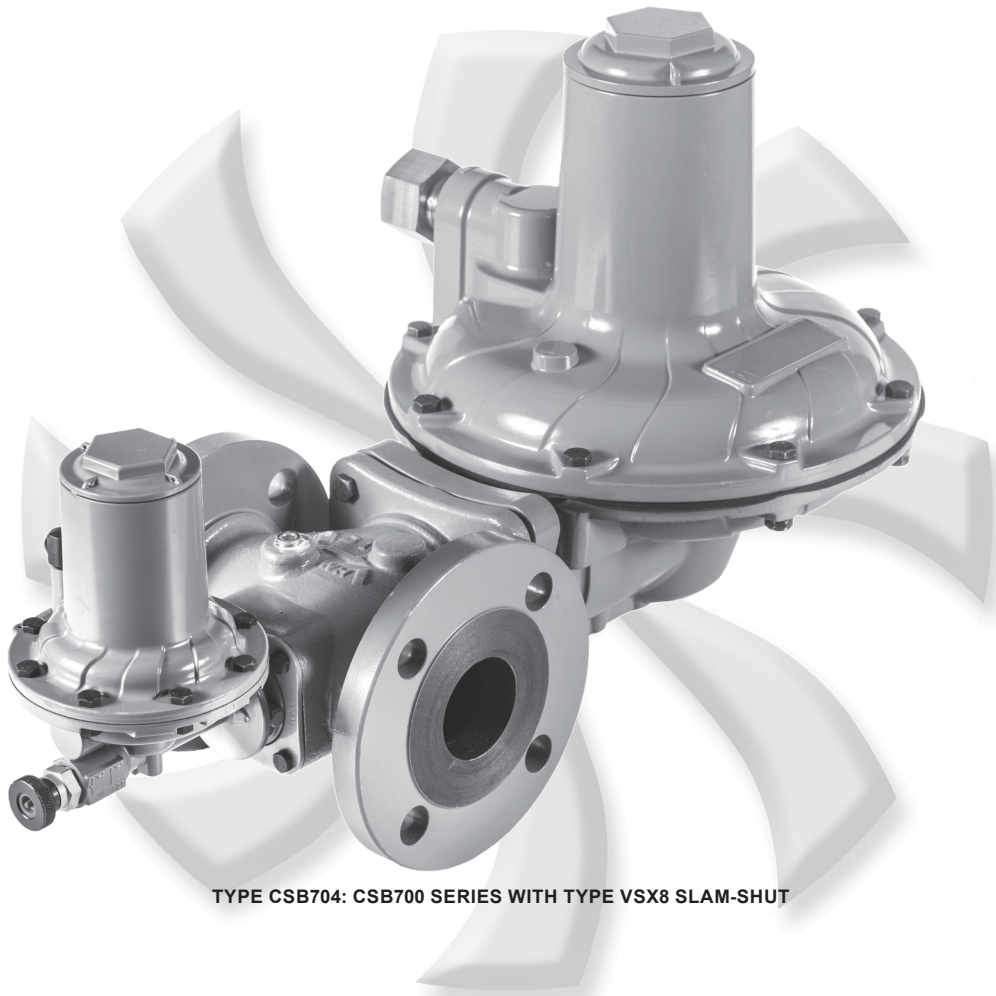


June 2021

# CSB700 Series Commercial / Industrial Pressure Reducing Regulators - North America



TYPE CSB704: CSB700 SERIES WITH TYPE VSX8 SLAM-SHUT

*Figure 1. Typical CSB700 Series Pressure Reducing Regulator*

## Features and Benefits

- **Ductile Iron and WCC Steel Bodies Available**
- **Wide Variety of Body Sizes and End Connections**
- **With Type VSX8 Slam-shut Option**
- **No Special Tools for Pressure Adjustment and Orifice Removal**

## Introduction

The CSB700 Series direct-operated, spring-loaded regulators have been engineered to fit a multitude of pressure reducing applications including commercial and industrial installations. This flexibility is provided by the numerous body sizes and end connections, outlet pressure settings. In addition to application flexibility, CSB700 Series offers multiple overpressure protection options to meet your application requirements.

