

GP1000 Pilot Type Piston Steam Regulator

01 Pilot valve

Lifting ball seal pilot valve assembly, the pilot valve disc is made of anti-corrosion tool steel, which is ground by imported grinding machine to achieve 0.01% steam leakage.

02 Pressure pistons

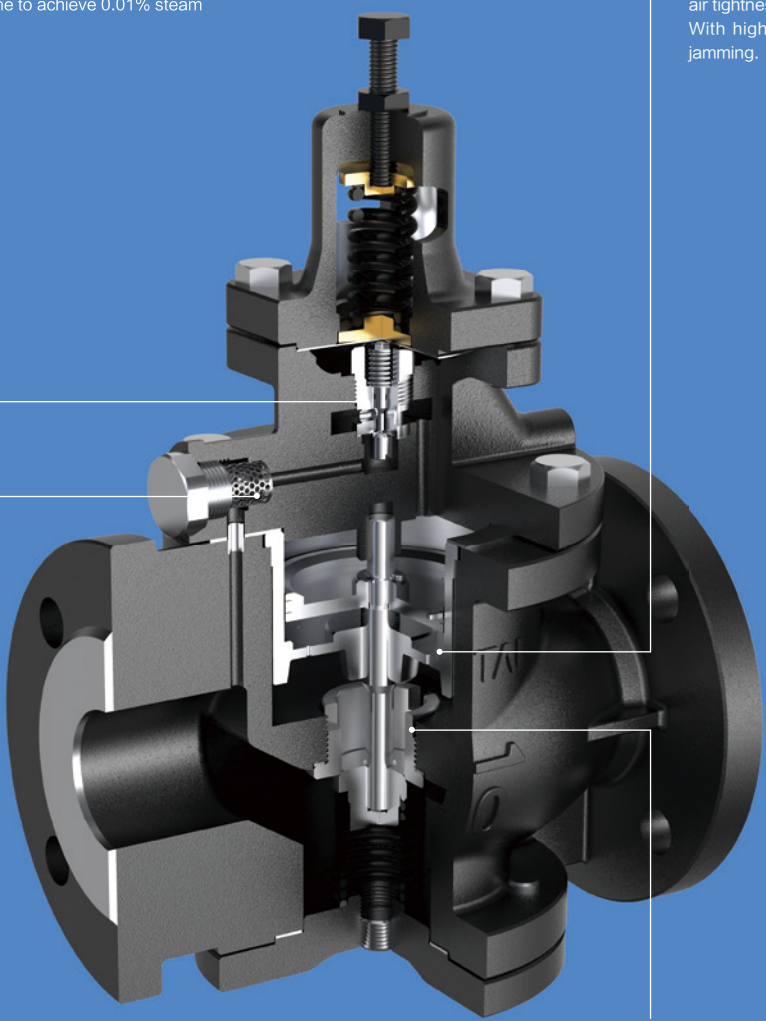
Stainless steel cylinder, piston with built-in elastic ring and high temperature tetrafluoroidal resistance. Ensure piston air tightness and wear resistance. With high lubricity to prevent impurity jamming.

03 Pilot valve filtration

Built-in 200 mesh filter to reduce impurity jamming and wear of pilot valve components.

04 Static pressure holding after valve

The main disc, the main valve seat is made of imported tool steel, through heat treatment + cryogenic treatment + aging to reach more than 60HRC hardness, with super wear resistance and cavitation resistance. The main disc adopts a spherical sealing structure for superior sealing performance, and the valve seat leakage class is ANSIIV.



GP1000 Pilot Type Piston Steam Regulator

DN15–DN100 Flanged | Pilot-operated piston structure | Cast iron, stainless steel



Body Material

Cast iron, stainless steel

Specification and Connection

DN15–DN100 Flanged PN16/PN25

Technical Parameters

Valve design: PN25
PMO Maximum working pressure under saturated steam: 16bar g
TMO Maximum working temperature: 220°C
Inlet pressure: 1bar–16bar
Reduced pressure: 0.5bar–14bar

