

September 2023

LS200 Series Direct-Operated Regulators



Figure 1. LS200 Series Direct-Operated Regulators

Features

- **Wide Pressure Range Capability with Single Regulator** - Up to 4.14 bar / 60 psig outlet pressure.
- **Suitable for Monitoring Applications** - Pair the LS200 Series with pilot operated regulator in a monitor application for spring open and spring closed.
- **Excellent Shock Characteristics and Fast Speed of Response** - Due to two-way stabilizer vent valve, which vents the spring case more rapidly than conventional vents, lag in diaphragm and valve disk movement is minimized.
- **Suitable for Hydrogen Applications** - Contact your local sales channel or Emerson Impact Partner for more details on Hydrogen configurations.
- **Bubble-Tight Shutoff** - Single-port construction, large diaphragm area, light-rate springs along with ideal durometer disk material and seat design provide low lock-up pressures.
- **Change Elastomer Disk without Disassembling the Actuator** - Hex shaped stem allows for disk removal without holding the stem during maintenance. Eliminates the chance of damaging the diaphragms during maintenance.
- **No Seat-to-Seat Adjustment Required** - Balanced single-port design eliminates necessity for seat-to-seat adjustments to achieve bubble-tight shutoff.
- **Easy Access to Trim Parts** - Change the valve disk in 30 minutes or less. Valve seat, disk, and cage easily removed with body remaining in line and without disassembly of actuator portion. Disk is accessible from bottom flange.
- **Reusable Pressure Seals** - O-rings used for pressure seals, unlike gaskets, are not ordinarily damaged by disassembling the regulator.
- **Resistance to Piping Stresses** - Steel constructions are available to help resist pipe stresses.

Outside North America Only

LS200 Series

Specifications

The Specifications section lists the specifications for the LS200 Series direct-operated regulators. Factory specification is stamped on the nameplate fastened on the regulator at the factory.

Actuator Sizes

Types LS200 and LS204 (475 mm): Low pressure construction for outlet pressure range of 17.2 to 138 mbar / 0.25 to 2 psig. Maximum operating inlet pressure of 6.2 bar / 90 psig. Outlet pressure range of 138 to 340 mbar / 2 to 5 psig has a maximum operating inlet up to 8.6 bar / 125 psig. The maximum emergency inlet pressure rating is 19.7 bar / 285 psig at 38°C / 100°F⁽¹⁾.

Types LS220 and LS224 (350 mm): Medium pressure construction for outlet pressure range of 0.3 to 0.69 bar / 4.35 to 10 psig. Maximum operating inlet pressure of 8.61 bar / 125 psig. Medium Pressure for outlet range of 0.69 to 1.5 bar / 10 to 21.75 psig has a maximum operating inlet up to 19.7 bar / 285 psig. The maximum emergency inlet pressure rating is 19.7 bar / 285 psig at 38°C / 100°F⁽¹⁾.

Types LS250 and LS254 (255 mm): High pressure construction for outlet pressure range of 1.38 to 4.14 bar / 20 to 60 psig. The maximum operating inlet pressure is 19.7 bar / 285 psig with a maximum emergency inlet pressure of 19.7 bar / 285 psig at 38°C / 100°F⁽¹⁾.

Outlet Pressure Ranges⁽¹⁾

See Table 2

Pressure Ratings⁽¹⁾

See Table 3

Maximum Outlet Pressure⁽¹⁾

See Table 3

Wide Open Flow Coefficients

See Table 4

Certifications

EN 334, EN 14382 and
Pressure Equipment Directive (PED)
DVGW
Up to 25% Hydrogen Blend (Pending 100%)

Pressure Registration

External; downstream control line is required

Temperature Capabilities⁽¹⁾⁽²⁾

-29 to 66°C / -20 to 150°F

-20 to 66°C / -4 to 150°F for PED

Lockup and Function Tested to -40°C / -40°F

Control Line Connection

Without Slam-Shut: 1/4 NPT (internal); connection will be positioned directly over body outlet (standard position) or 90 degrees right or left of standard position if specified.

With Slam-Shut: 1/4 NPT (internal) connection right or left directly over slam-shut. Can be selected or changed after shipment.

Vent Connection

3/4 NPT (internal) vent assembly.

Approximate Weight

Body

NPT: 12 kg / 26.5 lbs

2x2: 13.5 kg / 30.4 lbs

2x4: 17.55 kg / 38.7 lbs

Slam-Shut Device: 7.45 kg / 16.4 lbs

Types LS200 and LS204 Actuator:

39 kg / 86 lbs (Eye nuts included)

Types LS220 and LS224 Actuator:

27.7 kg / 61.1 lbs (Eye nuts included)

Types LS250 and LS254 Actuator:

20.35 kg / 44.9 lbs (Eye nuts included)

Construction Materials

Body: Gray iron, Ductile iron and WCC Steel

Bonnet (top/bottom flanges): Carbon steel (LF2)

Cage: 1.4308 Stainless steel

Stem: S17400 H1075

Orifice: 304 Stainless steel

Disk: Nitrile (NBR) Inside Steel Retainer

Actuator: S355ML Structural steel

Elastomers: Nitrile (NBR)

Diaphragm: Nylon-reinforced Nitrile (NBR)

1. The pressure/temperature limits in this Bulletin or any applicable standard limitation should not be exceeded.

2. Using optional restriction collar.

Table 1. Available Configurations

TYPE NUMBER				OPTION			
L	S	2					
				PRESSURE CONSTRUCTION			
0				Low Pressure Applications (Outlet Pressure 17 to 340 mbar / 0.25 to 5 psig)			
2				Medium Pressure Applications (Outlet Pressure: 0.3 to 1.5 bar / 4.35 to 21.75 psig)			
5				High Pressure Applications (Outlet Pressure: 1.38 to 4.14 bar / 20 to 60 psig)			
				OVERPRESSURE PROTECTION			
0				Without Overpressure Protection Module			
4				With Slam-shut Module ⁽¹⁾			
Example: Type number LS224E: LS200 Series regulator constructed for medium pressure applications, with Type VSX4 slam-shut module and external pressure registration. 1. Reference Instruction Manual D103127X012 for Type VSX8 safety slam-shut module.							

Table 2. LS200 Series Outlet Pressure Ranges, Control Springs

ACTUATOR DIAMETER SIZE mm / IN.	OUTLET PRESSURE RANGE		Part Number	CONTROL SPRINGS		Color
	bar	psig		Wire Diameter		
				mm	In.	
Type LS200 and LS204 475 / 18.7	0.017 to 0.022	0.25 to 0.32	ERAA07279A0	4.83	0.19	Light Blue
	0.02 to 0.05	0.30 to 0.70	ERAA07575A0	6.35	0.25	Yellow
	0.04 to 0.09	0.60 to 1.28	ERAA07577A0	6.35	0.25	Brown
	0.08 to 0.15	1.10 to 2.24	ERAA07585A0	7.92	0.312	Dark Grey
	0.14 to 0.35	2.00 to 5.00	ERAA07589A0	10.3	0.406	Pink
Type LS220 and LS224 350 / 13.8	0.30 to 0.35	4.35 to 5.1	ERAA07586A0	8.5	0.312	Light Green
	0.30 to 0.73	4.35 to 10.6	ERAA07589A0	10.5	0.406	Pink
	0.33 to 1.08	4.8 to 15.7	ERAA07592A0	12	0.438	Dark Blue
	0.57 to 1.5	8.3 to 21.75	ERAA07283A0	12.5	0.5	Orange
Types LS250 and LS254 255 / 10.0	1.38 to 2.09	20 to 30.3	ERAA07589A0	10.5	0.406	Pink
	1.38 to 3.09	20 to 44.8	ERAA07592A0	12	0.438	Dark Blue
	1.72 to 4.14	25 to 60	ERAA07283A0	12.5	0.5	Orange