# CSB700 Series

## Specifications

The Specifications section lists the specifications for the CSB700 Series regulators. The following information is stamped on the nameplate of CSB700 Series: Type and Class, Maximum Outlet Pressure and Spring Range.

### Available Configurations

See Table 1

### Body Sizes, Materials, End Connections and Pressure Ratings<sup>(1)</sup>

See Table 2

### Inlet Pressure Ratings<sup>(1)</sup>

See Table 3

### Maximum Outlet Pressure<sup>(1)</sup>

#### Emergency Casing:

Type CSB700/CSB700F/CSB720/CSB720F:

58.0 psig / 4.0 bar

Type CSB750: 72.5 psig / 5.0 bar

#### To Avoid Internal Metallic Parts Damage:

Type CSB700/CSB700F/CSB720/CSB720F:

5.0 psig / 0.34 bar over set pressure

Type CSB750: 21.8 psig / 1.5 bar over set pressure — not to exceed maximum emergency outlet

#### Operating Casing:

Type CSB700/CSB720: 16 psig / 1.1 bar

Type CSB750: 72.5 psig / 5.0 bar

### Outlet Pressure Ranges<sup>(1)</sup>

0.13 to 58.0 psig / 9.0 mbar to 4.0 bar

See Table 4

### Flow Capacities

See Tables 6 through 23

### Orifice Size

1-3/8 in. / 35 mm

### Flow and IEC Sizing Coefficients

See Table 3

### Temperature Capabilities<sup>(1)(2)(3)</sup>

#### According to PED Standards:

-4 to 151°F / -20 to 66°C

#### Non-PED:

-22 to 151°F / -30 to 66°C

### Spring Case Vent Connection

1 NPT: Types CSB700 and CSB720

1/2 NPT: Type CSB750

### Spring Case Vent and Body Orientation

See Figure 5

### Type VSX8 Slam-Shut Device Maximum Pressure<sup>(1)</sup>:

#### Maximum Operating Inlet Pressure:

232 psig / 16 bar

#### Maximum Operating Outlet Pressure:

87 psig / 6.0 bar

### Construction Materials

#### CSB700 Series Main Valve and Actuator

Body: Ductile iron or WCC Steel

Body O-ring: Nitrile (NBR)

Closing Cap: Aluminum

Adjusting Screw: Aluminum

Adjusting Bolt: Steel

Spring Case, Lower Casing and

Valve Stem: Aluminum

Orifice: Aluminum

Pusher Post and Relief Valve Seat: Aluminum

Diaphragm and Disk: Nitrile (NBR)

Control Spring: Music wire or Stainless steel

Relief Valve Spring: Stainless steel

Relief Valve Diaphragm Retainer: Zinc-plated steel

Retainer Ring: Zinc-plated steel

Lever Pin: Carbon steel

Lever: Steel Spring Seat and other metal parts:

Zinc-plated steel

#### Type VSX8 Slam-shut Device

Diaphragm Case, Spring Case

and Valve Stem: Aluminum

Diaphragm Plate: Stainless steel or

Noryl™ GFN2 Plastic

Diaphragm and Disk: Nitrile (NBR)

Control Spring: Steel

Vent Screen: 18-8 Stainless steel

Vent Screen Retainer: Zinc-plated steel

Closing Cap: Aluminum

Adjusting Screw: Leaded-Brass

### Approximate Weights

#### with Threaded body

Type CSB700/CSB720: 29 lbs / 13 kg

Type CSB750: 31 lbs / 14 kg

Type CSB704/CSB724: 31 lbs / 14 kg

Type CSB754: 33 lbs / 15 kg

#### with Flanged body

Add 11 lbs / 5.2 kg to weights listed

### Designed, Tested and Evaluated Consistent With:

ANSI B16, ASME BPVC Section VIII Division I,

ASTM B117 (Corrosion Resistance), EN 334 and

EN 14382

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

2. Standard token relief set values listed in Tables 5a, 5b, 5c and 5d are based on -4 to 140°F / -20 to 60°C.

3. Product has passed Emerson Process Management Regulator Technologies, Inc. testing for lockup, relief start-to-discharge and reseal down to -40°.

