

# Mark 608DS Series

## Low Pressure Double Seated Gas Regulators

The Mark 608DS is a double seated, self-operated gas regulator for use in tank blanketing applications. The double seated design allows the Mark 608DS to handle increased flow and higher pressure drops than similarly sized single seat valve types while maintaining ANSI Class VI shutoff. The large diaphragm is highly sensitive and insures accurate regulation. All wetted metal parts are produced from CF3M 316L Stainless Steel or WCB Carbon Steel for durability and long service life.



### SPECIFICATIONS

**Sizes:** 1-1/2" & 2" (DN40 & DN50)

#### End Connections

- ANSI 150/300 Integrally Flanged

#### Materials

- Body: Carbon Steel (WCB), Stainless Steel (CF3M)
- Trim: 316 Stainless Steel or Hastelloy C
- Spring Housing: Stainless Steel
- Diaphragm: Buna-N, Viton and EPDM
- Valve Seat: To match diaphragm

**Service:** Gas

**Shutoff:** ANSI Class VI

#### Ranges

- 1 to 5 inches w.c. (2,5 to 6,2 mbar)
- 4 to 8 inches w.c. (10,0 to 20 mbar)
- 8 to 28 inches w.c. (20 to 70 mbar)
- 10 to 17 inches w.c. (25 to 42 mbar)
- 14 to 28 inches w.c. (35 to 70 mbar)
- 0.75 to 1 psi (52 to 69 mbar)
- 1 to 2 psi (69 to 138 mbar)
- 1.5 to 3 psi (0,10 to 0,21 bar)
- 3 to 5 psi (0,21 to 0,34 bar)

**Operating Temperatures:** -15°F to 350°F (-26°C to 177°C)

**Estimate Weight:** 45 pounds (21 kgs)

#### Cv Rating:

- 1-1/2" size: 5 Cv; orifice 9/16" (14mm)
- 2" size: 17 Cv; orifice 1" (26mm)

**Maximum Inlet Pressures:** 150 psi (10,3 bar) maximum safety limit

**Maximum Outlet Pressure:** 20 psi (1,4 bar) maximum operating limit

**Pressure Sensing: Standard** - External Sensing Line with FNPT connection



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**FLOW CHARTS**

- 1-1/2" MK608DS Balanced Flow Capacities (Air at 1.0 s.g. in scfh)

Range	Set Point	Accuracy	Inlet Pressure (PSI)										
			2 psi	3 psi	5 psi	10 psi	15 psi	20 psi	25 psi	50 psi	75 psi	100 psi	150 psi
1.0 - 5.0" WC*	1.0" WC	3/4" WC	2380	2311	2234	1940	1886	2323	3964	4926	5593	5835	5405
	3.0" WC		2670	3545	4018	4260	4271	3883	3964	4726	5593	5835	5405
4.0 - 8.0" WC*	5.0" WC	1" WC	2566	3094	4049	5488	5409	5362	5239	6370	7360	7529	7135
	7.0" WC		2123	2443	3473	5112	6290	6637	6508	7963	9126	9411	8919
8.0 - 28.0" WC*	10.0" WC	1-1/2" WC	1988	2304	2964	4433	5970	7548	7858	9725	11128	11482	10811
	25.0" WC		1290	1580	1885	2169	2136	2404	2669	3185	3532	3952	3567
10.0 - 17.0" WC	12.0" WC	2" WC	2232	2823	3969	6222	7990	8077	8174	10022	11481	11858	11352
	15.0" WC		2104	2560	3403	5821	7480	8732	8874	10824	12365	12799	11892
14.0 - 28.0" WC	15.0" WC	2-1/2" WC	2040	2692	3672	5678	7043	8444	8699	10617	12365	12611	11892
	25.0" WC		1604	2167	3102	5366	6493	8340	8655	10617	12365	12611	11892
0.75 - 1 psi	0.75 psi	0.25 psi	2766	3652	4654	7014	8670	9913	10761	13165	18014	15435	14595
	1 psi		2225	3151	4503	6739	8599	9913	11507	14227	16192	16564	15676
1 - 2 psi	1.5 psi	0.30 psi		2692	4168	6416	8344	9927	11493	14227	16192	16564	15676
	2.0 psi		2232	3203	5422	7067	8628	9860	12103	13837	14305	13514	
1.5 - 3 psi	2.0 psi	0.40 psi		2363	4199	6468	8316	9927	11409	14227	16192	16514	15676
	3.0 psi			2778	6066	6993	8444	9626	12103	13837	13929	13514	
3 - 5 psi	3.5 psi	0.50 psi		2764	5678	7297	9100	10917	13590	15603	15811	15136	
	5.0 psi			5611	7079	8548	10412	13165	15014	15435	14595		