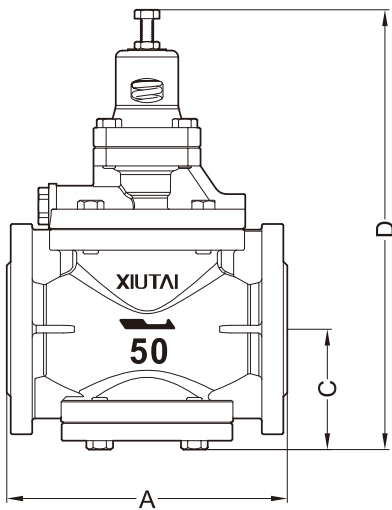
Material list

Main valve body, pilot valve body	GGG40/A216 WCB/A351CF8
Main seat, pilot seat	A276 440
Piston, piston ring	Bronze/A276 304
Pressure regulating spring	50CrVA
Regulating diaphragm	AISI301
Body gasket	304+Graphite

Pressure control range

Blue spring: 0.5bar–9bar
Green spring: 1bar–14bar

GP1000 DN15–DN100



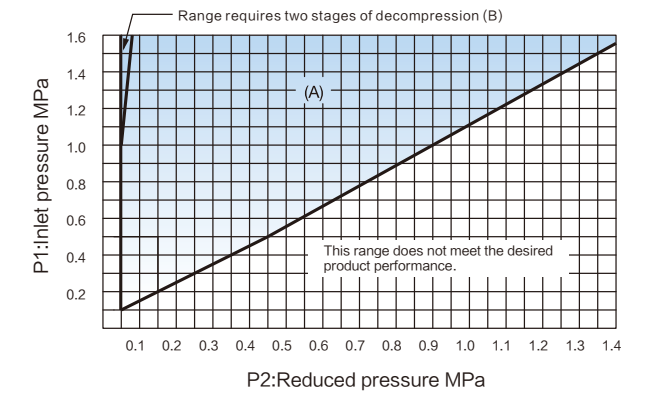
Dimensions

DN	A	C	D	
15	150	64	291	
20	150	64	291	
25	160	67	300	
32	180	82	333	
40	200	82	333	
50	220	93	353	
65	280	100	357	
80	310	122	404	
100	350	144	450	

GP1000 Pilot Type Piston Steam Regulator

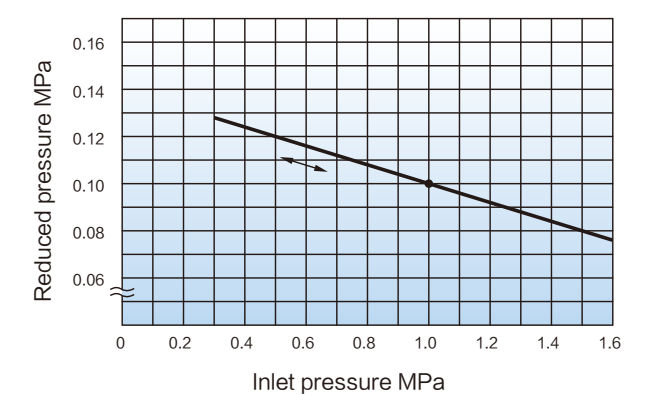
DN15–DN100 Flanged | Pilot-operated piston structure | Cast iron, stainless steel

Specification selection chart



Refer to the above selection chart to select the most appropriate pressure reducing valve. Find the point of intersection of inlet pressure (P1) and reduced pressure (P2). When within range(A) can be controlled by a pressure reducing valve. When the point of intersection is within range (B), reduce pressure in two stages. When within range (C), maximum performance cannot be obtained.