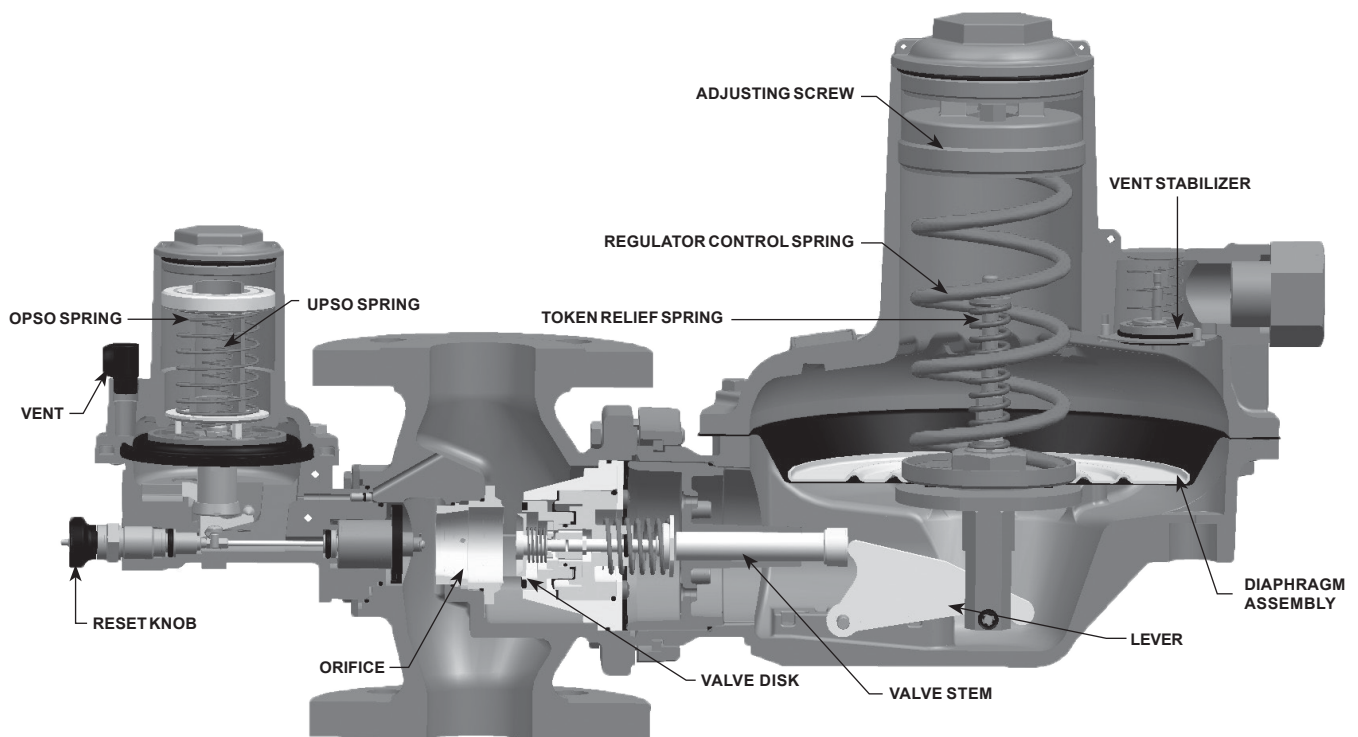


Figure 2. Type CSB704 Regulator with Type VSX8 Slam-Shut Internal View

## Multiple Overpressure Protection Options Available:

- **Token Internal Relief** – Provides relief from minor overpressure caused by nicks or dents on the orifice or by thermal expansion of gas in the downstream line. Token relief also provides a token or signal, in the form of odor, indicating that an overpressure situation is occurring.
- **Slam-Shut Protection** – Discontinues gas service by shutting off the gas flow if there is an overpressure or underpressure condition.

