

# GP-1000, GP-18/28, GP-1

## For Steam, Air and Non-Corrosive Gas

The GP-1000, GP-18/28, GP-1 Series valves are pilot-controlled for accurate regulation of pressure under wide-ranging flow. Internal pilot design eliminates external components and piping.

Internally piloted GP Series valves are capable of larger capacity and greater accuracy than direct acting valves. Bodies have three pressure ratings to assure the most economical match to your application. Internally piloted GP Series valves are best suited for use in continuous distribution applications.

Completely supported by piping, lightweight GP Series valves install easily with NPT or flanged connections. A stainless steel diaphragm, hardened stainless steel working parts and integral removable strainer team up to provide high performance over a long, trouble-free service life. Valves are equipped with a caged main valve assembly (separate shutoff surfaces and flow control ports), piston valve rings for longer life and an external adjusting screw with locking nut and cover. All working parts are renewable in-line. For air service, a Teflon® seat assures tight shutoff.

**For a fully detailed certified drawing, refer to list below.**  
**GP-1 CDY #1027 GP-1000 NPT CDY #1074**  
**GP-18/28 CDY #1026 GP-1000 Flanged CDY #1075**

Model Number	Pressure		Spring Color	Application	Maximum Temp. °F (°C)	Minimum Diff. psig (bar)	Body	Main Valve/ Valve Seat	Pilot Valve/ Seat	*Piston/Cylinder	Diaphragm
	Inlet psig (bar)	Reduced psig (bar)									
NPT GP-1000	15 - 150 (1 - 10)	5 - 125 (.34 - 8.6)	Black	Steam	450 (232)	7 (.48)	Ductile Iron ASTM A536	Stainless Steel AISI 420	Stainless Steel AISI 403/420	Bronze/Bronze	Stainless Steel AISI 301
150 ANSI GP-1000	15 - 125 (1 - 8.6)	5 - 106 (.34 - 7.3)									
NPT GP-1000A	15 - 150 (1 - 10)	5 - 125 (.34 - 8.6)		Air & Gas	175 (79)						
150 ANSI GP-1000A	15 - 125 (1 - 8.6)	5 - 106 (.34 - 7.3)									
GP-1000SS GP-1000AS	15 - 150 (1 - 10)	7 - 125 (.5 - 8.6)	Steam	450 (232)	Stainless Steel AISI 304	Stainless Steel AISI 420	Stainless Steel AISI 403/420	Stainless Steel AISI 420/ Stainless Steel AISI 403			
GP-18 GP-28	30 - 250 (2 - 17)	**5 - 115 (.34 - 8)	Blue Stripe	Steam	450 (232)	10 (.69)	Cast Iron ASTM A48 CL30	Stainless Steel AISI 403/420		Stainless Steel AISI 420	Stainless Steel AISI 304
GP-18A GP-28A		115 - 175 (8 - 12)	Gold	Air & Gas	250 (121)			Stainless Steel AISI 403/420 w/Teflon Disc			
GP-1	30 - 300 (2 - 21)	5 - 60 (.34 - 40)	Blue Stripe	Steam	535 (279)	15 (1)	Carbon Steel ASTM GR. WCB	Stainless Steel AISI 403/420			
GP-1A		60 - 175 (4 - 12)	Gold	Air & Gas	250 (121)			Stainless Steel AISI 403/420 w/Teflon Disc			

NOTES: Sizes 2" (50 mm) and below are NPT connections. Sizes 2" (50 mm) and larger are flanged connections.

Model GP-1000 is available with air-loaded pilots. Consult factory. Turndown ratio for GP-1000 20:1.

GP-18/28 & GP-1 maximum reduction ratio 10:1. GP-1, GP-18/28 **not rated for dead end service.**

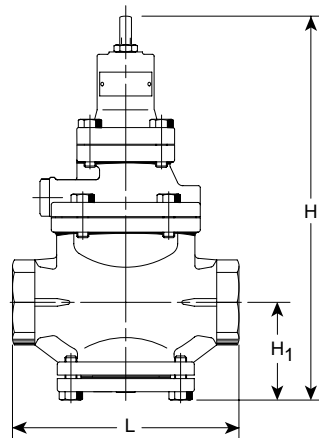
\*AISI 420 stainless steel piston & cylinder available. Consult factory.