Pressure characteristic chart



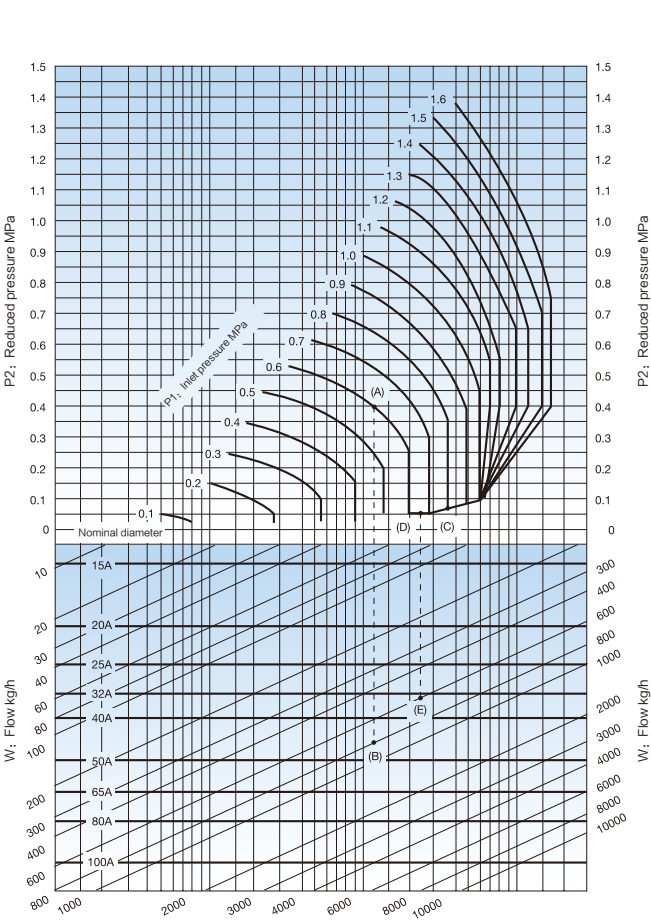
Reduced pressure is set to 0.1 MPa when inlet pressure is 1.0 MPa. The chart indicates a variation in reduced pressure when the inlet pressure is changed from 0.3 to 1.6 MPa.

Cv correction table

Table of rated Cv value (Cv value when correction factor C = 1)

Nominal diameter	15	20	25	32	40
Cv value	1	2.3	4	6.5	9
Nominal diameter	50	65	80	100	–
Cv value	16	25	36	64	–

Nominal diameter selection chart (for steam)



For example 1
Take a pressure reducing valve whose inlet pressure is (P1) 0.6 MPa, reduced pressure (P2) 0.4 MPa, flow rate 600 kg/h. When determining the nominal size, find the point of intersection (A) of inlet pressure 0.6 MPa and reduced pressure 0.4 MPa. Vertically proceed from point (A) to come across the flow rate 600 kg/h, and regard this point as (B). Point (B) is between nominal sizes 40 and 50. Select the larger nominal size , in this example, nominal size 50.

For example 2
Take a pressure reducing valve whose inlet pressure is (P1) 0.8 MPa, reduced pressure (P2) 0.05 MPa, flow rate 600 kg/h. When determining the nominal size, find the point of intersection (C) of inlet pressure 0.8 MPa and reduced pressure 0.05 MPa. Vertically proceed from point (D) to come across the flow rate 600 kg/h, and regard this point as (E). Point (E) is between nominal sizes 32 and 40. Select the larger nominal size , in this example, nominal size 40.

- Secure a safety rate of 80 to 90%

GP1000 Pilot Type Piston Steam Regulator

DN15–DN100 Flanged | Pilot-operated piston structure | Cast iron, stainless steel

Flow table (kg/h)										
P1(MPa)	P2(MPa)	15	20	25	32	40	50	65	80	100
1	0.05*	92	212	369	600	831	1478	2310	3326	5913
	0.1–0.4	132	303	528	858	1188	2112	3300	4752	8448
	0.5	127	292	508	825	1143	2033	3176	4574	8132
	0.6	116	268	467	760	1052	1871	2923	4210	7484
	0.7	104	239	416	676	936	1664	2601	3745	6659
	0.8	87	200	348	566	784	1394	2179	3137	5578
	0.9	63	145	252	410	568	1010	1578	2273	4042
0.9	0.1–0.4	120	276	480	780	1080	1920	3000	4320	7680
	0.5	110	253	441	716	992	1764	2756	3969	7056
	0.6	98	226	393	639	885	1574	2460	3543	6299
	0.7	82	290	330	537	744	1323	2067	2976	5292
	0.8	60	138	240	390	540	961	1501	2162	3844
0.8	0.1–0.3	108	248	432	702	972	1728	2700	3888	6912
	0.4	103	237	412	670	928	1650	2578	3712	6600
	0.5	92	212	369	600	832	1479	2311	3328	5916
	0.6	77	179	311	506	701	1247	1949	2806	4989
	0.7	56	130	227	369	511	909	1420	2045	3636
0.7	0.1–0.3	96	220	384	624	864	1536	2400	3456	6144
	0.4	86	197	344	559	774	1377	2151	3098	5508
	0.5	72	167	291	474	656	1166	1823	2625	4667
	0.6	53	122	213	346	480	854	1334	1921	3416
0.6	0.1–0.2	84	193	336	546	756	1344	2100	3024	5376
	0.3	79	182	316	514	712	1266	1979	2850	5067
	0.4	67	155	270	438	607	1080	1687	2430	4321
	0.5	49	114	198	322	447	795	1242	1788	3180
0.5	0.1–0.2	72	165	288	468	648	1152	1800	2592	4608
	0.3	61	141	246	400	554	986	1540	2218	3944
	0.4	45	105	182	297	411	731	1142	1645	2925
0.4	0.1	60	138	240	390	540	960	1500	2160	3840
	0.2	55	126	220	358	496	882	1378	1984	3528
	0.3	41	95	165	268	372	661	1033	1488	2646
0.3	0.1	48	110	192	312	432	768	1200	1728	3072
	0.2	36	83	145	237	328	583	911	1312	2333
0.2	0.1	30	70	123	200	277	493	770	1109	1972
0.1	0.05	18	41	72	118	164	291	455	656	1166