## Principle of Operations

Refer to Figures 3 and 4. When downstream demand decreases, the pressure under the diaphragm increases. This pressure overcomes the regulator setting (which is set by a spring). The action of the pusher post assembly, lever, and valve stem moves the balanced port assembly closer to the orifice and reduces gas flow. If downstream demand increases, pressure under the diaphragm decreases. Spring force pushes the pusher post assembly downward and the balanced port assembly moves away from the orifice.

## Installation

The CSB700 Series regulators may be installed in any position. As long as the flow through the body is the same as indicated by the flow direction arrow on the body and the spring case vent is pointed downward (see Figure 5). If gas escaping through the CSB700 Series token internal relief valve could constitute a hazard, the spring case vent must be piped to a location where escaping gas will not be hazardous. If the vented gas will be piped to another location, install obstruction-free tubing or piping at least equal to the vent and the end of the vent pipe must be protected from anything that might clog it.

## Downstream Control Line Connection

A CSB700 Series regulator with an “ET” or “EN” in the type number has a blocked throat, an O-ring stem seal and a 3/4 NPT control line tapping in the lower diaphragm casing, Figure 4. A regulator with a downstream control line is typically used for monitoring installations or other applications where there is an equipment installed between the regulator and the pressure control point. The O-ring stem seal helps separate body pressure from diaphragm case pressure on monitor installations where leakage cannot be tolerated. Refer to the CSB700 Series Instruction Manual for instructions on downstream control line installation.

# CSB700 Series

**Table 1. Available Configurations**

TYPE NUMBER					OPTION	
C	S	B	7			
						<b>PRESSURE CONSTRUCTION</b>
	0					Low Pressure Applications (Outlet Pressure: 3.6 in. w.c. to 1.6 psig / 9.0 to 110 mbar) <sup>(2)</sup>
	2					Medium Pressure Applications (Outlet Pressure: 0.9 to 11.3 psig / 61 to 780 mbar) <sup>(2)</sup>
	5					High Pressure Applications (Outlet Pressure: 10.2 to 58.0 psig / 0.70 to 4.0 bar) <sup>(2)</sup>
						<b>OVERPRESSURE PROTECTION</b>
	0					Without Overpressure Protection Module
	0F					Without Overpressure Protection Module (Outlet Pressure: 3.6 in. w.c. to 1.6 psig / 9.0 to 110 mbar and 3.9 to 4.7 psig / 270 to 325 mbar only) <sup>(2)</sup>
	4					With Type VSX8 Slam-shut Module <sup>(1)</sup>
	4F					With Type VSX8 Slam-shut Module <sup>(1)</sup> (Outlet Pressure: 3.6 in. w.c. to 1.6 psig / 9.0 to 110 mbar and 3.9 to 4.7 psig / 270 to 325 mbar only) <sup>(2)</sup>
						<b>PRESSURE REGISTRATION</b>
				E		External
						<b>RELIEF</b>
				N		None
				T		Token Internal Relief <sup>(3)</sup>
Example: Type number CSB724ET: Type CSB700 regulator constructed for medium pressure applications, with Type VSX8 Slam-shut Module, with External pressure registration and with Token relief.						
1. Reference Instruction Manual D103127X012 for information regarding the Type VSX8 Slam-shut Module.						
2. The pressure/temperature limits in this Bulletin and any applicable standard or code limitation should not be exceeded.						
3. Token relief not available for outlet pressure above 8 psig / 500 mbar.						

**Table 2. Body Sizes, Material, End Connections and Cold Working Pressure Ratings**

BODY MATERIAL	BODY SIZE		END CONNECTION	FACE-TO-FACE DIMENSION		BODY PRESSURE RATING	
	NPS	DN		In.	mm	psig	bar
Ductile Iron	1-1/2	40	NPT	6.10	155	250	17.2
	2	50					
	1-1/2	40	Rp	7.52	191		
	2	50					
	2	50	CL125 FF/CL150 FF	10.0	254		
	2	50		10.5	267		
	2	50		7.52	191		
	2	50	PN 10/16	7.87	200	232	16.0
	2	50		10.0	254		
	1-1/2	40	PN 16 Slip-On	8.74	222		
WCC Steel	1-1/2	40	NPT	6.10	155	290	20.0
	2	50					
	1-1/2	40	Rp	10.0	254		
	2	50					
	2	50	CL150 RF	7.52	191	232	16.0
	2	50	PN 10/16	7.52	191		
	2	50	PN 10/16	7.52	191		