\*\*6" & 8" (150 & 200 mm) GP-28 available only in 5-57 psig & 57-115 psig (.34 - 4 bar & 4 - 8 bar) spring. 10" (255 mm) GP-28 available only in 5-57 psig (.34 - 4 bar).

Pressure and Temperature Controls



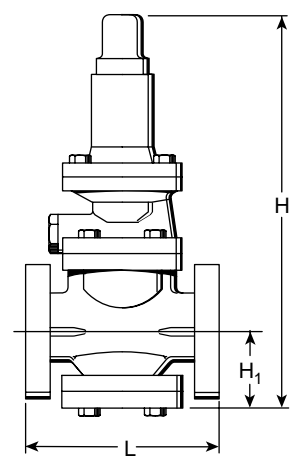
GP-1000



GP-1000



GP-28



GP-28, GP-1

**All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.**



# GP-1000, GP-18/28, GP-1

## For Steam, Air and Non-Corrosive Gases

### GP-1000, GP-1000A Dimensions and Weights

Symbol	Connection Size																	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
	1/2	15	3/4	20	1	25	1-1/4	32	1-1/2	40	2	50	2-1/2	65	3	80	4	100
L	5-7/8	150	6-1/8	155	6-5/16	160	7-1/2	190	7-1/2	190	8-11/16	220	9-5/8	245	11-3/8	290	13	330
H	11-1/4	285	11-1/4	285	11-7/8	300	12-3/4	323	12-3/4	323	13-5/8	347	14	357	15-7/8	404	17-3/4	450
H <sub>1</sub>	2-1/2	64	2-1/2	64	2-5/8	67	3-1/4	82	3-1/4	82	3-11/16	93	4	100	4-13/16	122	5-9/16	144
Wt, lb (kg)	15-1/2 (7)		15-1/2 (7)		19 (8.5)		25-1/2 (12)		27-1/2 (12.5)		40 (18)		66 (30)		77 (35)		116 (53)	
C <sub>v</sub>	1		2.3		4		6.5		9		16		25		36		64	

NOTE: GP-1000 is 1/2" - 2" (20 - 50 mm) NPT, 2" - 4" (50 - 100 mm) ANSI 150 lb flanged. For sizes 5" to 8" (125 - 205 mm), consult factory.

### GP-18/28, 18A/28A Dimensions and Weights

Symbol	Connection Size													
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
	1/2	15	3/4	20	1	25	1-1/4	32	1-1/2	40	2*	50*		
L	8-5/8	219	8-3/4	222	10-1/8	257	10-5/8	270	11-1/8	283	12	305		
H	12	311	12	311	15	369	15	369	15	383	16	415		
H <sub>1</sub>	3	77	3	77	4	87	4	87	4	94	4	103		
GP-18/18A wt lb (kg)	22 (10)		22 (10)		35 (16)		38 (17)		42 (19)		58 (25)			
GP-28/28A wt lb (kg)	-		-		-		-		-		55 (25)			
C <sub>v</sub>	2.1		3.5		6.25		9.7		14		20.8			

\*GP-28 2" (50 mm) flanged face to face 9-1/2" (238 mm).

### GP-18/28, 18A/28A Dimensions and Weights

Symbol	Connection Size															
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
	2-1/2	65	3	80	4	100	5	125	6	150	8	200	10	250		
L	10-3/8	264	12	305	14-3/4	375	18-7/8	480	19-7/8	505	23-1/2	597	28-1/8	715		
H	19	483	20	512	23	592	27	697	30	741	32	822	34	864		
H <sub>1</sub>	5	125	6	139	6	170	9	225	9	225	11	271	13	330		
GP-18/18A wt lb (kg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GP-28/28A wt lb (kg)	77 (35)		97 (44)		192 (87)		310 (141)		438 (197)		710 (323)		900 (409)			
C <sub>v</sub>	36		46		79.5		114		152		265		412			

NOTES: GP-18 1/2" - 2" (15 - 50 mm) are flanged and supplied with NPT companion flanges, gasket and bolts—not shown. "L" dimensions include the companion flanges. GP-28 is ANSI 250 lb flanged.