*When the primary pressure is greater than 0.7MPa and the decompression ratio is greater than 10:1, the rated Cv value is multiplied by the correction factor C obtained in Figure 1 to calculate the Cv correction value.

GP2000 Pilot Type Piston Steam Regulator

01 Pilot valve

Lifting ball seal pilot valve assembly, the pilot valve disc is made of anti-corrosion tool steel, which is ground by imported grinding machine to achieve 0.01% steam leakage.

02 Decompression range

Depending on the range, decompression springs of different colors and parameters are available for user selection.

03 Pilot valve filtration

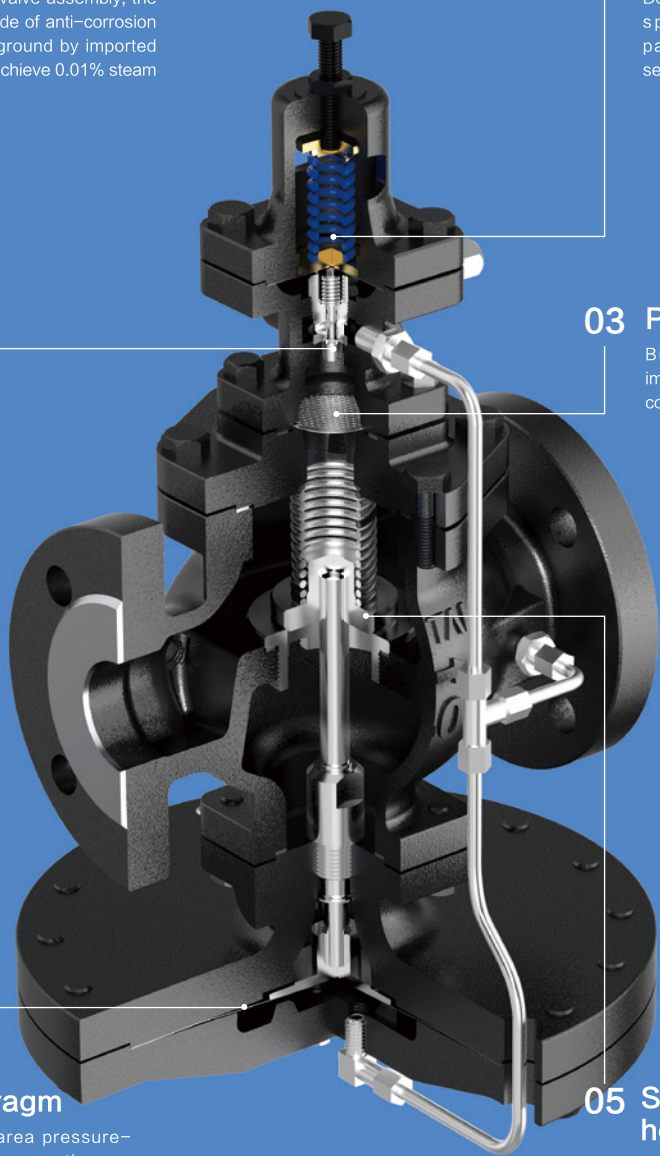
Built-in 200 mesh filter to reduce impurity jamming and wear of pilot valve components.