Table 3. Maximum Inlet and Outlet Pressures

PRESSURE	TYPE LS200		TYPE LS220		TYPE LS250		TYPE 133HP			
	bar	psig	bar	psig	bar	psig	bar	psig		
Maximum Operating Inlet Pressure	17 to 138 mbar / 0.25 to 2 psig maximum outlet pressure		6.2	90	8.6	125	19.7	285	10.3	150
	138 to 345 mbar / 2 to 5 psig maximum outlet pressure		8.6	125						
	<0.69 bar / 10 psig maximum outlet pressure		N/A	N/A	19.7	285				
	>0.69 bar / 10 psig maximum outlet pressure		N/A	N/A						
Maximum Emergency Inlet Pressure		19.7	285	19.7	285					
Maximum Operating Outlet Pressure ⁽¹⁾		0.34	5.0	1.5	22	4.1	60	4.1	60	
Maximum Outlet Pressure Over Outlet Pressure		0.8	11.6	2.0	29	5.8	84	6.9	100	
Maximum Emergency Outlet (Casing) Pressure		5.6 ⁽²⁾	66.0 ⁽²⁾	7.9 ⁽³⁾	115 ⁽³⁾	10.3	150	10.3	150	

1. With highest spring range available only.
 2. 35 psi / 2.41 bar per PED.
 3. 50 psi / 3.45 bar per PED.

Table 4. Wide Open Flow Coefficients

UNIT INFORMATION			FLOW COEFFICIENTS		
Regulator	Body	Type	C _g	C ₁	C _v
LS200 Series	2x2	LS200, LS220 and LS250	2083	33	72
	2x4		2461	29	74
	2x2	LS204, LS224 and LS254 with SSD	2001	28	71
	2x4		2304	34	67

Note: Multiply restricted trim % value by the C_g for the restricted C_g value.

LS200 Series

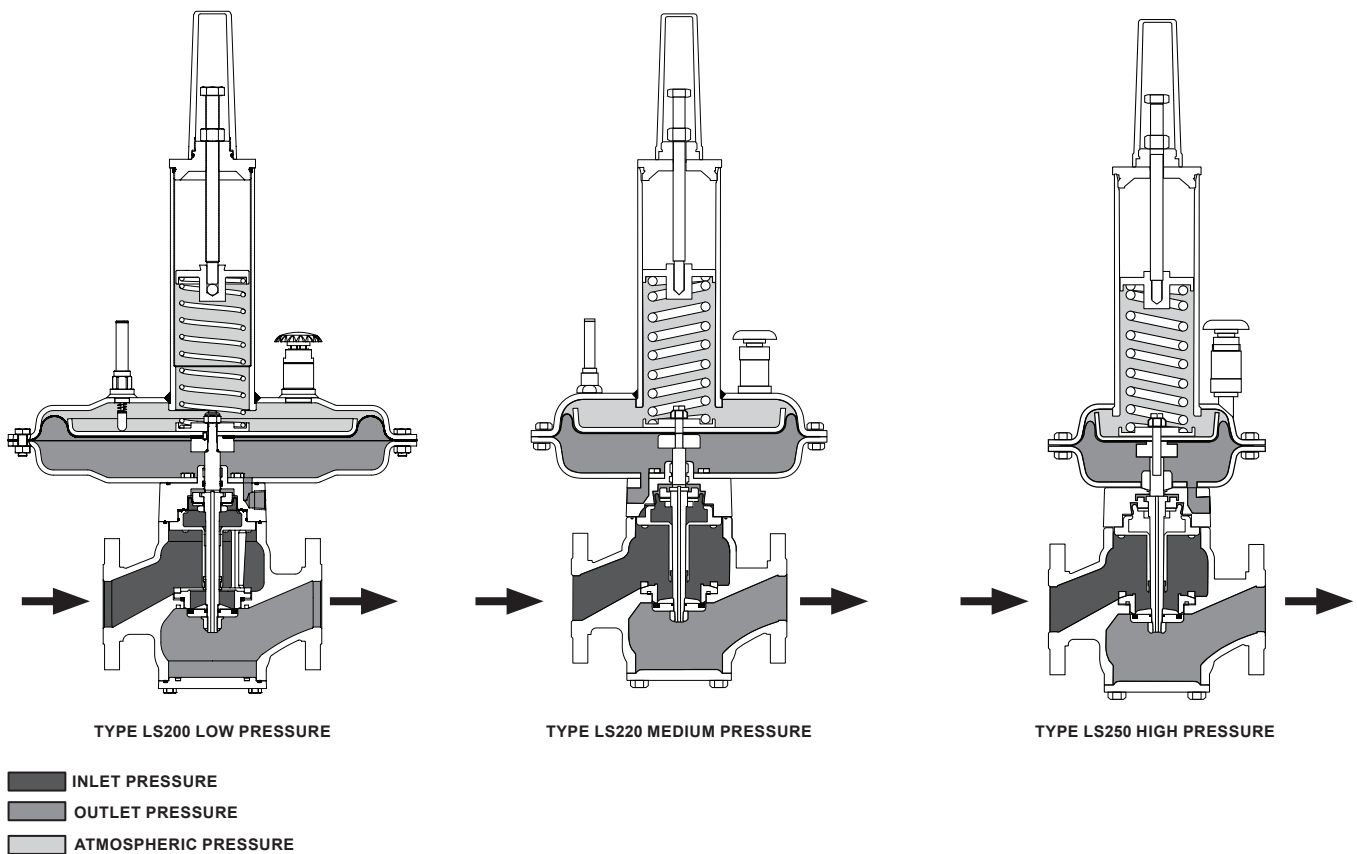


Figure 2. LS200 Series Regulator Operational Schematic

Introduction

Description

The LS200 Series direct-operated gas regulators are primarily designed for low pressure natural gas distribution systems, industrial and commercial applications supplying gas to furnaces, burners, and other appliances. The LS200 Series balanced port design enables the regulator to provide accurate control of gas pressure for maximum combustion efficiency despite varying inlet pressure conditions. The single port construction provides bubble-tight shutoff. An external downstream control line is required for the operation of the regulator. Refer to Table 2 for outlet pressure ranges of each type. LS200 Series regulators are available in a DN 50 / 2 in. body size with either NPT or flanged end connections.

An optional restriction collar can be installed if wide-open capacity is too high for applications using a relief valve as overpressure protection. The collar reduces wide-open capacity to 40%, 60% or 78% of wide open capacity. 78% is sized for replacing the legacy Type 133HP 100% units without needing to resize the relief valve.

Principle of Operation

In the LS200 Series, downstream pressure is registered under the diaphragm via the external control line and is used as the operating medium. Increased demand lowers the downstream pressure and allows the spring to move the diaphragm and stem assembly down, opening the valve disk and supplying more gas to the downstream system. Decreased demand increases the downstream pressure and moves the diaphragm and stem assembly up, closing the valve disk and decreasing the gas supply to the downstream system.

Boosting System

The LS200 Series incorporates a balancing diaphragm and a boosting system. When the regulator is locked up, inlet pressure is registered on the top of the valve disk and on the bottom of the balancing diaphragm through space between the stem and cage. Also, downstream pressure is registered on the bottom of the valve disk and on the top of the balancing diaphragm through a passage in the stem.

When the trim is open, gas flows from the inlet over the edge of the disk to the outlet. Under the disk, there is little gas flow. The gas pressure is higher than it is in the flow path where gas velocity tends to lower the pressure. The higher pressure near the disk is registered on the top of the balancing diaphragm through the space between the stem and the stem sleeve.

This pressure registered on the top of the balancing diaphragm aids downward disk travel and compensates for spring and diaphragm effect. This improves regulator rangeability and performance.

Installation

The regulator may be installed with actuator above or below the body but is normally installed with the actuator portion above the body portion. Flow through the body must be in the direction indicated by the flow direction arrow cast on the body portion. A downstream control line is required for operation of the regulator.

A remote vent line may be required for some installations. Vent openings must be protected against the entrance of rain, snow, insects, or any other foreign material that may plug the vent.

External dimensions are shown in Figure 3.

Integrated Slam-shut

The LS200 Series is offered with an integral slam-shut device that will stop gas from flowing if an over pressure or under pressure condition occurs.

The slam-shut design is industry leading with only design allowing the choice of side of the body to install the slam-shut. This allows the slam-shut to always be on the outside of a parallel run or facing out if against a wall. Rearming, maintenance and testing is safe with enough room to work.

