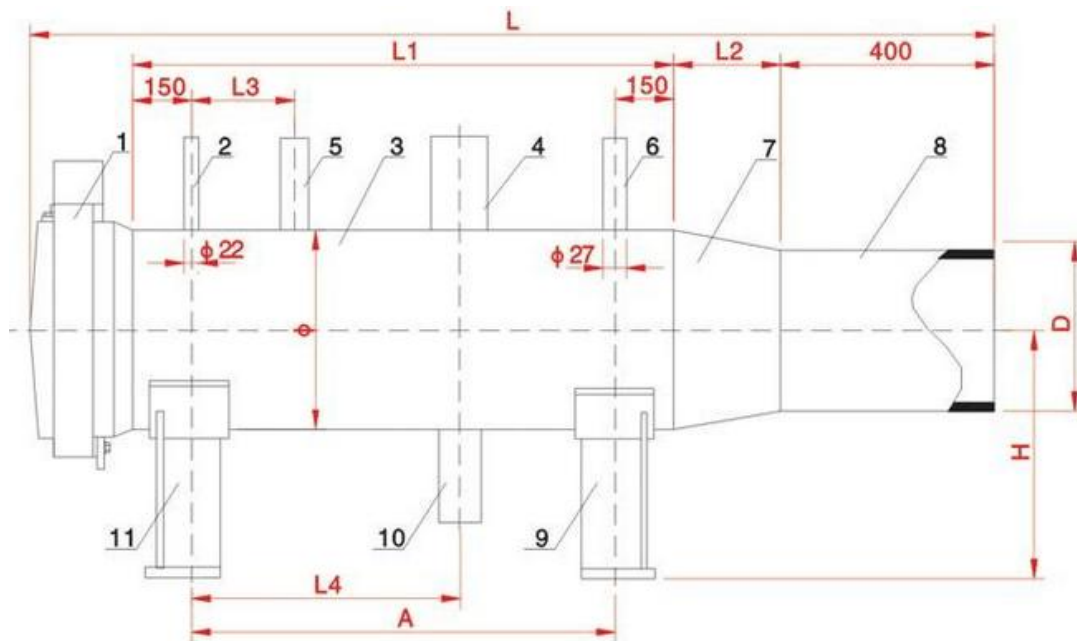
## Pipe Cleaning Process



Normal delivery process:

The conveying medium enters the main line from the first station via valve C, enters the final station through valve D, and valves A, B, E, and F are in the closed state.

Pipe cleaning process: When the ball is delivered, open the quick-opening blind plate 5 and put it into the pig, and tighten it at the reducer to close the blind plate. Open valve B; close valve 1, 4; close valve C, open valve A at the same time, the pig enters the main pipe, and the pigging work begins. When the ball is collected, the valve D is closed about one hour before the pig reaches the collecting cylinder, and the valve E, the valve F and the valves 1, 4 are opened. After confirming that the pig enters the collecting cylinder, open the valve D, close the valve E and the valve F, and then open the blind plate 5 after the pressure in the cylinder is completely discharged, and take out the pig, and the pigging operation is finished.





## Pig Launcher Receiver Size Chart

收球筒 外径 $\phi$	管线接口 外径D	主要结构尺寸							管口尺寸		
									进物料接 管外径 $\phi$	安全阀接 管外径 $\phi$	排污阀接 管外径 $\phi$
159	$\phi$ 108、114	1700	900	140	200	400	600	300	89	34	60
273	$\phi$ 219	1850	1000	178	200	450	700	340	114	34	60
426	$\phi$ 323、325	2200	1200	330	250	580	900	440	219	34	89
529	$\phi$ 406、426	2600	1400	508	250	680	1100	480	273	34	89
630	$\phi$ 508、529	2800	1600	508	250	780	1300	540	323	34	89
720	$\phi$ 610、630	3150	1800	610	250	880	1500	580	355	34	89
864	$\phi$ 711、720	3360	2000	610	250	980	1700	640	426	48	89
965	$\phi$ 813、820	3560	2200	610	250	1080	1900	700	457	48	89
1067	$\phi$ 914、920	3780	2400	610	250	1180	2100	750	529	48	89
1168	$\phi$ 1016、1020	4020	2600	610	250	1280	2300	800	559	48	89

## Cyclone Separator

The main function of the cyclone separator is to remove the solid particles and droplets carried in the gas of the transport medium as much as possible to achieve gas-solid liquid separation to ensure the normal operation of the pipeline and equipment.