04 Main diaphragm

The use of large-area pressure-bearing main diaphragm, the use of copper plated material imported from Japan, can sense small changes in pressure while reducing all fatigue, compared with stainless steel diaphragm, the service life is significantly improved.

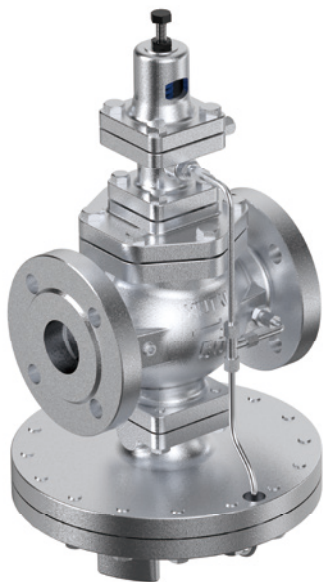
05 Static pressure holding after valve

The main disc, the main valve seat is made of imported tool steel, through heat treatment + cryogenic treatment + aging to reach more than 60HRC hardness, with super wear resistance and cavitation resistance. The main disc adopts a spherical sealing structure for superior sealing performance, and the valve seat leakage class is ANSIIV.



GP2000 Pilot Type Piston Steam Regulator

DN15–DN100 Flanged | Pilot–operated | Carbon steel, stainless steel



Body Material

Carbon steel, stainless steel

Specification and Connection

DN15–DN100 Flanged PN16/PN25
DN15–DN100 Flanged ANSI 150

Technical Parameters

Valve design: PN25
PMO Maximum working pressure under saturated steam: 20bar g
TMO Maximum working temperature: 230℃
Inlet pressure: 1bar–20bar
Reduced pressure: 0.2–14 bar

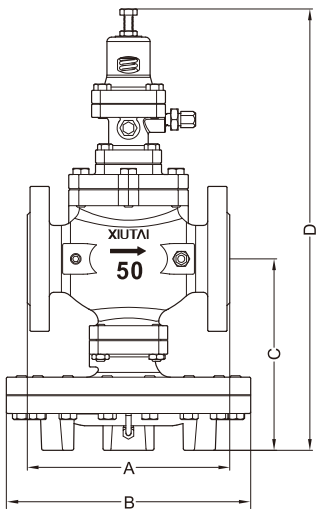
Material list

Main valve body, pilot valve body	GGG40/A216 WCB/A351CF8
Main seat, pilot seat	A276 440
Main valve, pilot valve	A276 420
Pressure regulating spring	50CrVA
Regulating diaphragm	AISI301
Body gasket	304+Graphite

Pressure control range

Yellow spring: 0.2bar–1.5bar
Blue spring: 0.5–9bar
Green spring: 1bar–14bar

GP2000 DN15–DN100



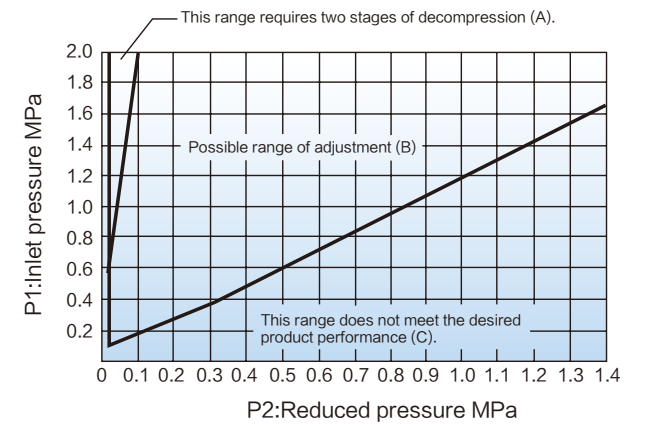
Dimensions

DN	A	B	C	D
15	150	200	170	398
20	160	200	170	398
25	160	226	175	404
32	180	226	192	434
40	200	226	192	434
50	230	278	216	498
65	280	352	251	552
80	310	352	264	575
100	350	401	321	658

GP2000 Pilot Type Piston Steam Regulator

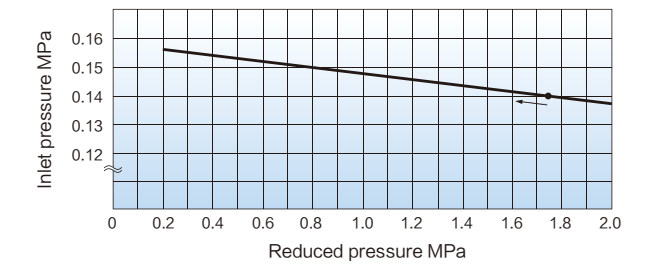
DN15–DN100 Flanged | Pilot–operated | Carbon steel, stainless steel