### GP-1/1A Dimensions and Weights

Symbol	Connection Size																			
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
	3/4	20	1	25	1-1/4	32	1-1/2	40	2*	50*	2-1/2	65	3	80	4	100	5	125	6	150
L	9	229	10-1/4	260	11	280	11-1/8	283	11-7/8	302	11-3/8	289	13-3/8	340	15-3/8	391	19-1/4	489	20-1/2	521
H <sub>1</sub>	3-1/8	78	3-1/2	90	3-3/4	96	3-3/4	96	4-1/4	109	5	128	5-1/2	146	6-3/4	172	8-3/4	221	8-3/4	224
H	14	352	16-1/2	418	17	433	17	433	18-1/2	468	20-3/4	529	22	557	25	637	29-5/8	751	31	785
Wt, lb (kg)	31 (14)		50 (23)		59 (27)		59 (27)		74 (34)		113 (52)		150 (68)		226 (103)		353 (160)		513 (233)	
C <sub>v</sub>	3.5		6.25		9.7		14		20.8		36		46		79.5		114		152	

NOTE: 3/4" - 2" (20 - 50 mm) are flanged and supplied with NPT companion flanges, gasket and bolts—not shown. "L" dimensions include the companion flanges. GP-1 2" (50 mm) and larger are ANSI 300 lb flanged.

\*GP-1 2" (50 mm) flanged face to face 10-1/4" (256 mm).

Pressure and Temperature Controls

# GP-18/28, GP-1

## Capacities for Steam, Air and Non-Corrosive Gas

For GP-18A/28A/1A air capacities (scfm), multiply steam capacities by 0.36.