The slam-shut measuring element utilizes the VSX8 Series controller (see VSX8 Series literature, D103127X012 for more details and support). The VSX8 Series uses a positive latching mechanism instead of a ball bearing design which reduces false trips related to vibration or external factors. See Figure 3 for more information.

Overpressure Protection

As is the case with most regulators, the LS200 Series regulators have outlet pressure ratings that are lower than the inlet pressure ratings. Some type of Overpressure Protection is needed if the actual inlet pressure ever exceeds the outlet pressure rating.

Maximum inlet and outlet pressures for the LS200 Series are given in Table 3. All models must be protected against inlet pressure above the maximum emergency inlet pressure (refer to Table 3).

Capacity Data

Flow capacities for various inlet pressures and outlet pressure settings are shown in Tables 5 to 20. Capacities are in thousands of Nm³/hr and SCFH at 60°F and 14.7 psia and in Nm³/hr at 0°C and 1.01325 bar of 0.6 specific gravity gas. To convert to equivalent capacities of other gases, multiply the SCFH values shown by the appropriate factor: air– 0.775; propane–0.628; butane–0.548; nitrogen–0.789. For gases of other specific gravities, multiply the given capacity by 0.775, and divide by the square root of the appropriate specific gravity. Then, if capacity is desired in Nm³/h at 0°C and 1.01325 bar, multiply SCFH by 0.0268.

Note

For optimum performance, select the lowest spring range that includes the desired outlet pressure setting.

For restricted-capacity constructions, determine flow capacities for outlet pressure settings of 0.14 bar / 2 psig or less by multiplying the values from Tables 5 to 20 by 40%, 60% or 78% (depending upon which restriction collar is selected). If flow capacities for inlet pressures lower than those shown are required, contact your local Sales Office. The representative regulating C_g of 2000 may be used for regulator sizing of full capacity constructions only if capacity table data is not available. The representative regulating C_g is an approximation only for pressure drops greater than 0.34 bar / 5 psig, because, at a given offset in controlled pressure, the regulating C_g varies with the spring being used with the pressure drop across the valve. To determine capacity using the flow coefficient C_g, use the appropriate procedure below.

Critical Pressure Drops

For critical pressure drops (absolute outlet pressure equal to or less than one-half of absolute inlet pressure), use the following formula:

$$Q = (P_1)(C_g)(1.29)$$

Non-Critical Pressure Drops

For pressure drops lower than critical (absolute outlet pressure greater than one-half of absolute inlet pressure).

$$Q = \sqrt{\frac{520}{GT}} C_g P_1 \text{SIN} \left(\frac{3417}{C_1} \sqrt{\frac{\Delta P}{P_1}} \right) \text{DEG}$$

where,

- Q = gas flow rate, SCFH
- P₁ = absolute inlet pressure, psia (P₁ gauge + 14.7)
- C_g = regulating or wide-open gas sizing coefficient
- G = specific gravity of the gas
- T = absolute temperature of gas at inlet, °Rankine
- C₁ = flow coefficient
- ΔP = pressure drop across the regulator, psig

Table 5. Industrial Flow Full-Capacity LS200 Series DN 50 x 50 / 2 x 2 in. Body in Nm³/hr at AC5 Accuracy

OUTLET PRESSURE, barg	INDUSTRIAL FLOW CAPACITIES IN Nm ³ /hr AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC5 FOR DN 50 X 50																						
	INLET PRESSURE, barg																						
	0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	1.25	1.5	2	3	4	5	6	7	10	12	16	19
TYPE LS200																							
0.02	121	303	396	425	601	655	770	805	1022	875	901	1284	1445	1626	2150	1931	1561	1528					
0.03	140	213	289	367	527	587	691	818	714	908	1007	1204	1550	1905	1978	2222	2661	2083					
0.05		211	389	391	572	615	800	724	985	987	1123	1513	1646	2032	2737	2426	2686	2361					
0.08		202	313	386	433	728	867	858	1025	1189	1277	1418	1541	2352	2971	2895	2984	3094					
0.1			298	311	583	700	649	706	812	834	924	1431	1597	1709	2411	2908	2878	2918					
0.15					595	689	799	942	1030	1140	1373	1555	1834	2233	2969	3564	3695	4448	4938				
0.3									903	938	1157	1265	1636	2512	3299	3330	3909	4377	5089				
TYPE LS220																							
0.3									923	1070	1286	1226	1515	2605	3823	4870	5947	6173	5805				
0.5								462	589	725	835	1002	1269	1982	2662	4219	5522	6626					
0.75										1051	1269		1390	2107	3483	4559	5975	7362	9203	10,052	11,893	6400	
1													1167	1733	2597	3568	4757	5947	6683	9288	10,307	13,847	13,847
1.5														1235	2282	3370	4219	5437	6173	8976	9713	14,470	17,047
TYPE LS250																							
1.5														1144	1931	2407	3002	3823	4248	5862	6626	8212	7985
2															790	1124	1286	1846	2104	3087	3625	3964	4276
3																1988	2701	3171	3823	5380	6315	7787	9146
4																	2268	3285	3851	5890	7079	9005	10,675

Table 6. Industrial Flow Full-Capacity LS200 Series DN 50 x 50 / 2 x 2 in. Body in SCFH at AC5 Accuracy

OUTLET PRESSURE, psig	INDUSTRIAL FLOW CAPACITIES IN THOUSANDS OF SCFH AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC5 FOR 2 X 2 IN.																						
	INLET PRESSURE, psig																						
	0.7	1.5	2.2	2.9	4.4	5.8	7.3	8.7	10	11.6	14.5	18	22	29	44	58	73	87	102	145	174	232	276
TYPE LS200																							
0.29	4.26	10.7	14.0	15.0	21.2	23.1	27.2	28.5	36.1	30.9	31.8	45.4	51.1	57.4	76.0	68.2	55.1	54.0					
0.44	4.93	7.53	10.2	13.0	18.6	20.7	24.4	28.9	25.2	32.1	35.6	42.5	54.8	67.3	69.9	78.5	94.0	73.6					
0.73		7.44	13.7	13.8	20.2	21.7	28.3	25.6	34.8	34.9	39.7	53.5	58.2	71.8	96.7	85.7	94.9	83.4					
1.16		7.15	11.1	13.6	15.3	25.7	30.7	30.3	36.2	42.0	45.1	50.1	54.5	83.1	105	102	105	109					
1.45			10.5	11.0	20.6	24.8	22.9	24.9	28.7	29.5	32.6	50.6	56.4	60.4	85.2	103	102	103					
2.18					21.0	24.4	28.2	33.3	36.4	40.3	48.5	54.9	64.8	78.9	105	126	131	157	175				
4.35									31.9	33.1	40.9	44.7	57.8	88.8	117	118	138	155	180				
TYPE LS220																							
4.35									32.6	37.8	45.4	43.3	53.5	92	135	172	210	218	205				
7									16.3	20.8	25.6	29.5	35.4	44.8	70	94	149	195	234				
11											37.1	44.8		49.1	74.4	123	161	211	260	325	355	420	226
14.5													41.2	61.2	91.7	126	168	210	236	328	364	489	489
22														43.6	80.6	119	149	192	218	317	343	511	602
TYPE LS250																							
22														40.4	68.2	85	106	135	150	207	234	290	282
29															27.9	39.7	45.4	65.2	74.3	109	128	140	151
44																70.2	95.4	112	135	190	223	275	323
58																	80.1	116	136	208	250	318	377

Table 7. Industrial Flow Full-Capacity LS200 Series DN 50 x 50 / 2 x 2 in. Body in Nm³/hr at AC10 Accuracy