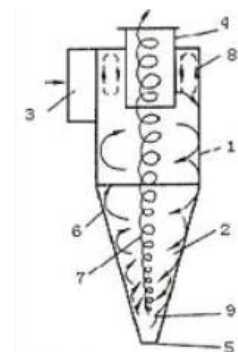
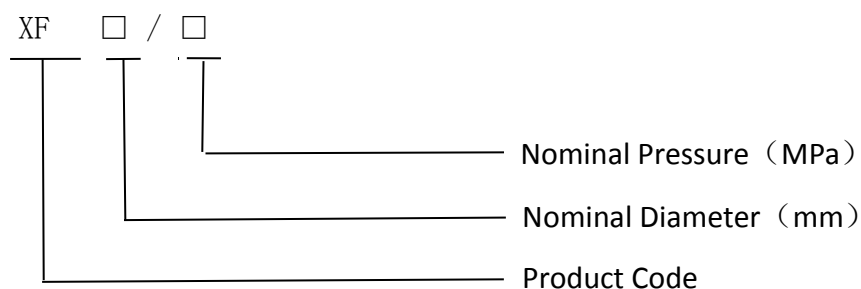
The cyclone separator adopts a vertical cylindrical structure, and the inside is divided into a liquid collection zone, a cyclone separation zone, a clean room zone, and the like along the axial direction. The cyclone sub-members are arranged evenly in the circumferential direction and also fixed by the upper and lower tube plates; the device is supported by a skirt, and the head is made of a high-pressure resistant head.



## Working Principle

The natural gas enters the cyclone separation zone inside the equipment through the inlet of the equipment. When the impurity-containing gas enters the cyclone sub-member in the axial direction, the airflow is strongly rotated by the guiding action of the guiding vanes, and the airflow spirally enters the cyclone cylinder along the cylinder. The dense droplets and dust particles are deflected toward the wall under the action of centrifugal force, and under the action of gravity, fall along the wall of the tube and flow out of the exhaust pipe of the cyclone tube to the liquid storage area at the bottom of the device, and flow out from the liquid outlet at the bottom of the device. The rotating airflow shrinks toward the center in the cylinder, and a secondary vortex flows upward to flow through the air duct to the purified natural gas chamber, and then flows out through the top outlet of the device.

## Model Description





## Main Technical Characteristics

- Maximum working pressure allowed: 8.5MPa
- Working temperature: -19 ~ +60 ° C
- Collecting liquid (dust) chamber with discharge valve
- Set with pressure gauge interface, can be installed pressure gauge
- Set with a level gauge interface, can be installed with a level gauge
- Separation effect: Solid particles of  $\geq 10 \mu m$  can be removed under the design pressure and gas volume. At the operating point, the separation efficiency is 99%. Under normal working conditions of pressure drop, the pressure drop of a single cyclone separator at the working point is not more than 0.05 MPa.
- The design life is not less than 20 years.
- Maximum flow: 400000Nm<sup>3</sup>/h
- Flange standard: PN1.6, PN2.5, PN4.0, PN6.3, PN10.0 RF

## Main Model and Technical Parameters

Type	Nominal Diameter	Nominal Pressure	Diameter (mm)	Length (mm)
XF-100/□	100	1.6~6.3MPa	400	1200
XF-150/□	150	1.6~6.3MPa	500	1500
XF-200/□	200	1.6~6.3MPa	600	1800
XF-250/□	250	1.6~6.3MPa	800	2300
XF-300/□	300	1.6~6.3MPa	800	2300
XF-350/□	350	1.6~6.3MPa	1000	2800
XF-400/□	400	1.6~6.3MPa	1200	3200
XF-500/□	500	1.6~6.3MPa	1500	4500



## U-tube Heat Exchanger

The U-tube heat exchanger has only one tube plate, and both ends of the tube are fixed on the same tube plate. The tube can be freely stretched and stretched without thermal stress, and the thermal compensation performance is good. The tube adopts double tube process, the flow is longer, and the flow rate is longer. High, good heat transfer performance, strong pressure bearing capacity, tube bundle can be extracted from the housing, easy to repair and clean, and the structure is simple and the cost is cheap. Heat exchangers are a general-purpose equipment widely used in petrochemical, metallurgy, refrigeration, gas and other industries.



