

Commercial/Industrial High-Pressure Regulators

For Commercial and Industrial high-pressure applications, such as distributed community systems, factories, office buildings, restaurants, Emerson has a wide variety of products and solutions. For ease of reference, only the most popular commercial and industrial regulators are shown on these pages. Other orifice sizes, body sizes and outlet pressure ranges are available. The higher capacities on commercial and industrial installations usually require a Two-stage regulator system. Temperature ratings for the Type 99 is -20 to 180°F / -29 to 82°C.

Note: Because of various spring ranges and orifice sizes, all commercial and industrial regulators should be individually sized for the particular installation. Consult specific product bulletins for maximum pressure ratings. Contact your local LPG Equipment Distributor for assistance.

Type 99 – Pilot-operated unit keeps outlet pressure constant despite varying flow rates and inlet pressures. Designed to handle loads up to 74,318,000 BTU per hour / 837 SCMH, the Type 99 is ideal for multiple customer installations. The unique pilot design, with fast opening and closing operation, makes the Type 99 ideal for large industrial boiler applications. The Type 99 can be used for low or high-pressure applications. A downstream control line is required. Additional overpressure protection is recommended to prevent excessive buildup in the downstream line.

Note: Type 99 regulators do not have an internal relief and should be installed with additional/external overpressure protection. These units should not be installed as part of a two-stage system in fixed piping serving 14 in. w.c. / 35 mbar appliance systems unless additional overpressure protection is installed that will make the



TYPE 99-901PH PILOT-OPERATED REGULATOR

system compliant with NFPA 58 requirements for a two-stage system. Please consult with your LPG Equipment Distributor for more information.

Flanged Bodies - 99F Series is equipped with 2 in. CL300 flanged bodies.

Overpressure Protection - The Type 99 is also available in monitor configurations. Note that the Type 99 monitor regulators have unique type numbers. For more information on monitor overpressure protection, see page 42.