OUTLET PRESSURE, barg	INDUSTRIAL FLOW CAPACITIES IN Nm ³ /hr AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC10 FOR DN 50 X 50																						
	INLET PRESSURE, barg																						
	0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	1.25	1.5	2	3	4	5	6	7	10	12	16	19
TYPE LS200																							
0.02	150	480	564	617	805	908	1085	1128	1277	1452	1614	1756	2020	2149	2749	2599	3889	3291					
0.03	322	311	422	523	687	801	960	1009	1063	1154	1481	1713	1834	2215	2578	2905	3369	3047					
0.05		366	532	647	867	1007	1112	1337	1427	1608	1764	2124	2376	2833	3559	3872	4602	4353					
0.08		286	456	618	873	977	1116	1305	1426	1572	1841	2098	2341	2809	3736	4519	4809	5986					
0.1			371	496	707	1043	1169	1190	1289	1147	1678	1985	2228	2598	3384	3974	4443	5167					
0.15					694	908	1113	1247	1384	1542	1811	2056	2340	2737	3499	4599	4648	5797	6290				
0.3									1296	1364	1635	1962	2235	2762	4266	4389	5511	5956	7137				
TYPE LS220																							
0.3									1427	1606	1770	2277	2532	3228	3879	4984	6201	6853	8269				
0.5									1107	1427	1586	2073	2517	3058	3483	4531	5522	5890	7221				
0.75											1529	1937		2973	4106	4814	6315	6315	7561	9826	11,610	11,893	12,063
1													2144	2806	4021	5097	6145	7249	7985	10336	11,440	13,847	13,847
1.5														2475	3993	4786	5663	6824	7702	9968	10,817	16,339	17,047
TYPE LS250																							
1.5														2299	3455	4361	5125	6003	6654	8070	9175	11,015	12,828
2															2667	3455	4106	5040	5522	7334	8353	9684	10,902
3																4304	5550	6258	7419	9968	11,157	13,196	14,980
4																	5012	6541	7561	10,732	12,544	14,895	17,556

Outside North America Only

LS200 Series

Table 8. Industrial Flow Full-Capacity LS200 Series DN 50 x 50 / 2 x 2 in. Body in SCFH at AC10 Accuracy

OUTLET PRESSURE, psig	INDUSTRIAL FLOW CAPACITIES IN THOUSANDS OF SCFH AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC10 FOR 2 X 2 IN.																						
	INLET PRESSURE, psig																						
	0.7	1.5	2.2	2.9	4.4	5.8	7.3	8.7	10	11.6	14.5	18	22	29	44	58	73	87	102	145	174	232	276
TYPE LS200																							
0.29	5.29	16.9	19.9	21.8	28.4	32.1	38.3	39.9	45.1	51.3	57.0	62.0	71.4	75.9	97.1	91.8	137	116					
0.44	11.4	11.0	14.9	18.5	24.3	28.3	33.9	35.6	37.5	40.8	52.3	60.5	64.8	78.3	91.1	103	119	108					
0.73		12.9	18.8	22.9	30.7	35.6	39.3	47.2	50.4	56.8	62.3	75.1	84.0	100	126	137	163	154					
1.16		10.1	16.1	21.8	30.8	34.5	39.5	46.1	50.4	55.6	65.0	74.1	82.7	99.2	132	160	170	212					
1.45			13.1	17.5	25.0	36.8	41.3	42.1	45.5	40.5	59.3	70.1	78.7	91.8	120	140	157	183					
2.18					24.5	32.1	39.3	44.1	48.9	54.5	64.0	72.7	82.7	96.7	124	162	164	205	222				
4.35									45.8	48.2	57.8	69.3	79.0	97.6	151	155	195	210	252				
TYPE LS220																							
4.35									50.4	56.7	62.5	80.4	89.4	114	137	176	219	242	292				
7									39.1	50.4	56	73.2	88.9	108	123	160	195	208	255				
11											54	68.4	99.8	105	145	170	223	223	267	347	410	420	426
14.5													75.7	99.1	142	180	217	256	282	365	404	489	489
22														87.4	141	169	200	241	272	352	382	577	602
TYPE LS250																							
22														81.2	122	154	181	212	235	285	324	389	453
29															94.2	122	145	178	195	259	295	342	385
44																152	196	221	262	352	394	466	529
58																	177	231	267	379	443	526	620

Table 9. Industrial Flow Full-Capacity LS200 Series DN 50 x 100 / 2 x 4 in. Body in Nm³/hr at AC5 Accuracy

OUTLET PRESSURE, bar	INDUSTRIAL FLOW CAPACITIES IN Nm³/hr AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC5 FOR DN 50 X 100																						
	INLET PRESSURE, bar																						
	0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	1.25	1.5	2	3	4	5	6	7	10	12	16	19
TYPE LS200																							
0.02	177	432	564	603	862	922	1085	1158	1441	1237	1283	1824	2067	2317	1759	2839	2207	2723					
0.03	201	302	407	525	749	831	992	1156	1023	1283	1423	1696	2211	2705	2909	3177	3902	3049					
0.05		300	554	549	817	876	1148	1014	1410	1383	1573	2152	2356	2870	3966	3411	3817	3407					
0.08		284	439	547	622	1036	1247	1231	1475	1669	179	2022	2202	3352	4335	4133	4393	4389					
0.1			419	438	823	1000	908	995	1167	1186	1308	2056	2267	2441	3386	4300	4125	4256					
0.15					840	967	1133	1331	1445	1622	1945	2182	2637	3162	4242	5064	5424	6272	7278				
0.3									972	1322	1633	1810	2339	3600	4641	5137	5499	6206	7288				
TYPE LS220																							
0.3									1008	1169	1405	1339	1642	2860	4191	5324	6485	6739	6343				
0.5									507	643	793	912	1096	1388	2169	2888	4616	6031	7249				
0.75											1147	1388	1521	2305	3794	4984	6513	6513	8042	10,052	10,987	12,997	6994
1													1274	1894	2832	3908	5182	6485	7306	10,137	11,270	15,150	15,121
1.5														1348	2495	3681	4616	5918	6739	9798	10,619	15,801	18,604
TYPE LS250																							
1.5														1249	2110	2631	3256	4191	4644	6400	7249	8976	8750
2															864	1229	1405	2019	2299	3370	3936	4332	4672
3																2175	2945	3455	4191	5862	6909	8495	9996
4																	2479	3568	4219	6456	7730	9826	11,667

Table 10. Industrial Flow Full-Capacity LS200 Series DN 50 x / 100 2 x 4 in. Body in SCFH at AC5 Accuracy

OUTLET PRESSURE, psig	INDUSTRIAL FLOW CAPACITIES IN THOUSANDS OF SCFH AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC5 FOR 2 X 4 IN.																						
	INLET PRESSURE, psig																						
	0.7	1.5	2.2	2.9	4.4	5.8	7.3	8.7	10	11.6	14.5	18	22	29	44	58	73	87	102	145	174	232	276
TYPE LS200																							
0.29	6.25	15.3	19.9	21.3	30.5	32.6	38.3	40.9	50.9	43.7	45.3	64.4	73.0	81.9	62.2	100.3	78.0	96.2					
0.44	7.11	10.7	14.4	18.6	26.5	29.4	35.1	40.9	36.1	45.3	50.3	59.9	78.1	95.6	103	112	138	108					
0.73		10.6	19.6	19.4	28.9	31.0	40.6	35.8	49.8	48.9	55.6	76.0	83.3	101	140	121	135	120					
1.16			10.0	15.5	19.3	22.0	36.6	44.1	43.5	52.1	59.0	6.3	71.4	77.8	118	153	146	155	155				
1.45				14.8	15.5	29.1	35.3	32.1	35.1	41.2	41.9	46.2	72.7	80.1	86.3	120	152	146	150				
2.18						29.7	34.2	40.0	47.0	51.0	57.3	68.7	77.1	93.2	112	150	179	192	222	257			
4.35									34.4	46.7	57.7	64.0	82.7	127	164	182	194	219	258				
TYPE LS220																							
4.35									35.6	41.3	49.6	47.3	58	101	148	188	229	238	224				
7									17.9	22.7	28	32.2	38.7	49	77	102	163	213	256				
11											40.5	49	53.7	81.4	134	176	230	230	284	355	388	459	247
14.5													45	66.9	100	138	183	229	258	358	398	535	534
22														47.6	88.1	130	163	209	238	346	375	558	657
TYPE LS250																							
22														44.1	74.5	92.9	115	148	164	226	256	317	309
29															30.5	43.4	49.6	71.3	81.2	119	139	153	165
44																76.8	104	122	148	207	244	300	353
58																	87.5	126	149	228	273	347	412

