

# Industrial Service Low-Pressure Regulators

## Regulators



TYPE 133H  
OR 133L



TYPE 299H



TYPE 99

Emerson has a wide range of low-pressure regulators to meet almost any commercial or industrial application. For ease of reference, only the most popular commercial and industrial regulators are shown on this page. Other orifice sizes, body sizes and outlet pressure ranges are available.

**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 pressures ratings. Contact your local LPG Equipment Distributor for assistance.**

**Type 299H** – A high capacity pilot-operated regulator. Incorporates a lightweight design (21 lbs / 10 kg) with dependable operation. With a capacity up to 38,000 000 BTU per hour / 428 SCMh, the Type 299H is ideal for applications from large commercial sites to smaller multi-dwelling establishments. The unit comes with a 1-1/2 or 2 in. cast iron body with internal or external registration. Internal registration allows easy installation while external registration provides higher accuracy. 2 in. / DN 50 flanged body or steel body material also available. Alternate

outlet settings from 3.5 in. w.c. to 60 psig / 9 mbar to 4.1 bar are available. Temperature ratings for the Type 299H is -20 to 150°F / -29 to 66°C. **The Type 299H has maximum inlet pressure rating of 150 psig / 10 bar so it cannot be used as a First-Stage regulator.**

**Type 99** – Pilot-operated unit keeps outlet pressure constant despite varying flow rates and inlet pressures. Designed to handle loads up to 63,250,000 BTU per hour / 712 SCMh, the Type 99L is ideal for multiple customer installations. The unique pilot design, with fast opening and closing operation, makes the Type 99L ideal for large industrial boiler applications. The Type 99L can be used for low pressure. A downstream control line is required. Temperature ratings for the Type 99 is -20 to 160°F / -29 to 82°C.

**133 Series** – Direct-operated Second-Stage regulator ideal for large industrial applications with loads up to 70,875,000 BTU per hour / 798 SCMh. The unit can be used for either low pressure or pounds service. Maximum inlet pressure is 60 psig / 4.1 bar and a downstream control line is required. The 133 Series has a temperature rating of -20 to 150°F / -29 to 66°C.

### Low-Pressure Commercial/Industrial Regulators

TYPE	CAPACITIES (PROPANE)		ORIFICE SIZE		INLET AND OUTLET CONNECTION, IN.	OUTLET PRESSURE RANGE		OUTLET PRESSURE SETTING		MAXIMUM OPERATING INLET PRESSURE	
	BTU / hr	SCMH	In.	mm		psig	bar	psig	bar	psig	bar
299H-101	13,100,000 <sup>(1)</sup>	148 <sup>(1)</sup>	3/4	19	1-1/2 FNPT	9 to 20 in. w.c.	22 to 50 mbar	11 in. w.c.	27 mbar	150	10.3
299H-102	19,700,000 <sup>(1)</sup>	222 <sup>(1)</sup>			2 FNPT						
299H-103	23,300,000 <sup>(2)</sup>	262 <sup>(2)</sup>			1-1/2 FNPT	6 to 16	0.41 to 1.1	10	0.69		
299H-104	38,000,000 <sup>(2)</sup>	428 <sup>(2)</sup>			2 FNPT						
299H-105	20,400,000 <sup>(3)</sup>	230 <sup>(3)</sup>			1-1/2 FNPT	9 to 20 in. w.c.	22 to 50 mbar	11 in. w.c.	27 mbar		
299H-106					2 FNPT						
299H-107	38,000,000 <sup>(4)</sup>	428 <sup>(4)</sup>			1-1/2 FNPT	6 to 16	0.41 to 1.1	10	0.69		
299H-108					2 FNPT						
99-501P	49,000,000 <sup>(6)</sup>	552 <sup>(6)</sup>	1-1/8	29	2 FNPT	7 in. w.c. to 2 psig	17 mbar to 0.14 bar	1	69 mbar	150	10.3
99-502P	50,600,000 <sup>(6)</sup>	570 <sup>(6)</sup>				1 to 5	69 mbar to 0.34 bar	5	0.34		
99-503P	61,650,000 <sup>(6)</sup>	694 <sup>(6)</sup>				2 to 10	0.14 to 0.69	10	0.69		
99-504P	63,250,000 <sup>(6)</sup>	712 <sup>(6)</sup>				5 to 15	0.34 to 1.0	15	1.0		
133L-4	70,875,000 <sup>(3)</sup>	798 <sup>(3)</sup>	2	51		8.5 to 18 in. w.c.	21 to 45 mbar	14 in. w.c.	35 mbar	60	4.1
133H-1	66,150,000 <sup>(5)</sup>	745 <sup>(5)</sup>				1.5 to 3	0.10 to 0.21	3	0.21		
133H-3	115,958,000 <sup>(6)</sup>	1305 <sup>(6)</sup>				5 to 10	0.34 to 0.69	10	0.69		

1. Capacity based on inlet pressure of 10 psig / 0.69 bar, Internal Registration and 2 in. w.c. / 5 mbar droop.  
 2. Capacity based on inlet pressure of 20 psig / 1.4 bar higher than outlet pressure, Internal Registration and 20% droop.  
 3. Capacity based on inlet pressure of 10 psig / 0.69 bar, External Registration and 2 in. w.c. / 5 mbar droop.  
 4. Capacity based on inlet pressure of 20 psig / 1.4 bar higher than outlet pressure, External Registration and 2 in. w.c. / 5 mbar droop.  
 5. Capacity based on inlet pressure of 10 psig / 0.69 bar, External Registration and 20% droop.  
 6. Capacity based on inlet pressure of 20 psig / 1.4 bar higher than outlet pressure, External Registration and 20% droop.  
 NOTE: Additional spring ranges and body styles are available. Ask your LPG Equipment Distributor for more information.