Pilot-Operated High-Pressure Commercial/Industrial Regulators

TYPE	CAPACITIES (PROPANE) ⁽¹⁾		ORIFICE SIZE		INLET AND OUTLET CONNECTION	OUTLET PRESSURE RANGE		OUTLET PRESSURE SETTING		MAXIMUM OPERATING INLET PRESSURE																																																																																																			
	BTU / hr	SCMH	In.	mm		psig	bar	psig	bar	psig	bar																																																																																																		
99-510P	29,400,000	331	7/8	22	2 in. FNPT	7 in. w.c. to 2	17 mbar to 0.14	1	69 mbar	250	17.2																																																																																																		
99F-510P					2 in. / DN 50 CL300 FF							99-511P	33,206,000	374	2 in. FNPT	1 to 5	69 mbar to 0.34	5	0.34	99F-511P	2 in. / DN 50 CL300 FF	99-513P	36,368,000	409	2 in. FNPT	2 to 10	0.14 to 0.69	10	0.69	99F-513P	2 in. / DN 50 CL300 FF	99-512P	37,950,000	427	2 in. FNPT	5 to 15	0.34 to 1.0	15	1.0	99F-512P	2 in. / DN 50 CL300 FF	99-515P	41,112,000	463	2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4	99F-515P	2 in. / DN 50 CL300 FF	99-903P	44,275,000	498	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-903P	2 in. / DN 50 CL300 FF	99-502PH	50,600,000	570	1-1/8	29	2 in. FNPT	1 to 5	69 mbar to 0.34	5	0.34	300	20.7	99F-502PH	2 in. / DN 50 CL300 FF	99-503PH	61,668,000	694	2 in. FNPT	2 to 10	0.14 to 0.69	10	0.69	99F-503PH	2 in. / DN 50 CL300 FF	99-504PH	63,250,000	712	2 in. FNPT	5 to 15	0.34 to 1.0	15	1.0	99F-504PH	2 in. / DN 50 CL300 FF	99-505PH	67,993,000	765	2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4	99F-505PH	2 in. / DN 50 CL300 FF	99-901PH	74,318,000	837	2 in. FNPT
99-511P	33,206,000	374			2 in. FNPT	1 to 5	69 mbar to 0.34	5	0.34																																																																																																				
99F-511P					2 in. / DN 50 CL300 FF							99-513P	36,368,000	409	2 in. FNPT	2 to 10	0.14 to 0.69	10	0.69	99F-513P	2 in. / DN 50 CL300 FF	99-512P	37,950,000	427	2 in. FNPT	5 to 15	0.34 to 1.0	15	1.0	99F-512P	2 in. / DN 50 CL300 FF	99-515P	41,112,000	463	2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4	99F-515P	2 in. / DN 50 CL300 FF	99-903P	44,275,000	498	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-903P	2 in. / DN 50 CL300 FF	99-502PH	50,600,000	570	1-1/8	29	2 in. FNPT	1 to 5	69 mbar to 0.34	5	0.34	300	20.7	99F-502PH			2 in. / DN 50 CL300 FF	99-503PH	61,668,000	694	2 in. FNPT			2 to 10	0.14 to 0.69	10	0.69	99F-503PH	2 in. / DN 50 CL300 FF	99-504PH	63,250,000	712	2 in. FNPT	5 to 15	0.34 to 1.0	15	1.0	99F-504PH	2 in. / DN 50 CL300 FF	99-505PH	67,993,000	765	2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4	99F-505PH	2 in. / DN 50 CL300 FF	99-901PH	74,318,000	837	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-901PH	2 in. / DN 50 CL300 FF
99-513P	36,368,000	409			2 in. FNPT	2 to 10	0.14 to 0.69	10	0.69																																																																																																				
99F-513P					2 in. / DN 50 CL300 FF							99-512P	37,950,000	427	2 in. FNPT	5 to 15	0.34 to 1.0	15	1.0	99F-512P	2 in. / DN 50 CL300 FF	99-515P	41,112,000	463	2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4	99F-515P	2 in. / DN 50 CL300 FF	99-903P	44,275,000	498	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-903P	2 in. / DN 50 CL300 FF	99-502PH	50,600,000	570	1-1/8	29	2 in. FNPT	1 to 5	69 mbar to 0.34	5	0.34	300	20.7	99F-502PH			2 in. / DN 50 CL300 FF	99-503PH	61,668,000	694	2 in. FNPT			2 to 10			0.14 to 0.69	10	0.69	99F-503PH	2 in. / DN 50 CL300 FF			99-504PH	63,250,000	712	2 in. FNPT	5 to 15	0.34 to 1.0	15	1.0	99F-504PH	2 in. / DN 50 CL300 FF	99-505PH	67,993,000	765	2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4	99F-505PH	2 in. / DN 50 CL300 FF	99-901PH	74,318,000	837	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-901PH	2 in. / DN 50 CL300 FF						
99-512P	37,950,000	427			2 in. FNPT	5 to 15	0.34 to 1.0	15	1.0																																																																																																				
99F-512P					2 in. / DN 50 CL300 FF							99-515P	41,112,000	463	2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4	99F-515P	2 in. / DN 50 CL300 FF	99-903P	44,275,000	498	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-903P	2 in. / DN 50 CL300 FF	99-502PH	50,600,000	570	1-1/8	29	2 in. FNPT	1 to 5	69 mbar to 0.34	5	0.34	300	20.7	99F-502PH			2 in. / DN 50 CL300 FF	99-503PH	61,668,000	694	2 in. FNPT			2 to 10			0.14 to 0.69	10	0.69	99F-503PH	2 in. / DN 50 CL300 FF			99-504PH			63,250,000	712	2 in. FNPT	5 to 15	0.34 to 1.0			15	1.0	99F-504PH	2 in. / DN 50 CL300 FF	99-505PH	67,993,000	765	2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4	99F-505PH	2 in. / DN 50 CL300 FF	99-901PH	74,318,000	837	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-901PH	2 in. / DN 50 CL300 FF												