Outside North America Only

Table 11. Industrial Flow Full-Capacity LS200 Series DN 50 x 100 / 2 x 4 in. Body in Nm³/hr at AC10 Accuracy

OUTLET PRESSURE, bar	INDUSTRIAL FLOW CAPACITIES IN Nm ³ /hr AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC10 FOR DN 50 X 100																						
	INLET PRESSURE, bar																						
	0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	1.25	1.5	2	3	4	5	6	7	10	12	16	19
TYPE LS200																							
0.02	277	882	1034	1126	1456	1630	1931	1991	2234	2519	2751	2927	3291	3340	3862	3505	5027	4069					
0.03	595	574	774	954	1247	1430	1710	1783	1850	2002	2514	2849	2982	3426	3621	3889	4347	3790					
0.05		675	972	1182	1571	1800	1982	2352	2493	2788	3000	3533	3862	4403	5008	5185	5909	5406					
0.08		525	831	1129	1580	1762	1983	2308	2505	2742	3120	3497	3807	4351	5246	6101	6218	7387					
0.1			682	907	1281	1871	2071	2089	2247	1988	2845	3295	3652	4032	4772	5342	5780	6382					
0.15					1249	1621	1975	2202	2425	2682	3071	3415	3833	4247	4917	6231	6033	7177	6605				
0.3									1482	2369	2786	3269	3663	4290	6023	6026	7076	7350	7494				
TYPE LS220																							
0.3									1518	1710	1886	2424	2696	3398	4106	5295	6598	7277	8778				
0.5									1178	1518	1688	2206	2679	3256	3681	4814	5862	6286	7674				
0.75											1628	2061	3002	3143	4361	5097	6711	6711	8042	10,449	12,346	12,658	12,856
1													2282	2973	4248	5409	6513	7702	8495	10,987	12,148	14,753	14,725
1.5														2636	4219	5097	6031	7277	8212	10,619	11,525	17,387	18,123
TYPE LS250																							
1.5														2447	3653	4644	5437	6371	7079	8580	9769	11,723	13,649
2															2832	3681	4361	5352	5890	7787	8891	10,307	11,610
3																4559	5918	6654	7900	10,591	11,865	14,045	15,942
4																	5324	6938	8042	11,412	13,337	15,829	18,689

Table 12. Industrial Flow Full-Capacity LS200 Series DN 50 x 100 / 2 x 4 in. Body in SCFH at AC10 Accuracy

OUTLET PRESSURE, psig	INDUSTRIAL FLOW CAPACITIES IN THOUSANDS OF SCFH AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC10 FOR 2 X 4																						
	INLET PRESSURE, psig																						
	0.7	1.5	2.2	2.9	4.4	5.8	7.3	8.7	10	11.6	14.5	18	22	29	44	58	73	87	102	145	174	232	276
TYPE LS200																							
0.29	9.78	31.2	36.5	39.8	51.5	57.6	68.2	70.4	78.9	89.0	97.2	103	116	118	136	124	178	144					
0.44	21.0	20.3	27.4	33.7	44.1	50.5	60.4	63.0	65.4	70.7	88.8	101	105	121	128	137	154	134					
0.73		23.9	34.3	41.8	55.5	63.6	70.0	83.1	88.1	98.5	106	125	136	156	177	183	209	191					
1.16		18.6	29.4	39.9	55.8	62.3	70.1	81.6	88.5	96.9	110	124	135	154	185	216	220	261					
1.45			24.1	32.0	45.3	66.1	73.2	73.8	79.4	70.2	101	116	129	142	169	189	204	226					
2.18					44.1	57.3	69.8	77.8	85.7	94.8	109	121	135	150	174	220	213	254	233				
4.35									52.4	83.7	98.5	116	129	152	213	213	250	260	265				
TYPE LS220																							
4.35									53.6	60.4	66.6	85.6	95.2	120	145	187	233	257	310				
7									41.6	53.6	59.6	77.9	94.6	115	130	170	207	222	271				
11											57.5	72.8	106	111	154	180	237	237	284	369	436	447	454
14.5													80.6	105	150	191	230	272	300	388	429	521	520
22														93.1	149	180	213	257	290	375	407	614	640
TYPE LS250																							
22														86.4	129	164	192	225	250	303	345	414	482
29															100	130	154	189	208	275	314	364	410
44																161	209	235	279	374	419	496	563
58																	188	245	284	403	471	559	660

LS200 Series

Table 13. Utility Flow Full-Capacity LS200 Series DN 50 x 50 / 2 x 2 in. Body in Nm³/hr at AC5 Accuracy

OUTLET PRESSURE, barg	UTILITY FLOW CAPACITIES IN Nm ³ /hr AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC5 FOR DN 50 X 50																						
	INLET PRESSURE, barg																						
	0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	1.25	1.5	2	3	4	5	6	7	10	12	16	19
TYPE LS200																							
0.02	92	287	382	399	595	639	770	750	934	811	856	1284	1427	1382	1886	1912	1644	1500					
0.03	109	175	260	341	369	575	606	683	655	738	895	1154	1173	1417	1855	2129	2661	2083					
0.05		183	285	346	549	519	769	715	893	909	1044	1209	1405	1715	2737	2207	2177	2361					
0.08		128	288	385	419	419	867	875	978	1003	1008	1385	1498	2018	2610	2918	2747	3094					
0.1			175	265	500	689	708	654	768	792	1036	1291	1314	1624	2419	2419	2878	2918					
0.15					514	689	807	942	1030	1140	1366	1536	1768	2190	2822	3301	3695	4202	4913				
0.3									875	1168	1087	1395	1523	1830	3270	3179	3707	4191	4810				
TYPE LS220																							
0.3									807	869	1104	1526	1979	2500	3540	4502	3087	2775	3002				
0.5									462	589	725	835	1002	1269	1792	2441	3285	4474	5805				
0.75											631	920	1390	1555	2393	3455	5125	5947	7532	9061	8297	12,290	6938
1													1206	1368	1764	2789	3002	4870	5493	9175	10,081	11,638	11,610
1.5														1252	2180	3171	4021	5012	5918	8920	9543	13,705	15,659
TYPE LS250																							
1.5														745	1549	2019	2464	3030	3710	5409	6343	6909	6711
2															759	1082	1235	1600	1838	3087	2699	3455	4276
3																1937	2582	3030	3681	5267	6060	7476	8778
4																	2178	3143	4078	5663	6799	8637	10,251

Table 14. Utility Flow Full-Capacity LS200 Series DN 50 x 50 / 2 x 2 in. Body in SCFH at AC5 Accuracy

OUTLET PRESSURE, psig	UTILITY FLOW CAPACITIES IN THOUSANDS OF SCFH AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC5 FOR 2 X 2 IN.																						
	INLET PRESSURE, psig																						
	0.7	1.5	2.2	2.9	4.4	5.8	7.3	8.7	10	11.6	14.5	18	22	29	44	58	73	87	102	145	174	232	276
TYPE LS200																							
0.29	3.26	10.2	13.5	14.1	21.0	22.6	27.2	26.5	33.0	28.7	30.3	45.4	50.4	48.8	66.6	67.6	58.1	53.0					
0.44	3.87	6.19	9.18	12.1	13.0	20.3	21.4	24.1	23.1	26.1	31.6	40.8	41.5	50.1	65.5	75.2	94.0	73.6					
0.73		6.46	10.1	12.2	19.4	18.3	27.2	25.3	31.6	32.1	36.9	42.7	49.7	60.6	96.7	78.0	76.9	83.4					
1.16		4.52	10.2	13.6	14.8	14.8	30.7	30.9	34.6	35.5	35.6	48.9	52.9	71.3	92.2	103	97.1	109					
1.45			6.18	9.38	17.7	24.4	25.0	23.1	27.1	28.0	36.6	45.6	46.4	57.4	85.5	85.5	102	103					
2.18					18.2	24.4	28.5	33.3	36.4	40.3	48.3	54.3	62.5	77.4	99.7	117	131	148	174				
4.35									30.9	41.3	38.4	49.3	53.8	64.7	116	112	131	148	170				
TYPE LS220																							
4.35									28.5	30.7	39	53.9	69.9	88.3	125	159	109	98	106				
7									16.3	20.8	25.6	29.5	35.4	44.8	63.3	86.2	116	158	205				
11											22.3	32.5	49.1	54.9	84.5	122	181	210	266	320	293	434	245
14.5													42.6	48.3	62.3	98.5	106	172	194	324	356	411	410
22														44.2	77	112	142	177	209	315	337	484	553
TYPE LS250																							
22														26.3	54.7	71.3	87	107	131	191	224	244	237
29															26.8	38.2	43.6	56.5	64.9	109	95.3	122	151
44																68.4	91.2	107	130	186	214	264	310
58																	76.9	111	144	200	240.1	305	362