\* Must be inverted for proper operation if set at 8" wc or below

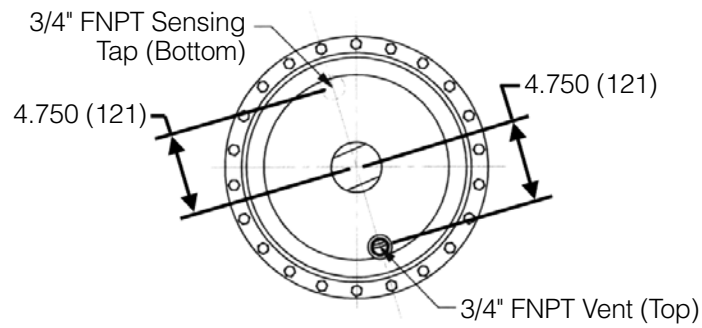
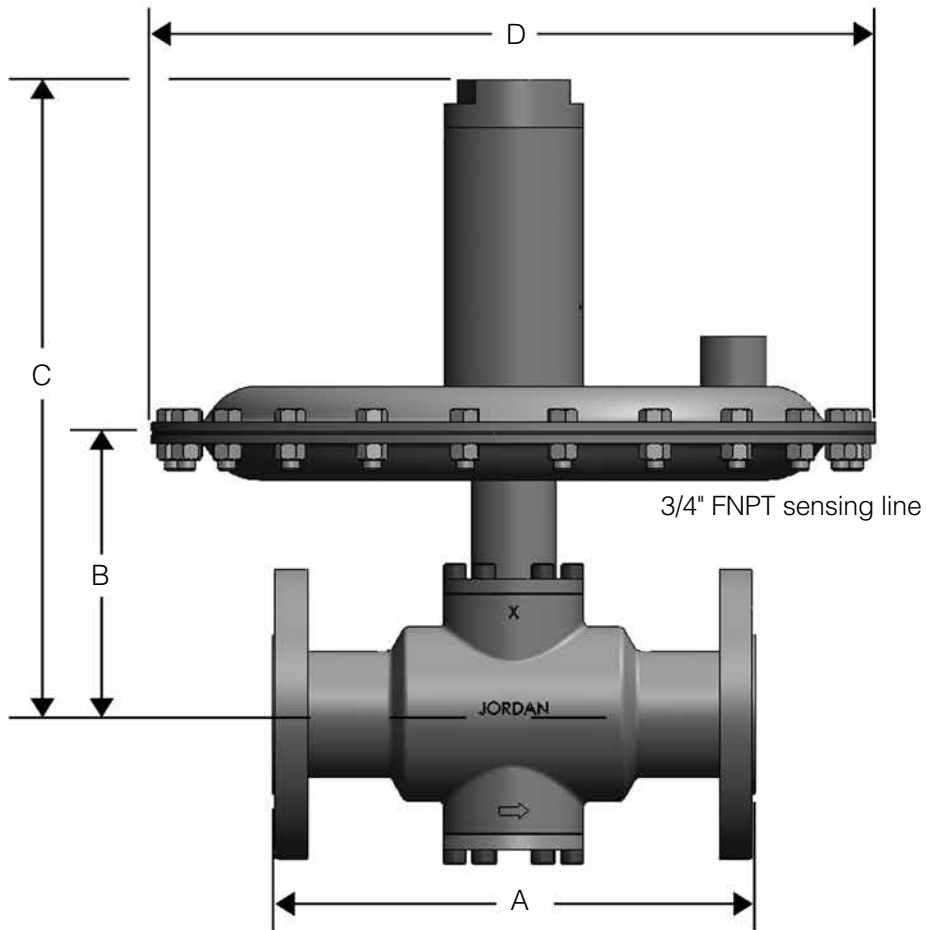
- 2" MK608DS Balanced Flow Capacities (Air at 1.0 s.g. in scfh)