99-515P	41,112,000	463			2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4																																																																																																				
99F-515P					2 in. / DN 50 CL300 FF							99-903P	44,275,000	498	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-903P	2 in. / DN 50 CL300 FF	99-502PH	50,600,000	570	1-1/8	29	2 in. FNPT	1 to 5	69 mbar to 0.34	5	0.34	300	20.7	99F-502PH			2 in. / DN 50 CL300 FF	99-503PH	61,668,000	694	2 in. FNPT			2 to 10			0.14 to 0.69	10	0.69	99F-503PH	2 in. / DN 50 CL300 FF			99-504PH			63,250,000	712	2 in. FNPT	5 to 15	0.34 to 1.0			15			1.0	99F-504PH	2 in. / DN 50 CL300 FF	99-505PH	67,993,000			765	2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4	99F-505PH	2 in. / DN 50 CL300 FF	99-901PH	74,318,000	837	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-901PH	2 in. / DN 50 CL300 FF																		
99-903P	44,275,000	498			2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1																																																																																																				
99F-903P					2 in. / DN 50 CL300 FF							99-502PH	50,600,000	570	1-1/8	29	2 in. FNPT	1 to 5	69 mbar to 0.34	5	0.34	300	20.7	99F-502PH			2 in. / DN 50 CL300 FF	99-503PH	61,668,000	694	2 in. FNPT			2 to 10			0.14 to 0.69	10	0.69	99F-503PH	2 in. / DN 50 CL300 FF			99-504PH			63,250,000	712	2 in. FNPT	5 to 15	0.34 to 1.0			15			1.0	99F-504PH	2 in. / DN 50 CL300 FF	99-505PH	67,993,000			765			2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4			99F-505PH	2 in. / DN 50 CL300 FF	99-901PH	74,318,000	837	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-901PH	2 in. / DN 50 CL300 FF																								
99-502PH	50,600,000	570	1-1/8	29	2 in. FNPT	1 to 5	69 mbar to 0.34	5	0.34	300	20.7																																																																																																		
99F-502PH					2 in. / DN 50 CL300 FF							99-503PH	61,668,000	694			2 in. FNPT	2 to 10	0.14 to 0.69	10	0.69			99F-503PH			2 in. / DN 50 CL300 FF	99-504PH	63,250,000	712	2 in. FNPT			5 to 15			0.34 to 1.0	15	1.0	99F-504PH	2 in. / DN 50 CL300 FF			99-505PH			67,993,000	765	2 in. FNPT	10 to 20	0.69 to 1.4			20			1.4	99F-505PH	2 in. / DN 50 CL300 FF	99-901PH	74,318,000			837	2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1	99F-901PH	2 in. / DN 50 CL300 FF																																						
99-503PH	61,668,000	694			2 in. FNPT	2 to 10	0.14 to 0.69	10	0.69																																																																																																				
99F-503PH					2 in. / DN 50 CL300 FF							99-504PH	63,250,000	712			2 in. FNPT	5 to 15	0.34 to 1.0	15	1.0			99F-504PH			2 in. / DN 50 CL300 FF	99-505PH	67,993,000	765	2 in. FNPT			10 to 20			0.69 to 1.4	20	1.4	99F-505PH	2 in. / DN 50 CL300 FF			99-901PH			74,318,000	837	2 in. FNPT	10 to 65	0.69 to 4.5			30	2.1	99F-901PH	2 in. / DN 50 CL300 FF																																																				
99-504PH	63,250,000	712			2 in. FNPT	5 to 15	0.34 to 1.0	15	1.0																																																																																																				
99F-504PH					2 in. / DN 50 CL300 FF							99-505PH	67,993,000	765			2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4			99F-505PH			2 in. / DN 50 CL300 FF	99-901PH	74,318,000	837	2 in. FNPT			10 to 65			0.69 to 4.5	30	2.1	99F-901PH	2 in. / DN 50 CL300 FF																																																																				
99-505PH	67,993,000	765			2 in. FNPT	10 to 20	0.69 to 1.4	20	1.4																																																																																																				
99F-505PH					2 in. / DN 50 CL300 FF							99-901PH	74,318,000	837			2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1			99F-901PH			2 in. / DN 50 CL300 FF																																																																																		
99-901PH	74,318,000	837			2 in. FNPT	10 to 65	0.69 to 4.5	30	2.1																																																																																																				
99F-901PH					2 in. / DN 50 CL300 FF																																																																																																								

1. Capacity based on inlet pressure 20 psig / 1.4 bar greater than outlet pressure, external registration and 0.1 to 0.3 psi / 6.9 to 21 mbar proportional band. NOTE: Additional spring ranges and body styles are available. Ask your LPG Equipment distributor for more information.