Table 15. Utility Flow Full-Capacity LS200 Series DN 50 x 50 / 2 x 2 in. Body in Nm³/hr at AC10 Accuracy

OUTLET PRESSURE, barg	UTILITY FLOW CAPACITIES IN Nm ³ /hr AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC10 FOR DN 50 X 50																						
	INLET PRESSURE, barg																						
	0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	1.25	1.5	2	3	4	5	6	7	10	12	16	19
TYPE LS200																							
0.02	150	434	564	617	793	908	1085	1113	1277	1397	1586	1756	1932	2089	2783	2511	3889	3291					
0.03	159	235	380	512	636	788	836	886	1008	1089	1259	1667	1649	1983	2562	2791	3136	3047					
0.05		347	527	636	825	996	1102	1337	1421	1559	1749	2096	2293	2733	3559	3534	4071	4353					
0.08		282	456	617	873	977	1116	1305	1426	1572	1841	2098	2341	2806	3736	4377	4685	5986					
0.1			344	488	718	1043	1127	1161	1269	1411	1574	1932	2144	2422	3744	3885	4242	5167					
0.15					698	899	1112	1245	1384	1529	1805	2011	2311	2727	3487	4375	4628	5797	6290				
0.3									1296	1344	1601	1925	2194	2652	4266	4366	5511	5956	7137				
TYPE LS220																							
0.3									1362	1501	1708	2223	2432	3200	3851	4955	6201	6796	8184				
0.5									1036	1317	1546	2044	2396	3030	3766	4955	5465	5833	7136				
0.75											1436	1764	2769	2917	3964	4814	5975	6145	7532	9684	11,610	12,290	12,346
1													1937	2662	3766	4870	5805	7249	7787	10,251	11,327	13,366	13,762
1.5														2452	3964	4616	5635	7051	7589	9883	10,760	16,877	17,188
TYPE LS250																							
1.5														2291	3483	4502	5182	6003	6485	7787	9118	11,383	12,629
2															2537	3483	4021	4729	5352	7561	8438	9684	10,647
3																4276	5522	6654	7362	10,052	10,959	12,374	14,555
4																	4984	6711	7702	10,647	12,488	15,857	17,415

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Table 16. Utility Flow Full-Capacity LS200 Series DN 50 x 50 / 2 x 2 in. Body in SCFH at AC10 Accuracy

OUTLET PRESSURE, psig	UTILITY FLOW CAPACITIES IN THOUSANDS OF SCFH AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC10 FOR 2 X 2 IN.																						
	INLET PRESSURE, psig																						
	0.7	1.5	2.2	2.9	4.4	5.8	7.3	8.7	10	11.6	14.5	18	22	29	44	58	73	87	102	145	174	232	276
TYPE LS200																							
0.29	5.29	15.3	19.9	21.8	28.0	32.1	38.3	39.3	45.1	49.4	56.0	62.0	68.3	73.8	98.4	88.7	137	116					
0.44	5.61	8.31	13.4	18.1	22.5	27.8	29.5	31.3	35.6	38.5	44.5	58.9	58.3	70.1	90.5	98.6	111	108					
0.73		12.3	18.6	22.5	29.1	35.2	38.9	47.2	50.2	55.1	61.8	74.1	81.0	96.6	126	125	144	154					
1.16		9.97	16.1	21.8	30.8	34.5	39.5	46.1	50.4	55.6	65.0	74.1	82.7	99.2	132	155	166	212					
1.45			12.2	17.2	25.4	36.8	39.8	41.0	44.8	49.8	55.6	68.3	75.8	85.6	132	137	150	183					
2.18					24.7	31.7	39.3	44.0	48.9	54.0	63.8	71.1	81.7	96.4	123	155	164	205	222				
4.35									45.8	47.5	56.6	68.0	77.5	93.7	151	154	195	210	252				
TYPE LS220																							
4.35									48.1	53	60.3	78.5	85.9	113	136	175	219	240	289				
7									36.6	46.5	54.6	72.2	84.6	107	133	175	193	206	252				
11											50.7	62.3	97.8	103	140	170	211	217	266	342	410	434	436
14.5													68.4	94	133	172	205	256	275	362	400	472	486
22														86.6	140	163	199	249	268	349	380	596	607
TYPE LS250																							
22														80.9	123	159	183	212	229	275	322	402	446
29															89.6	123	142	167	189	267	298	342	376
44																151	195	235	260	355	387	437	514
58																	176	237	272	376	441	560	615

Table 17. Utility Flow Full-Capacity LS200 Series DN 50 x 100 / 2 x 4 in. Body in Nm³/hr at AC5 Accuracy

OUTLET PRESSURE, barg	UTILITY FLOW CAPACITIES IN Nm ³ /hr AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC5 FOR DN 50 X 100																						
	INLET PRESSURE, barg																						
	0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	1.25	1.5	2	3	4	5	6	7	10	12	16	19
TYPE LS200																							
0.02	174	537	708	732	1071	1128	1334	1273	1555	1321	1337	1896	1984	1686	1656	2277	2471	2723					
0.03	207	328	479	624	664	1020	1057	1161	1093	1204	1397	1702	1625	1735	1634	2537	3978	3793					
0.05		340	526	638	984	917	1340	1219	1490	1490	1638	1786	1945	2099	2379	2608	3292	4294					
0.08		240	533	706	754	737	1511	1483	1634	1625	1579	2044	2084	2458	2307	3452	4107	5625					
0.1			325	485	905	1213	1222	1114	1277	1295	1626	1903	1836	1975	2102	2883	4314	5317					
0.15					929	1212	1398	1608	1710	1847	2141	2268	2468	2656	2486	3939	5572	7618	5404				
0.3									788	1894	1705	2054	2115	2223	2888	5529	5609	7635	5291				
TYPE LS220																							
0.3									869	937	1192	1645	2138	2699	3823	4842	3313	3002	3200				
0.5									498	634	782	900	1082	1368	1934	2636	3540	4814	6258				
0.75											680	991	1501	1676	2582	3738	5522	6400	8099	9769	8920	13,281	7476
1													1303	1475	1903	3002	3228	5239	5918	9883	10,874	14,951	14,923
1.5														1348	2464	3398	4332	5409	6654	9628	10,279	14,781	16,877
TYPE LS250																							
1.5														801	1674	2178	2662	3256	3993	5833	6853	8863	8608
2															852	1215	1388	1727	1982	3313	2888	3710	4616
3																2090	2888	3398	4106	5692	6824	8382	9854
4																	2449	3511	4389	6343	7646	9713	11,525

Table 18. Utility Flow Full-Capacity LS200 Series DN 50 x 100 / 2 x 4 in. Body in SCFH at AC5 Accuracy