GP-18/28, GP-1 Capacities—Steam														
Inlet	Outlet	lb/hr												
		Connection Size												
		in												
psig		1/2†	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	5	6	8†	10†
20	5-10	125	208	371	576	831	1,234	2,136	2,730	4,717	6,764	9,019	15,724	24,447
	20	124	207	370	574	828	1,231	2,130	2,721	4,704	6,745	8,994	15,680	24,378
30	5-15	161	268	478	741	1,070	1,590	2,752	3,516	6,077	8,714	11,618	20,256	31,492
	30	126	209	374	580	837	1,244	2,153	2,751	4,755	6,818	9,091	15,850	24,642
40	25	166	276	494	766	1,106	1,644	2,845	3,635	6,282	9,008	12,011	20,940	32,556
	5-20	196	327	585	907	1,310	1,946	3,367	4,303	7,436	10,663	14,218	24,787	38,537
50	40	152	254	454	704	1,016	1,509	2,612	3,338	5,769	8,272	11,030	19,229	29,896
	32	197	329	588	912	1,316	1,956	3,383	4,325	7,475	10,719	14,293	24,918	38,740
	5-25	232	387	691	1,073	1,549	2,301	3,983	5,089	8,796	12,613	16,817	29,319	45,582
75	60	219	365	652	1,012	1,460	2,169	3,754	4,797	8,290	11,888	15,851	27,634	42,963
	48	283	472	842	1,307	1,886	2,802	4,849	6,196	10,709	15,356	20,474	35,696	55,496
	8-37	322	537	959	1,488	2,148	3,191	5,522	7,056	12,195	17,487	23,315	40,648	63,197
100	80	285	476	849	1,318	1,903	2,827	4,892	6,251	10,804	15,493	20,657	36,014	-
	65	364	606	1,083	1,680	2,425	3,603	6,236	7,968	13,771	19,747	26,329	45,903	-
	10-50	412	687	1,226	1,903	2,746	4,080	7,061	9,022	15,593	22,360	29,813	51,976	80,808
125	100	352	586	1,047	1,624	2,345	3,483	6,029	7,704	13,314	19,092	25,456	44,381	-
	80	453	755	1,349	2,092	3,019	4,486	7,764	9,921	17,146	24,587	32,783	57,154	-
	13-62	502	836	1,493	2,317	3,344	4,969	8,600	10,989	18,992	27,233	36,311	63,306	98,421
150	120	418	697	1,244	1,931	2,786	4,140	7,165	9,155	15,822	22,689	30,252	52,741	-
	100	521	869	1,551	2,408	3,475	5,163	8,936	11,418	19,733	28,296	37,728	65,775	-
	15-75	591	986	1,769	2,732	3,943	5,858	10,139	12,955	22,390	32,107	42,809	74,634	116,034
175	140	484	807	1,441	2,236	3,228	4,796	8,300	10,606	18,330	26,284	-	-	-
	120	589	982	1,753	2,721	3,927	5,835	10,098	12,903	22,300	31,978	42,637	74,334	-
	18-87	681	1,135	2,027	3,147	4,541	6,747	11,678	14,922	25,789	36,980	49,307	85,963	133,647
200	160	550	917	1,638	2,542	3,669	5,451	9,435	12,056	20,836	29,878	-	-	-
	140	657	1,094	1,954	3,033	4,377	6,503	11,255	14,381	24,855	35,641	-	-	-
	20-100	771	1,285	2,295	3,561	5,140	7,636	13,217	16,888	29,187	41,854	55,805	97,291	151,260
225	180	617	1,028	1,835	2,848	4,111	6,107	10,570	13,506	23,342	33,472	-	-	-
	140	807	1,346	2,403	3,730	5,383	7,998	13,842	17,687	30,568	43,833	-	-	-
	23-112	861	1,435	2,562	3,976	5,738	8,526	14,756	18,855	32,586	46,727	62,303	108,620	168,873
250*	180	791	1,318	2,354	3,653	5,272	7,833	13,557	17,323	29,939	42,931	-	-	-
	160	877	1,462	2,610	4,051	5,847	8,686	15,034	19,210	33,200	47,608	-	-	-
	140	947	1,579	2,819	4,375	6,315	9,382	16,238	20,749	35,859	51,420	-	-	-
300**	25-125	951	1,584	2,829	4,391	6,337	9,415	16,295	20,821	35,985	51,601	68,801	119,945	186,496
	180	1,090	1,817	3,245	5,036	7,269	10,799	18,691	23,883	41,277	59,189	78,919	-	-
	160	1,130	1,883	3,360	5,220	7,535	11,193	19,373	24,754	42,782	61,348	81,797	-	-
	30-150	1,154	1,924	3,436	5,332	7,696	11,433	19,789	25,286	43,700	62,664	83,552	-	-

Pressure and Temperature Controls

\*GP-18/28 to be used up to 250 psig (17.2 bar) inlet maximum.  
 \*\*GP-1 only to be used up to 300 psig (20.7 bar) inlet maximum.  
 †GP-1 not available in these sizes.