Specification selection chart



Refer to the above selection chart to select the most appropriate pressure reducing valve. Find the point of intersection of inlet pressure (P1) and reduced pressure (P2). When the point of intersection is within range (A), reduce pressure in two stages. When within range(B) can be controlled by a pressure reducing valve. When within range (C), maximum performance cannot be obtained. When reducing pressure in two stages, maximize the distance between the valves (at least 3m)

Pressure characteristic chart



Reduced pressure is set to 0.14 MPa when inlet pressure is 1.75 MPa. The chart indicates a variation in reduced pressure when the inlet pressure is changed from 0.2 to 2.0 MPa.

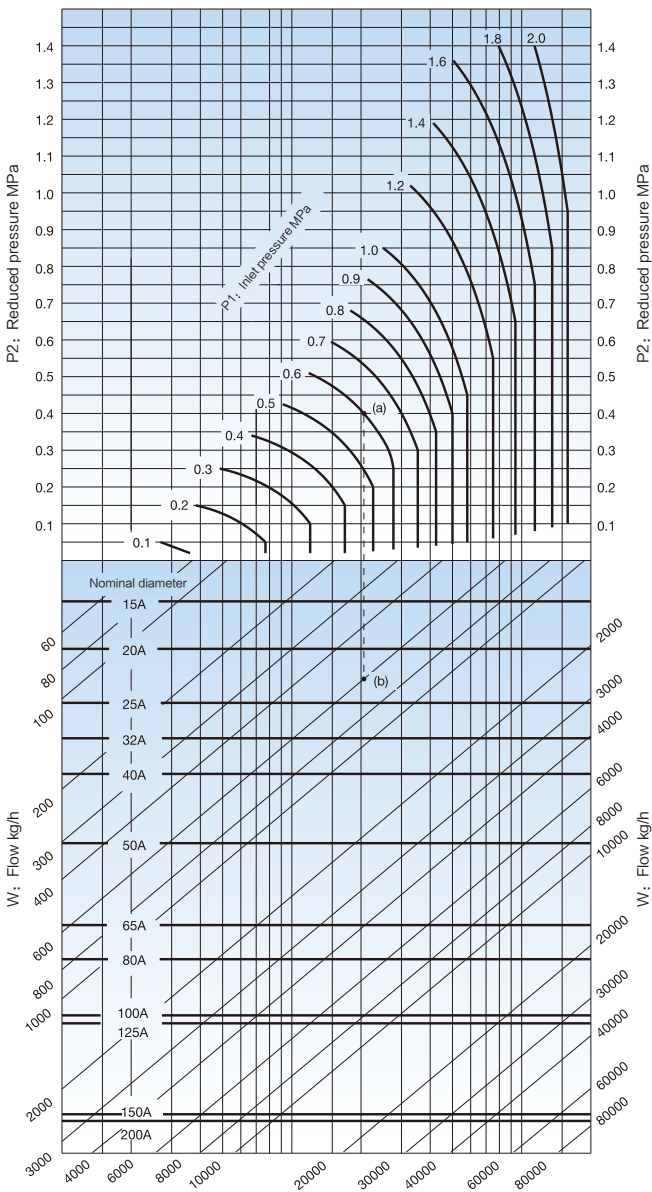
Cv correction table

Table of rated Cv value (Cv value when correction factor C = 1)

Nominal diameter	15	20	25	32	40	50
Cv value	5	7.2	10.9	14.3	18.8	32

Nominal diameter	65	80	100	125	150	200
Cv value	54	70	108	112	225	234

Nominal diameter selection chart
(for steam/external inspection)



For example
 Take a pressure reducing valve whose inlet pressure (P1) is 0.6 MPa, reduced pressure (P2) 0.4 MPa, flow rate 600 kg/h. When determining the nominal size, find the point of intersection (A) of inlet pressure 0.6 MPa and reduced pressure 0.4 MPa. Vertically proceed from point (A) to come across the flow rate 600 kg/h, and regard this point as (B). Point (B) is between nominal sizes 20 and 25. Select the larger nominal size ,in this example, nominal size 25.