OUTLET PRESSURE, psig	UTILITY FLOW CAPACITIES IN THOUSANDS OF SCFH AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC5 FOR 2 X 4 IN.																						
	INLET PRESSURE, psig																						
	0.7	1.5	2.2	2.9	4.4	5.8	7.3	8.7	10	11.6	14.5	18	22	29	44	58	73	87	102	145	174	232	276
TYPE LS200																							
0.29	6.16	19.0	25.0	25.9	37.8	39.9	47.2	45.0	54.9	46.7	47.2	67.0	70.1	59.6	58.5	80.4	87.3	96.2					
0.44	7.31	11.6	16.9	22.1	23.5	36.0	37.3	41.0	38.6	42.5	49.3	60.2	57.4	61.3	57.7	89.7	141	134					
0.73		12.0	18.6	22.5	34.8	32.4	47.4	43.1	52.6	52.6	57.9	63.1	68.7	74.2	84.1	92.2	116	152					
1.16		8.49	18.8	25.0	26.6	26.0	53.4	52.4	57.8	57.4	55.8	72.2	73.6	86.8	81.5	122	145	199					
1.45			11.5	17.1	32.0	42.9	43.2	39.4	45.1	45.8	57.4	67.3	64.9	69.8	74.3	102	152	188					
2.18					32.8	42.8	49.4	56.8	60.4	65.3	75.7	80.2	87.2	93.9	87.9	139	197	269	191				
4.35									27.8	66.9	60.2	72.6	74.7	78.6	102	195	198	270	187				
TYPE LS220																							
4.35									30.7	33.1	42.1	58.1	75.5	95.3	135	171	117	106	113				
7									17.6	22.4	27.6	31.8	38.2	48.3	68.3	93.1	125	170	221				
11											24	35	53	59.2	91.2	132	195	226	286	345	315	469	264
14.5													46	52.1	67.2	106	114	185	209	349	384	528	527
22														47.6	87	120	153	191	235	340	363	522	596
TYPE LS250																							
22														28.3	59.1	76.9	94	115	141	206	242	313	304
29															30.1	42.9	49	61	70	117	102	131	163
44																73.8	102	120	145	201	241	296	348
58																	86.5	124	155	224	270	343	407

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LS200 Series

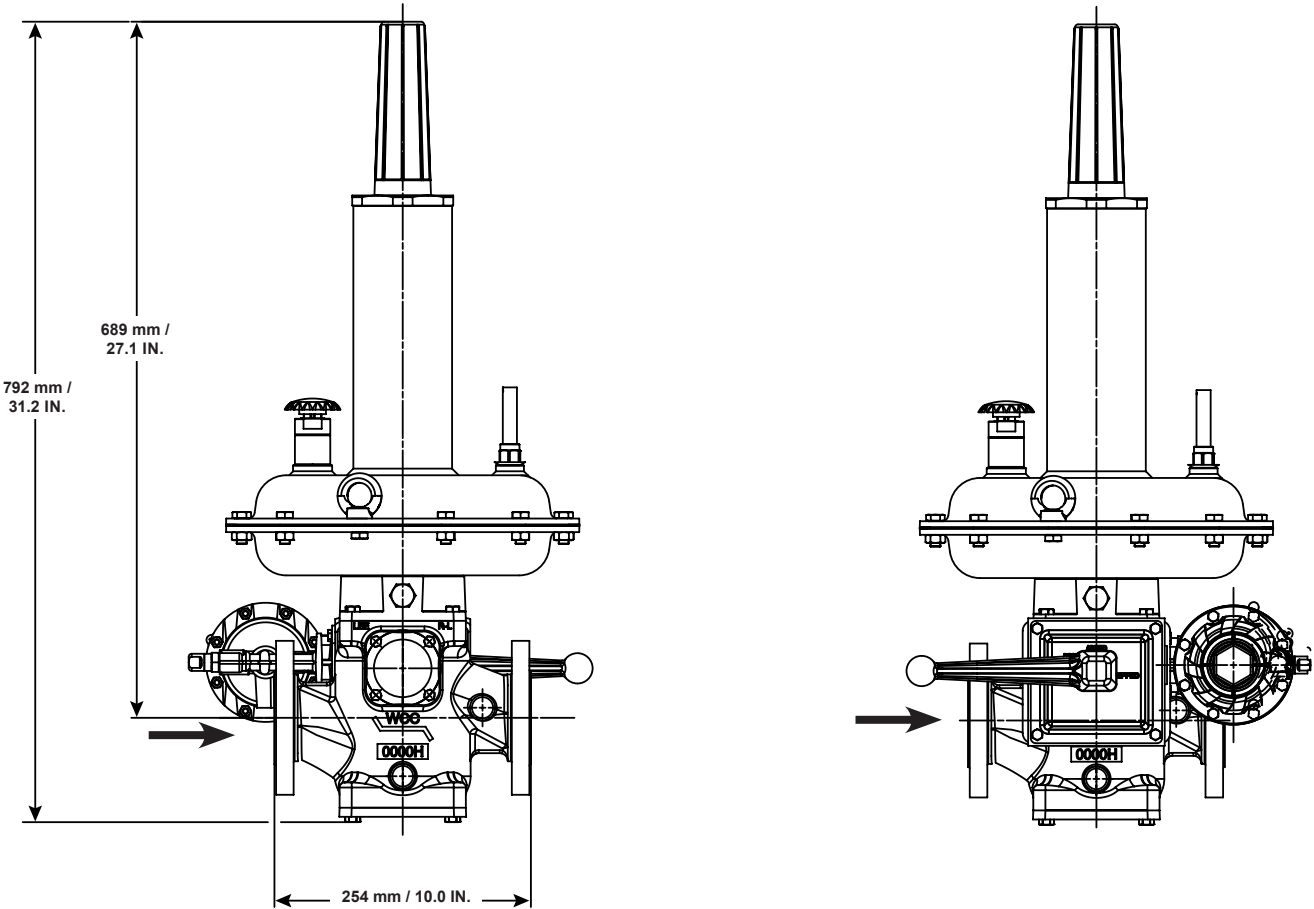
Table 19. Utility Flow Full-Capacity LS200 Series DN 50 x 100 / 2 x 4 in. Body in Nm³/hr at AC10 Accuracy

OUTLET PRESSURE, barg	UTILITY FLOW CAPACITIES IN Nm ³ /hr AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC10 FOR DN 50 X 100																							
	INLET PRESSURE, barg																							
	0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	1.25	1.5	2	3	4	5	6	7	10	12	16	19	
TYPE LS200																								
0.02	277	799	1034	1125	1434	1628	1928	1961	2229	2417	2694	2915	3132	3224	3862	3357	5004	4069						
0.03	293	433	700	935	1154	1408	1486	1552	1750	1892	2131	2753	2666	3049	3564	3713	4021	3781						
0.05		637	966	1166	1496	1785	1962	2363	2477	2684	2970	3496	3724	4203	4926	4736	5218	5362						
0.08			522	839	1123	1583	1745	1981	2305	2479	2706	3144	3464	3809	4316	5149	5821	6020	7399					
0.1				629	889	1295	1867	2010	2045	2216	2444	2688	3195	3490	3728	5193	5167	5434	6371					
0.15						1268	1610	1972	2192	2428	2653	3054	3344	3754	4218	4853	6091	6220	7200	6919				
0.3										1342	2321	2706	3184	3540	4118	5942	6051	7637	7367	8829				
TYPE LS220																								
0.3										1433	1580	1798	2342	2563	3341	4049	5239	6541	7221	8608				
0.5										1164	1385	1671	2152	2526	3200	3936	5210	5720	6145	7504				
0.75												1512	1858	2917	3087	4163	5040	6286	6485	7900	10,166	12,205	12,941	12,997
1														2042	2806	3936	5125	6088	7617	8184	10,789	11,921	14,583	14,555
1.5															2585	4163	5040	5975	7447	8127	10,307	11,185	17,188	17,953
TYPE LS250																								
1.5															2421	3625	4729	5380	6315	6853	8495	9656	11,610	13,507
2																2670	3625	4332	4955	5805	7702	8297	10,194	11,468
3																	4474	5862	6994	7815	10,449	11,751	13,875	15,772
4																		5210	6881	8099	11,270	13,224	15,688	18,491

Table 20 Utility Flow Full-Capacity LS200 Series DN 50 x 100 / 2 x 4 in. Body in SCFH at AC10 Accuracy