# GP-18/28, GP-1

Pressure and Temperature Controls

GP-18/28, GP-1 Capacities—Steam														
		kg/hr												
Inlet	Outlet	Connection Size												
		mm												
bar		15†	20	25	32	40	50	65	80	100	125	150	200†	250†
1.4	.35-.7	57	95	169	262	378	561	971	1,241	2,143	3,075	4,100	7,147	11,112
2.0	1.4	57	94	168	261	376	560	968	1,237	2,138	3,066	4,088	7,127	11,081
	.35-1	73	122	217	337	486	723	1,251	1,598	2,762	3,961	5,281	9,207	14,314
2.8	2	57	95	170	264	380	565	979	1,250	2,161	3,099	4,132	7,204	11,201
	1.7	76	126	224	348	503	747	1,293	1,652	2,855	4,095	5,459	9,518	14,798
3.4	.35-1.4	89	149	266	412	595	885	1,530	1,956	3,380	4,847	6,463	11,267	17,517
	2.8	69	116	206	320	462	686	1,187	1,517	2,622	3,760	5,014	8,740	13,589
5.2	2.2	90	150	267	415	598	889	1,538	1,966	3,398	4,872	6,497	11,326	17,609
	.35-1.7	105	176	314	488	704	1,046	1,810	2,313	3,998	5,733	7,644	13,327	20,719
6.9	4.1	100	166	296	460	664	986	1,706	2,180	3,768	5,403	7,205	12,561	19,529
	3.3	129	215	383	594	857	1,274	2,204	2,816	4,868	6,980	9,306	16,225	25,225
8.6	.55-2.6	146	244	436	676	976	1,450	2,510	3,207	5,543	7,949	10,598	18,476	28,726
	5.5	130	216	386	599	865	1,285	2,224	2,841	4,911	7,042	9,389	16,370	–
10.3	4.5	165	275	492	764	1,102	1,638	2,835	3,622	6,260	8,976	11,968	20,865	–
	.7-3.4	187	312	557	865	1,248	1,855	3,210	4,101	7,088	10,164	13,551	23,625	36,731
12.1	6.9	160	266	476	738	1,066	1,583	2,740	3,502	6,052	8,678	11,571	20,378	–
	5.5	206	343	613	951	1,372	2,039	3,529	4,510	7,794	11,176	14,901	25,979	–
13.8	.9-4.3	228	380	679	1,053	1,520	2,259	3,909	4,995	8,633	12,379	16,505	28,775	44,737
	8.3	190	317	565	878	1,266	1,882	3,257	4,161	7,192	10,313	13,751	23,973	–
15.5	6.9	237	395	705	1,095	1,580	2,347	4,061	5,190	8,970	12,862	17,149	29,898	–
	1-5.2	269	448	804	1,242	1,792	2,663	4,608	5,889	10,177	14,594	19,459	33,925	52,743
17.2*	9.6	220	367	665	1,016	1,467	2,180	3,773	4,821	8,332	11,947	–	–	–
	8.3	268	446	797	1,237	1,785	2,652	4,590	5,865	10,136	14,535	19,380	33,788	–
20.7**	1.2-6	310	516	921	1,430	2,064	3,069	5,308	6,783	11,722	16,809	22,412	39,074	60,749
	11.0	250	417	755	1,155	1,668	2,471	4,289	5,480	9,471	13,581	–	–	–
17.2*	9.6	299	497	888	1,379	1,990	2,956	5,116	6,537	11,298	16,200	–	–	–
	1.4-6.9	350	584	1,043	1,619	2,336	3,471	6,008	7,676	13,267	19,024	25,366	44,223	68,755
15.5	12.4	280	467	834	1,295	1,869	2,776	4,804	6,139	10,610	15,214	–	–	–
	9.6	367	612	1,092	1,695	2,447	3,635	6,292	8,040	13,894	19,924	–	–	–
17.2*	1.6-7.7	391	652	1,165	1,807	2,608	3,875	6,707	8,570	14,812	21,240	28,320	49,373	76,760
	12.4	360	599	1,070	1,660	2,396	3,560	6,162	7,894	13,609	19,514	–	–	–
20.7**	11.0	399	665	1,186	1,841	2,658	3,948	6,834	8,732	15,091	21,640	–	–	–
	9.6	431	718	1,281	1,989	2,870	4,265	7,381	9,491	16,300	23,373	–	–	–
17.2*	1.7-8.6	432	720	1,286	1,996	2,880	4,280	7,407	9,464	16,357	23,455	31,273	54,520	84,771
	12.4	495	826	1,475	2,289	3,304	4,909	8,496	10,856	18,762	26,904	35,872	–	–
20.7**	11.0	514	856	1,527	2,373	3,425	5,088	8,806	11,252	19,446	27,885	37,180	–	–
	2-10.3	525	875	1,562	2,424	3,498	5,197	8,995	11,494	19,864	28,484	37,978	–	–

\*GP-18/28 to be used up to 250 psig (17.2 bar) inlet maximum.