**Table 3. Inlet and Outlet Pressure Ratings and Flow and Sizing Coefficients**

TYPE	SPECIFIC MAXIMUM ALLOWABLE PRESSURE / MAXIMUM EMERGENCY OUTLET PRESSURE <sup>(1)</sup>		MAXIMUM ALLOWABLE PRESSURE / MAXIMUM EMERGENCY INLET PRESSURE <sup>(1)</sup>		MAXIMUM OPERATING INLET PRESSURE		ORIFICE SIZE		WIDE-OPEN FLOW COEFFICIENT			IEC SIZING COEFFICIENT			
	psig	bar	psig	bar	psig	bar	In.	mm	C <sub>g</sub>	C <sub>v</sub>	C <sub>i</sub>	X <sub>T</sub>	F <sub>D</sub>	F <sub>L</sub>	
CSB700 and CSB704	58.0	4.0	174	12.0	145	10.0	1-3/8	35	1080	27.7	39	0.96	0.89	0.66	
CSB700F and CSB704F					87	6.0									
CSB720F and CSB724F					290	20.0									
CSB720 and CSB724					232	16									
CSB750 and CSB754	72.5	5.0	290	20.0	232	16									

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

**Table 4. CSB700 Series Primary Regulator Outlet Pressure Ranges**

TYPE	OPERATING PRESSURE RANGES, W <sub>d</sub>		PART NUMBER	SPRING COLOR	SPRING WIRE DIAMETER		SPRING FREE LENGTH	
	psig	mbar			In.	mm	In.	mm
CSB700, CSB704, CSB700F and CSB704F	3.6 to 5.6 in. w.c.	9 to 14	GE30336X012	Silver	0.118	3.00	8.82	224
	5.2 to 9.6 in. w.c.	13 to 24	ERSA01138A0	Red	0.138	3.50	10.4	264
	8.8 to 15.7 in. w.c.	22 to 39	GE30338X012	Black Stripe	0.170	4.32	6.78	172
	12.8 to 20.1 in. w.c.	32 to 50	GE30339X012	Purple	0.171	4.34	7.35	187
	16.9 to 28.1 in. w.c.	42 to 70	GE30340X012	White Stripe	0.182	4.62	7.40	188
CSB720 and CSB724	0.9 to 1.6	61 to 110	ERSA03656A0	Dark Green	0.192	4.88	8.82	224
	1.5 to 3.2	105 to 220	ERSA03657A0	Blue	0.234	5.94	8.53	217
	3.1 to 5.5	210 to 380	GG06247X012	Black	0.315	8.00	8.13	206
	4.6 to 8.3	320 to 570	ERSA01582A0	Red with White Stripe	0.343	8.71	6.97	177
	7.4 to 11.3	510 to 780	ERSA05055A0	Blue with White Stripe	0.394	10	7.13	181
CSB720F and CSB724F	3.9 to 4.7	270 to 325	ERAA11747A0	Black with White Stripe	0.256	6.5	9.25	235
CSB750 and CSB754	10.2 to 17.3	0.7 to 1.19 bar	GE30345X012	Purple Stripe	0.354	9.00	8.87	225
	15.2 to 39.2	1.05 to 2.7 bar	GE30346X012	Brown	0.433	11.0	8.88	226
	33.4 to 47.1	2.3 to 3.25 bar	ERSA01125A0	Gray with Red Stripe	0.496	12.6	8.87	225
	45 to 58	3.1 to 4 bar	ERSA01126A0	Gray with Orange Stripe	0.539	13.7	8.89	226