OUTLET PRESSURE, psig	UTILITY FLOW CAPACITIES IN THOUSANDS OF SCFH AT 0.6 SPECIFIC GRAVITY NATURAL GAS AT AC10 FOR 2 X 4 IN.																							
	INLET PRESSURE, psig																							
	0.7	1.5	2.2	2.9	4.4	5.8	7.3	8.7	10	11.6	14.5	18	22	29	44	58	73	87	102	145	174	232	276	
TYPE LS200																								
0.29	9.78	28.2	36.5	39.8	50.7	57.5	68.1	69.3	78.8	85.4	95.2	103	111	114	136	119	177	144						
0.44	10.3	15.3	24.7	33.0	40.8	49.8	52.5	54.9	61.9	66.9	75.3	97.3	94	108	126	131	142	134						
0.73		22.5	34.1	41.2	52.9	63.1	69.3	83.5	87.5	94.8	105	124	132	149	174	167	184	189						
1.16		18.4	29.6	39.7	55.9	61.7	70.0	81.5	87.6	95.6	111	122	135	153	182	206	213	261						
1.45			22.2	31.4	45.8	66.0	71.0	72.3	78.3	86.4	95.0	113	123	132	183	183	192	225						
2.18					44.8	56.9	69.7	77.4	85.8	93.8	108	118	133	149	171	215	220	254	244					
4.35									47.4	82.0	95.6	113	125	146	210	214	270	260	312					
TYPE LS220																								
4.35									50.6	55.8	63.5	82.7	90.5	118	143	185	231	255	304					
7									41.1	48.9	59	76	89.2	113	139	184	202	217	265					
11											53.4	65.6	103	109	147	178	222	229	279	359	431	457	459	
14.5													72.1	99.1	139	181	215	269	289	381	421	515	514	
22														91.3	147	178	211	263	287	364	395	607	634	
TYPE LS250																								
22															85.5	128	167	190	223	242	300	341	410	477
29																94.3	128	153	175	205	272	293	360	405
44																	158	207	247	276	369	415	490	557
58																		184	243	286	398	467	554	653

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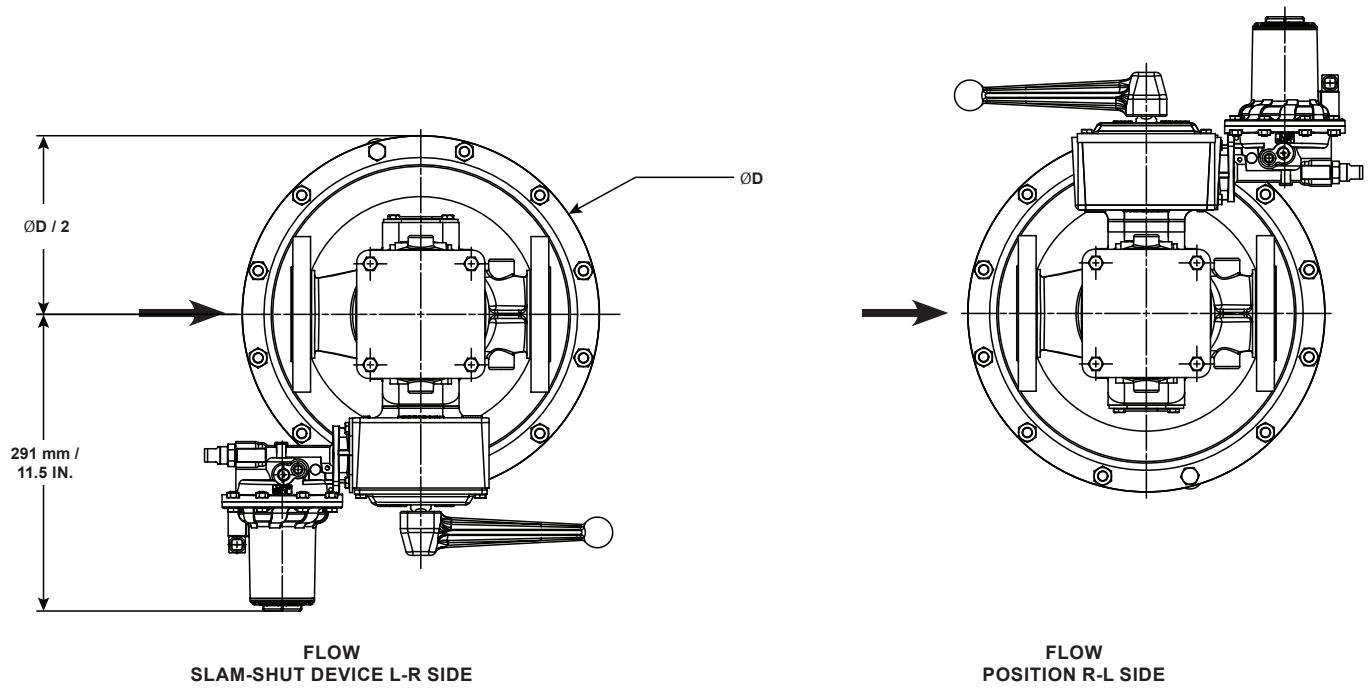


SLAM-SHUT DEVICE POSITIONS

Figure 3. LS200 Series with Slam-Shut Device Assembly Positions and Dimensions

Outside North America Only

LS200 Series



TYPE	DIAMETER	
	mm	In.
LS200	475	18.7
LS220	350	13.8
LS250	255	10

Figure 3. LS200 Series with Slam-Shut Device Assembly Positions and Dimensions (continued)

Ordering Information

Use the Specifications section on page 2 and carefully review the description to the right of each specification. Use this information to complete the

Ordering Guide on the following page. Specify the desired selection wherever there is a choice to be made. Then send the Ordering Guide to your local Sales Office.

Ordering Guide

Actuator (Select One)

- Type LS200
- Type LS220
- Type LS250

Body Material and End Connection Style (Select One)

Ductile Iron

- PN16
- CL150 RF
- PN16 with expanded outlet
- CL150 RF with expanded outlet

Steel

- NPT
- PN16
- CL150 RF
- PN16 with expanded outlet
- CL150 RF with expanded outlet

Outlet Pressure Range (Select One)

Type LS200

- 0.017 to 0.022 bar / 0.25 to 0.32 psig, Light Blue
- 0.02 to 0.05 bar / 0.30 to 0.70 psig, Yellow
- 0.04 to 0.09 bar / 0.60 to 1.28 psig, Brown
- 0.08 to 0.15 bar / 1.10 to 2.24 psig, Dark Grey
- 0.14 to 0.35 bar / 2 to 5 psig, Pink

Type LS220

- 0.30 to 0.35 bar / 4.35 to 5.1 psig, Light Green
- 0.3 to 0.73 bar / 4.35 to 10.6 psig, Pink
- 0.33 to 1.08 bar / 4.8 to 15.7 psig, Dark Blue
- 0.57 to 1.5 bar / 8.3 to 21.75 psig, Orange

Type LS250

- 1.38 to 2.09 bar / 20 to 30.3 psig, Pink
- 1.38 to 3.09 bar / 20 to 44.8 psig, Dark Blue
- 1.72 to 4.14 bar / 25 to 60 psig, Orange

Trim, Percent of Full Capacity (Select One)

- 100% (standard)
- 78%
- 60%
- 40%

Elastomers

- Nitrile (NBR) (standard)

Slam-Shut Position (refer to Figure 3) (Select One)

- L-R
- R-L
- L-R with Field Conversion Option
- R-L with Field Conversion Option

LS200 Series

Regulators Quick Order Guide	
***	Readily Available for Shipment
**	Allow Additional Time for Shipment
*	Special Order, Constructed from Non-Stocked Parts. Consult your local Sales Office for Availability.
Availability of the product being ordered is determined by the component with the longest shipping time for the requested construction.	

Specification Worksheet

Application:
 Specific Use _____
 Line Size _____
 Fluid Type _____
 Specific Gravity _____
 Temperature _____
 Does the Application Require Overpressure Protection?
 Yes No

Pressure:
 Maximum Inlet Pressure (P_{1max}) _____
 Minimum Inlet Pressure (P_{1min}) _____
 Downstream Pressure Setting(s) (P_2) _____
 Set Pressure _____
 Maximum Flow (Q_{max}) _____

Accuracy Requirements:
 Less Than or Equal To:
 5% 10% 20% 40%

Construction Material Requirements (if known):

Outside North America Only

-  Webadmin.Regulators@emerson.com
-  Facebook.com/EmersonAutomationSolutions
-  Fisher.com
-  LinkedIn.com/company/emerson-automation-solutions
-  Twitter.com/emr_automation

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