## Performance Characteristics

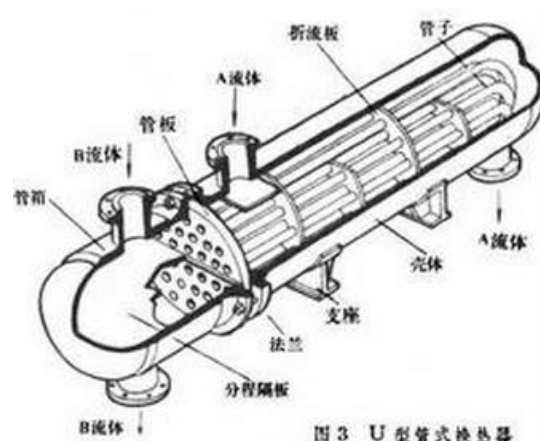
- Simple structure, only one tube plate, less sealing surface, reliable operation and low cost
- The tube bundle can be extracted and the tube (shell) can be easily cleaned.
- Light weight, suitable for high temperature and high pressure applications
- Heat exchanger material:
  - Tube process material: S30408/20, shell material: S30408/Q345R
  - Forgings: Class III forgings in accordance with JB4726-2000 standard
  - Steel pipe: in line with GB/T8163-2008, GB/T14976-2012 standard
  - Steel plate: in line with GB713-2008 standard
- Installation method: vertical / horizontal

## Main Technical Characteristics

- Maximum working pressure allowed: tube length 8.5MPa, shell side 0.6MPa
- Tube design temperature:  $-20^{\circ}\text{C}$
- Shell design temperature:  $100^{\circ}\text{C}$ ,
- Tube process medium: natural gas, relative density: 0.6, characteristics: explosive
- Shell process medium: water
- Specification: DN100~DN400

## Auxiliary Equipment

- Pressure gauge
- Safety valve
- Import and export thermometer
- Drain valve



## RX-Q Series Pressure Regulating Box

This series of pressure regulating boxes are mainly used in medium and low pressure gas transmission and distribution systems. It is composed of filter, pressure regulator (self-shut off, release function), ball valve, pressure gage and box; it has compact structure, convenient maintenance and safety usage. It is suitable for civil buildings, small-area, and medium-sized user sites such as apartment houses, hotels, and restaurants; it can also be used for low-pressure gas boilers and small direct-fired turbines. Box is manufactured by stainless steel, cold-rolled steel spray, and glass steel.



RX 25~80/0.4A-Q-CT

## Key Benefits

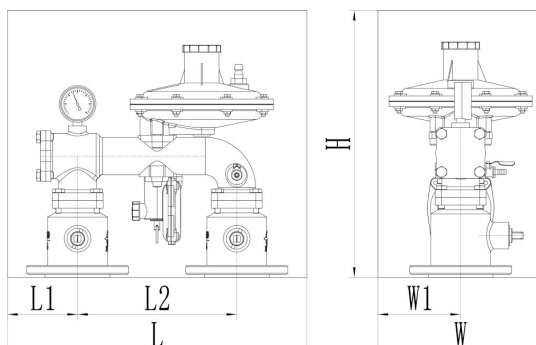
- Modular Structure Design
- The Upper and Lower Cover and Shut-off Valve Housing are Made of Aluminum Alloy, with Light Weight, Anti-Corrosion
- The Shut-off Valve Adopt New Type Tripping Mechanism, with Feature of Sensitive, Accurate and Reliable
- Accurate Outlet Pressure Adjustment
- Come with a Filter
- Overpressure Automatically Cut off (Manual Reset)
- Overpressure Safety Release (LPG without)
- Easy Installation, Convenient Online Maintenance