# CSB700 Series

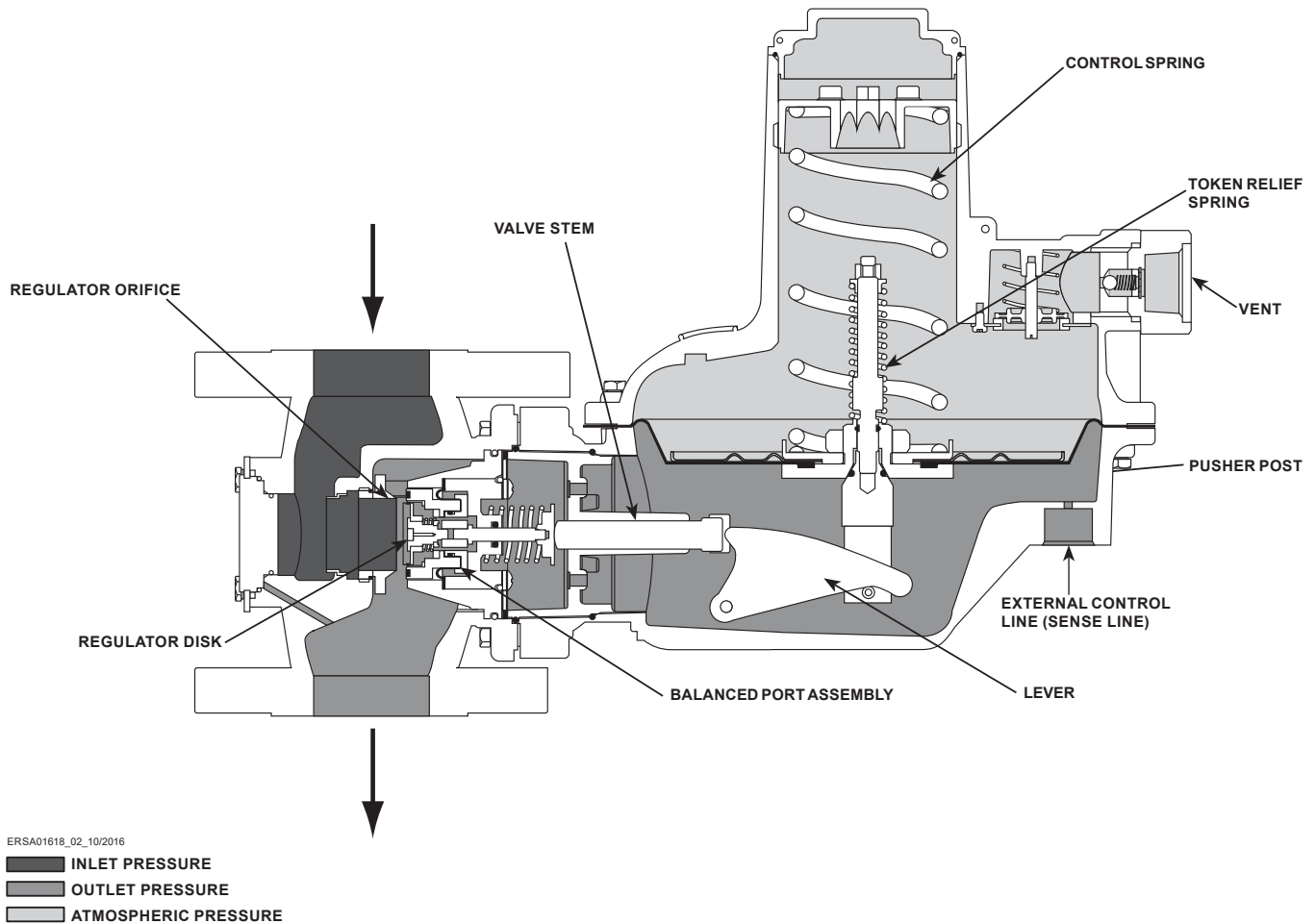


Figure 3. CSB700 Series with External Registration Operational Schematics

## Internal Token Relief

CSB700 Series regulators with a “T” in the type number, provide a low capacity or token internal relief to help minimize overpressure. The token relief also acts to avoid nuisance trips of the slam-shut mechanism due to pressure increase from thermal expansion or overpressure caused by orifice damage such as nicks and dents.

## Overpressure Protection

Overpressuring any portion of a regulator or associated equipment may cause personal injury, leakage or property damage due to bursting of pressure-containing parts or explosion of accumulated gas. Provide appropriate pressure relieving to ensure that the critical limits in the Specifications section are not exceeded. Regulator operation within ratings does not preclude the possibility of damage from external sources or from debris in the pipeline.