GP2000 Pilot Type Piston Steam Regulator

DN15–DN100 Flanged | Pilot-operated | Carbon steel, stainless steel

Flow table													(kg/h)
P1(MPa)	P2(MPa)	15	20	25	32	40	50	65	80	100	125	150	200
2.0	0.1–0.9	1260	1814	2746	3603	4737	8064	13608	17640	27216	28224	56700	58968
	1	1232	1775	2687	3525	4634	7889	13330	17280	26661	27648	55543	57765
	1.2	1136	1636	2477	3250	4273	7273	12290	15931	24580	25490	51208	53257
	1.4	1012	1458	2207	2896	3808	6481	10952	14197	21904	22715	45633	47459
1.8	0.1–0.8	1140	1641	2485	3260	4286	7296	12312	15960	24624	25536	51300	53352
	0.9	1113	1603	2426	3183	4185	7125	12039	15606	24078	24969	50,162	52169
	1	1067	1537	2327	3053	4014	6832	11544	14965	23089	23944	48102	50026
	1.2	954	1374	2081	2730	3590	6111	10325	13385	20651	21416	43024	44745
	1.4	803	1157	1751	2298	3021	5143	8690	11265	17380	18024	36210	37658
1.6	0.1–0.7	1020	1468	2223	2917	3835	6528	11016	14280	22032	22848	45900	47736
	1	893	1286	1947	2554	3358	5716	9658	12520	19317	20033	40245	41855
	1.3	664	956	1448	1900	2498	4253	7186	9315	14378	14905	29943	31141
1.4	0.1–0.6	900	1296	1962	2574	3384	5760	9720	12600	19440	20160	40500	42120
	1	702	1011	1531	2009	2642	4497	7599	9851	15199	15762	31664	32931
	1.1	620	893	1352	1773	2331	3969	6706	8694	13413	13910	27945	29062
1.2	0.1–0.5	780	1123	1700	2230	2932	4992	8424	10920	16848	17472	35100	36504
	1	477	687	1040	1365	1795	3055	5162	6692	10325	10708	21512	22372
1	0.1–0.4	660	950	1438	1887	2481	4224	7128	9240	14256	14784	29700	30888
	0.5	635	914	1385	1817	2388	4066	6870	8906	13740	14249	28626	29771
	0.8	435	627	950	1246	1638	2789	4713	6109	9426	9775	19637	20423
0.9	0.1–0.4	600	864	1308	1716	2256	3840	6480	8400	12960	13440	27000	28080
	0.5	551	793	1201	1576	2072	3528	5961	7728	11923	12364	24840	25833
	0.7	413	595	901	1182	1554	2646	4471	5796	8942	9273	18630	19375
0.8	0.1–0.3	540	777	1177	1544	2030	3456	5832	7560	11664	12096	24300	25272
	0.5	462	665	1007	1322	1738	2958	4998	6480	9997	10368	20828	21662
0.7	0.1–0.3	480	691	1046	1372	1804	3072	5184	6720	10368	10752	21600	22464
	0.5	364	525	794	1042	1371	2333	3943	5111	7886	8178	16430	17087
0.6	0.1–0.2	420	604	915	1201	1579	2688	4536	5880	9072	9408	18900	19,656
	0.3	395	570	862	1132	1488	2533	4280	5549	8561	8878	17836	18550
	0.5	248	357	541	710	934	1590	2686	3482	5373	5572	11195	11643
0.5	0.1–0.2	360	518	784	1029	1353	2304	3888	5040	7776	8064	16200	16848
	0.3	308	443	671	881	1158	1972	3332	4320	6665	6912	13885	14441
	0.4	228	329	498	653	859	1462	2471	3203	4943	5126	10298	10710
0.4	0.05–0.15	300	432	654	858	1128	1,920	3240	4200	6480	6720	13500	14040
	0.3	206	297	450	591	777	1323	2235	2898	4471	4636	9315	9687
0.3	0.05–0.1	240	345	523	686	902	1536	2592	3360	5184	5376	10800	11232
	0.2	182	262	397	521	685	1166	1971	2555	3943	4089	8215	8543
0.2	0.05	180	259	392	515	677	1152	1944	2520	3888	4032	8100	8424
	0.1	154	221	335	440	579	986	1666	2160	3332	3456	6942	7220
0.1	0.05	91	131	198	260	342	583	985	1277	1971	2044	4107	4271

BRV Direct-acting Steam Regulators

01 Bellows

The pressure-sensing part is a 316Ti bellows for excellent life and corrosion resistance.