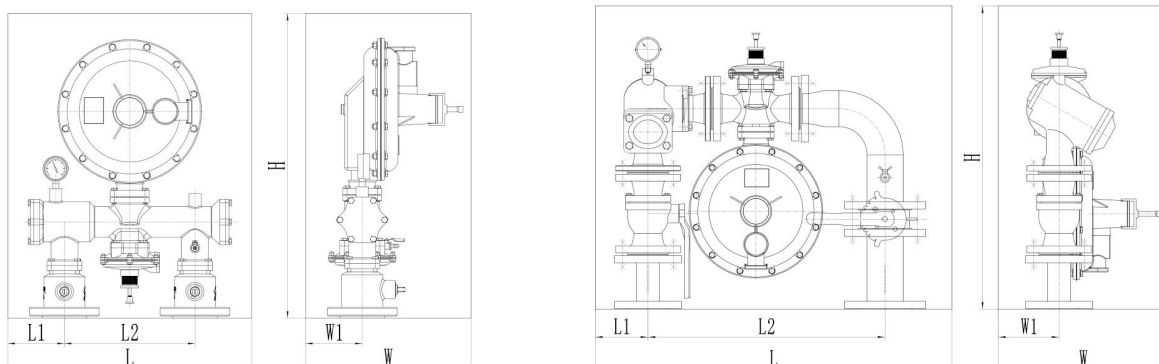
RX 150~180/0.4A-Q-CT

## Main Technical Characteristics

- Maximum Inlet Pressure: 0.4MPa
- Outlet Pressure Range: 1-20KPa
- Accuracy Class: AC15
- Lock-up Pressure Class: SG20
- Working Temperature: -19 ~ +60°C
- Mounting: Wall Mounted/Floor Mounted



RX 200/0.4A-Q-CT



SIZE							
TYPE	L	L1	L2	W1	W	H	In/Out
RX 25/0.4A-Q-CT	470	110	250	130	260	420	DN25/DN25
RX 50/0.4A-Q-CT	470	110	250	130	260	420	DN40/DN40
RX 80/0.4A-Q-CT	470	110	250	130	260	420	DN50/DN50
RX 25/0.4A-Q-CT	520	110	300	130	260	420	DN25/DN25
RX 50/0.4A-Q-CT	520	110	300	130	260	420	DN40/DN40
RX 80/0.4A-Q-CT	520	110	300	130	260	420	DN50/DN50
RX 150/0.4A-Q-CT	560	130	300	130	380	700	DN50/DN50
RX 180/0.4A-Q-CT	630	130	350	150	400	750	DN50/DN80
RX 200/0.4A-Q-CT	880	130	585	150	420	750	DN50/DN80

### RX 25/0.4A-Q-CT

P2 (Kpa)	P1 (MPa)					
	0.02	0.05	0.1	0.2	0.3	0.4
2.0	28	35	40	65	68	70
2.5	28	35	40	65	68	70
3.0	26	33	38	55	58	65
5.0	26	32	38	50	55	65
10.0	26	32	38	50	55	65

### RX 50/0.4A-Q-CT

P2 (Kpa)	P1 (MPa)					
	0.02	0.05	0.1	0.2	0.3	0.4
2.0	35	50	80	104	110	121
2.5	35	50	75	100	105	110
3.0	35	50	75	90	97	105
5.0	32	48	72	90	95	105
10.0	32	48	72	90	95	100

<b>RX 80/0.4A-Q-CT</b>						
P2 (Kpa)	P1 (MPa)					
	0.02	0.05	0.1	0.2	0.3	0.4
2.0	45	65	85	110	120	128
2.5	45	62	82	106	115	120
3.0	43	60	80	106	105	115
5.0	40	57	78	106	105	115
10.0	40	57	78	106	105	115
<b>RX 150/0.4A-Q-CT</b>						
P2 (Kpa)	P1 (MPa)					
	0.02	0.05	0.1	0.2	0.3	0.4
2.0	32	76	150	230	320	380
3.0	32	76	150	230	320	380
5.0	28	76	150	230	320	380
8.0	25	65	145	230	320	380
10.0	10	65	145	230	320	380
15.0	10	60	145	230	320	380
<b>RX 180/0.4A-Q-CT</b>						
P2 (Kpa)	P1 (MPa)					
	0.02	0.05	0.1	0.2	0.3	0.4
2.0	40	80	180	260	350	400
3.0	40	80	180	260	350	400
5.0	35	80	180	260	350	400
8.0	30	76	155	260	350	400
10.0	12	76	155	260	350	400
15.0	12	76	155	260	350	400
<b>RX 200/0.4A-Q-CT</b>						
P2 (Kpa)	P1 (MPa)					
	0.02	0.05	0.1	0.2	0.3	0.4
2.0	50	115	190	300	370	450
3.0	50	123	198	300	370	450
5.0	50	123	198	300	370	450
8.0	38	123	180	300	370	450
10.0	15	123	180	300	370	450
15.0	15	123	180	300	370	450



川以长流乃致远

天因直上而成高

Chuantian Chengdu Branch

Tel: 028-67820556

Email: [jasonctgas@hotmail.com](mailto:jasonctgas@hotmail.com)

Add: No.1606 Fuhua South Road,  
Wuhou District, Chengdu, China

Leshan Chuantian Gas Equipment Co., Ltd.

Tel: 0833-2448808

Add: No. 199, Zhenxing Ave., Industry Cluster  
Zone, Leshan, Sichuan, China

Web: <http://www.ctgas.cn/>