The CSB700 Series regulators have outlet pressure ratings that are lower than their inlet pressure ratings. A pressure-relieving or pressure-limiting device is needed for the CSB700 Series that do not have a slam-shut device installed.

Types CSB704, CSB724F, CSB724 and CSB754 regulators rely on Type VSX8 slam-shut device for overpressure protection. In the event that outlet pressure rises above or falls below the pressure setting of the Type VSX8, the slam-shut device will activate or trip, thereby stopping flow through to the downstream system. To restart flow to the downstream system, the Type VSX8 must be reset.

Type CSB704 regulators with a “T” in their type number provide a low capacity (Token) internal relief which provides sufficient relief to preclude the Type VSX8 tripping due to pressure rise caused by thermal expansion or overpressure due to orifice damage such as nicks and dents.



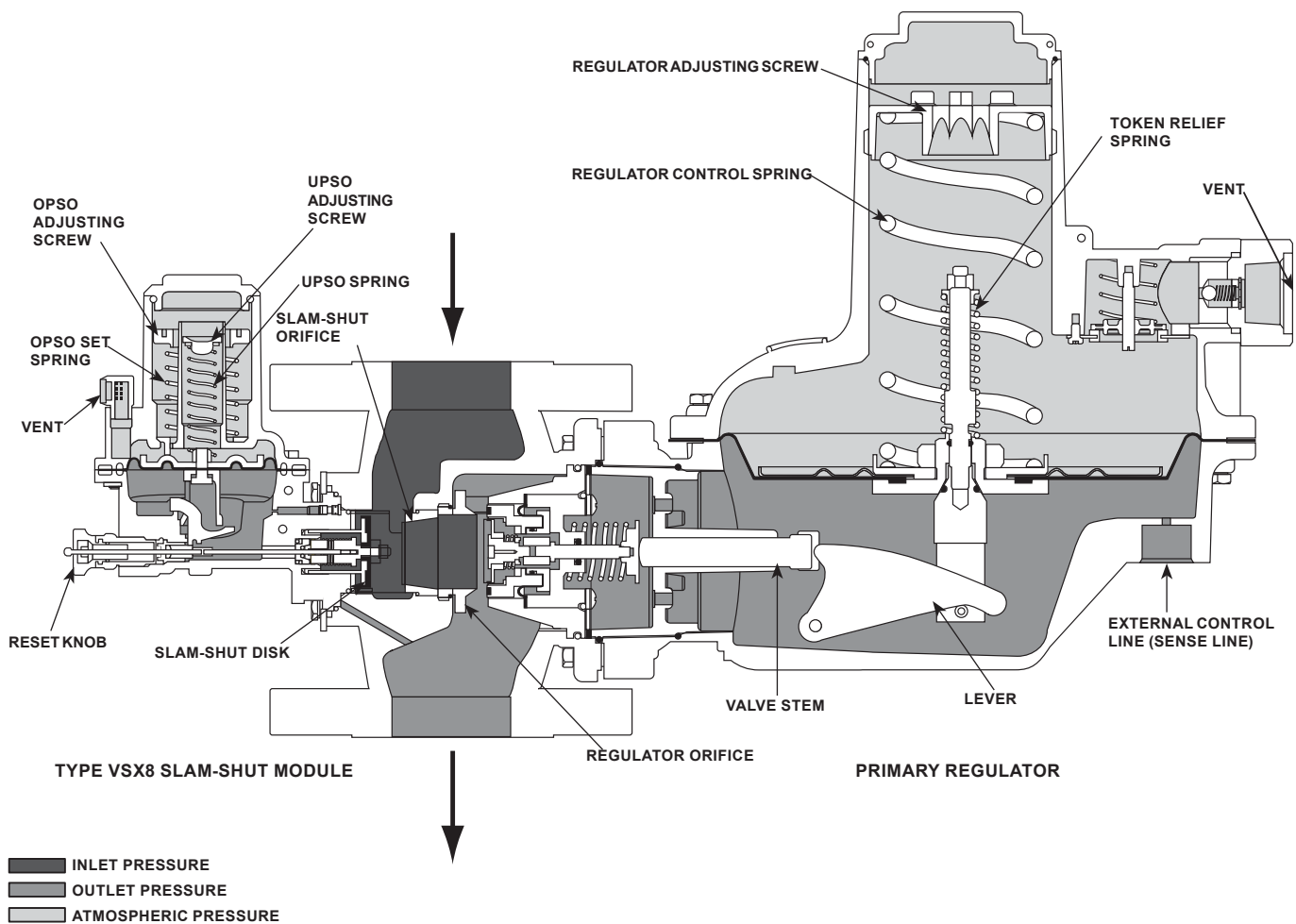


Figure 4. Type CSB704ET, Externally Registered Regulator and Slam-Shut Operational Schematic

## Type VSX8 Slam-Shut Device

The Type VSX8 slam-shut device on the Type CSB704 regulator is a fast-acting shutoff device that provides overpressure (OPSO) or over and underpressure (OPSO/UPSO) protection by shutting off the flow of gas to the downstream system. The Type VSX8's actions are independent of the Type CSB704 regulator and of variations to the inlet pressure. The Type VSX8 uses external pressure registration and requires a downstream control line regardless if the regulator is internally or externally registered. Refer to the CSB700 Series Instruction Manual for instructions regarding downstream control line installation.

Refer to Figure 4, shutoff disk is normally located in the open (reset) position. If the pressure below the diaphragm increases (or decreases) reaching the Type VSX8 setpoint, the diaphragm will travel upwards (or downwards) to release the trip mechanism which allows the spring force on the stem to push the stem and disk against the seat, shutting off all gas flow. The manual reset has an internal bypass to equalize the reset pressure on either side on the shutoff disk.