\*\*GP-1 only to be used up to 300 psig (20.7 bar) inlet maximum.

†GP-1 not available in these sizes.

## Capacities for Steam, Air and Non-Corrosive Gas

For GP-1000A air capacities (scfm), multiply steam capacities for GP-1000 by 0.36.

GP-1000 Capacities—Steam										
		lb/hr								
Inlet	Outlet	Connection Size								
		in								
psig		1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
20	5-10	60	137	237	386	534	949	1,482	2,138	3,797
	20	59	136	237	385	532	947	1,478	2,131	3,789
30	5-15	77	176	306	496	688	1,223	1,910	2,753	4,892
	30	60	137	239	389	538	957	1,494	2,154	3,828
40	25	79	181	316	513	711	1,264	1,974	2,846	5,057
	5-20	93	215	374	608	842	1,496	2,337	3,369	5,986
50	40	72	167	291	472	653	1,160	1,813	2,614	4,644
	32	51	216	376	611	846	1,504	2,348	3,386	6,017
	5-25	110	254	442	719	996	1,769	2,764	3,985	7,081
75	60	104	240	417	678	939	1,668	2,605	3,756	6,673
	48	135	310	539	876	1,213	2,155	3,365	4,851	8,621
	5-37	153	353	614	997	1,381	2,454	3,832	5,525	9,817
100	80	136	313	543	883	1,224	2,174	3,395	4,895	8,697
	65	173	398	693	1,126	1,559	2,771	4,328	6,239	11,086
	5-50	196	451	785	1,275	1,766	3,138	4,900	7,064	12,472
125	100	168	385	670	1,088	1,508	2,678	4,184	6,032	10,718
	80	216	496	863	1,402	1,941	3,450	5,388	7,768	13,803
	6-62	239	549	956	1,552	2,150	3,821	5,968	8,604	15,289
150	120	199	458	796	1,294	1,791	3,184	4,973	7,168	12,737
	100	248	571	993	1,613	2,234	3,970	6,202	8,940	15,885
	8-75	281	648	1,132	1,830	2,535	4,505	7,036	10,144	18,024

Pressure and Temperature Controls

GP-1000 Capacities—Steam										
		kg/hr								
Inlet	Outlet	Connection Size								
		mm								
bar		15	20	25	32	40	50	65	80	100
1.4	.35-.7	27	62	108	175	243	431	674	972	1,726
	1.4	27	62	108	175	242	430	672	968	1,722
2.0	.35-1	35	80	139	226	313	556	868	1,251	2,224
	2	27	62	109	177	245	435	679	979	1,740
2.8	1.7	36	82	144	233	323	575	897	1,294	2,299
	.35-1.4	42	98	170	276	383	680	1,062	1,531	2,721
	2.8	33	76	132	214	297	527	824	1,188	2,111
3.4	2.2	23	98	171	278	385	684	1,067	1,539	2,735
	.35-1.7	50	116	201	327	453	804	1,256	1,811	3,219
	4.1	47	109	190	308	427	758	1,184	1,707	3,033
5.2	3.3	61	141	245	398	551	979	1,530	2,205	3,919
	.35-2.6	70	160	279	453	628	1,115	1,742	2,511	4,462
	5.5	62	142	247	401	556	988	1,543	2,225	3,953
6.9	4.5	79	181	315	512	709	1,259	1,967	2,836	5,039
	.4-3.4	89	205	357	580	803	1,426	2,227	3,211	5,669
	6.9	76	175	305	495	685	1,217	1,902	2,742	4,872
8.6	5.5	98	225	392	637	882	1,568	2,449	3,531	6,274
	.4-4.4	109	250	434	706	977	1,737	2,713	3,911	6,949
	8.3	90	208	362	588	814	1,447	2,260	3,258	5,789
10.3	6.9	113	260	451	733	1,016	1,805	2,819	4,064	7,220
	.5-5.2	128	294	515	832	1,152	2,048	3,198	4,611	8,193