Range	Set Point	Accuracy	Inlet Pressure (PSI)										
			2 psi	3 psi	5 psi	10 psi	15 psi	20 psi	25 psi	50 psi	75 psi	100 psi	150 psi
1.0 - 5.0" WC*	1.0" WC	3/4" WC	4811	5810	8217	12235	15351	16340	17453	22297	25024	25600	23785
	3.0" WC		5513	6661	9431	14025	17608	18825	20009	25694	28852	29364	27569
4.0 - 8.0" WC*	5.0" WC	1" WC	5628	6320	8335	12444	15121	16317	16758	22297	25025	25600	23785
	7.0" WC		5369	6067	8061	12032	14650	15882	16236	21660	24141	24847	23245
8.0 - 28.0" WC*	10.0" WC	1-1/2" WC	3977	4740	6824	10090	12900	16340	17475	22297	25025	25600	23785
	25.0" WC		1771	2286	3484	5286	6844	8639	9336	11892	13248	13553	12433
10.0 - 17.0" WC	12.0" WC	2" WC	3837	5260	7154	12080	15121	16293	17671	22263	25025	25600	23785
	15.0" WC		3602	5013	6901	11653	14604	15859	17324	21660	24141	24847	23245
14.0 - 28.0" WC	15.0" WC	2-1/2" WC	4747	5348	7799	11255	15351	16293	17475	22297	25025	25600	23785
	25.0" WC		3926	4675	7039	10362	14257	15151	16339	20810	23258	23717	22164
0.75 - 1 psi	0.75 psi	0.25 psi	5131	6386	8565	12677	15070	16340	16743	22297	25025	25600	23785
	1 psi		4594	5930	9152	12221	14550	15830	16212	21660	24141	24847	23245
1 - 2 psi	1.5 psi	0.30 psi		5612	7799	12031	15095	16340	17475	22263	25025	25600	23785
	2.0 psi		4193	6402	10274	13049	14158	15124	19324	21786	22211	20542	
1.5 - 3 psi	2.0 psi	0.40 psi		6404	8106	12469	15121	16317	17475	22297	25025	25600	23785
	3.0 psi		3061	6055	10390	12931	14042	15060	19324	21786	22211	20542	
3 - 5 psi	3.5 psi	0.50 psi		6615	6378	11533	9693	11536	22297	25025	25600	23785	
	5.0 psi		3476	5885	11235	9618	11569	22509	25319	25976	23785		

\* Must be inverted for proper operation if set at 8" wc or below

MARK 608DS LOW PRESSURE DOUBLE SEATED PRESSURE REGULATOR

**DIMENSIONS**



Valve Size	Flange Rating	Dimensions (inches)			
		A	B	C	D
1-1/2"	150/300	9.875	5.82	13.14	15.00
2"	150/300	10.00	5.82	13.14	15.00

Valve Size	Flange Rating	Dimensions (mm)			
		A	B	C	D
DN40	10/16	250,8	147,8	333,8	381,0
DN50	10/16	254,0	147,8	333,8	381,0

**ORDERING SCHEMATIC**

Model No	Size	Body Mat'l	1	2	3	4	5	6	7	8	9	10	11	12

Model	
608DS	Standard

Size	
150	1-1/2" (DN40)
200	2" (DN50)

Body Material	
CS	Carbon Steel (WCB)
6L	Stainless Steel (CF3M)

1 & 2	End Connections
I5	150# IFE
I3	300# IFE
ZZ	Non-Standard

3 & 4	Seat & Diaphragm
8B	1-1/2" / 0.56" Orifice Buna-N
8E	1-1/2" / 0.56" Orifice EPDM
8V	1-1/2" / 0.56" Orifice Viton
9B	2" / 1.00" Orifice Buna-N
9E	2" / 1.00" Orifice EPDM
9V	2" / 1.00" Orifice Viton

5 & 6	Range	
	W.C.	mbar
07	1 - 5" W.C.	5,0 - 12,5 mbar
08	4 - 8" W.C.	10,0 - 19,9 mbar
09	8 - 28" W.C.	19,9 - 70,0 mbar
10	10 - 17" W.C.	24,9 - 42,3 mbar
11	14 - 28" W.C.	34,9 - 70,0 mbar
12	0.75 - 1 psi	51,7 - 69,0 mbar
13	1 - 2 psi	69,0 - 137,9 mbar
14	1.5 - 3 psi	0,10 - 0,21 bar
15	3 - 5 psi	0,21 - 0,34 bar
ZZ	Non-Standard	

7 & 8	Actuator
SD	Standard
ZZ	Non-Standard

9 & 10	Accessories
00	None
SC	Clean F / Oil Free
ZZ	Non-Standard

11 & 12	PED Confirmation
0F	CE Category 1

NOTE: Valve is NOT field repairable. Contact your local representative or 800-543-7311 for repair information.



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