02 Easy to adjust

It adopts high-strength plastic handle, which is light and beautiful to operate.

03 Circular arc seat

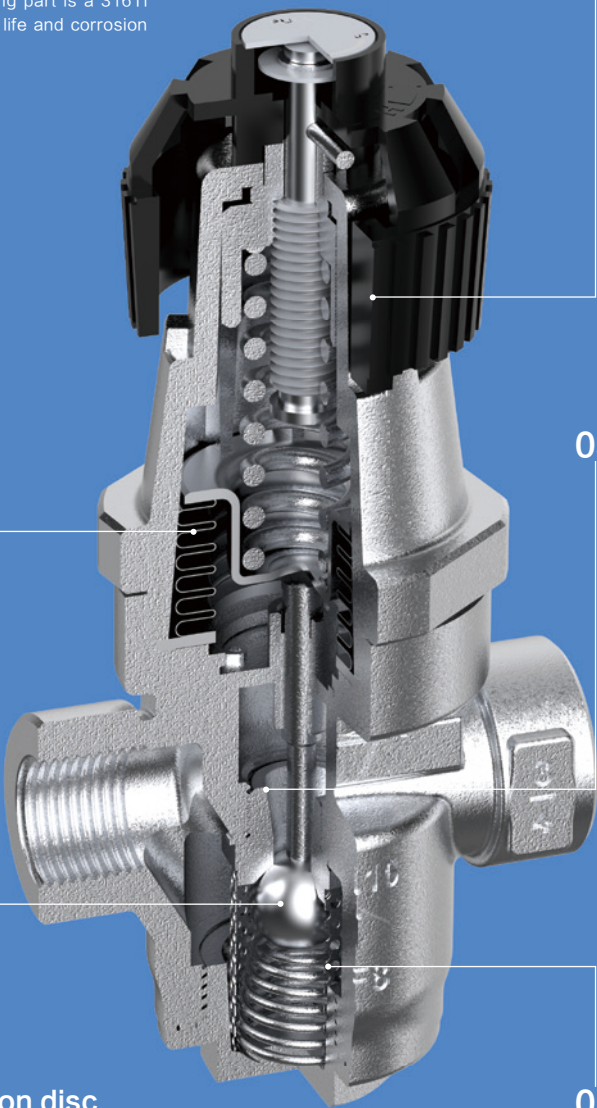
The valve seat adopts an inner circular arc surface structure, and the contact surface between the main valve seat and the valve disc seal is large.

04 High precision disc

G5 precision hard alloy steel balls are used, which are wear-resistant and the main valve has no leakage.

05 Filter function

The main valve is equipped with a 60-mesh double-layer filter to isolate impurities.



BRV Direct-acting Steam Regulators

1/2"-1" Screwed | Stainless steel



Body Material

Stainless steel

Specification and Connection

DN15-DN25 Screwed BSP,BSPT,NPT

Technical Parameters

Valve design: PN16
PMO Maximum working pressure under saturated steam: 16bar g
TMO Maximum working temperature: 220℃

Material list

Body, Bonnet	A351CF8
Seat	A182 F304
Valve core	SUS440C
Spool return spring	A240 316
Pressure regulating spring	60Si2Mn
Bellows	316Ti

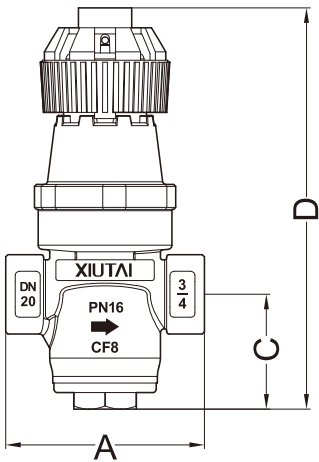
Pressure control range

1bar-3bar
2bar-8bar

Installation Position

Horizontal connection : from left to right
Horizontal connection : from right to left

BRV DN15-DN25 GGG40



Dimensions

DN	A	C	D	
15	85	52	192	
20	95	55	200	
25	105	58	104	