## Note

In order for the Underpressure Shutoff (UPSO) of any slam-shut to be triggered, the downstream pipe pressure must drop below the UPSO setpoint. In the case of a downstream line break, numerous factors can prevent the downstream pipe pressure from decreasing below the slam-shut UPSO setpoint. These factors include the distance of pipe to the break, the diameter of the pipe, size of the break and the number of restrictions, such as valves, elbows and bends, downstream of the regulator and/or slam-shut device. Due to these factors additional protections should be installed to stop flow in the event of a line break.

# CSB700 Series

**Table 5a. Overpressure Shut-off OPSO Only Ranges**

REGULATOR			SLAM SHUT DEVICE							
Type	Typical Setpoint	Spring Range	Type (Maximum Operating Inlet)	Token Relief Set	Relief Range Shown as a % of Regulator Setpoint		Required Difference Between Token Relief and OPSO	Over Pressure Shut-off (OPSO) Set Range	Factory Set OPSO	
	psig	psig		psig	min	max	psig	psig	psig	
CSB704F	7 in. w.c.	5.2 to 9.6 in. w.c.	VSX8L (125 psi)	12 in. wc	170	215	3.2 in. w.c	12 to 24 in. w.c.	22 in. w.c.	
	11 in. w.c.	8.8 to 15.7 in. w.c.		17 in. wc	150	160	4 in. w.c.	16 in. w.c. to 1.6 psig	25 in. w.c.	
	14 in. w.c.	12.8 to 20.0 in. w.c.		21 in. wc	150	160	4 in. w.c.	24 in. w.c. to 2.8 psig	1.1	
CSB724F	1	24 in. w.c. to 1.6 psig		1.4	140	150	6.4 in. w.c	1.4 to 4.1	2	
	2	1.5 to 3.2		2.6	130	140	0.6	2.0 to 7.3	3.5	
	3			3.8	125	140	0.6		5	
	5	3.1 to 5.5		6.2	125	140	0.7	3.2 to 11.0	7	
	10	7.4 to 11.3							5.8 to 13.3 <sup>(1)</sup>	12
CSB704	7 in. w.c.	5.2 to 9.6 in. w.c.		VSX8L (232 psi)	12 in. wc	170	215	3.2 in. w.c	12 to 24 in. w.c.	22 in. w.c.
	11 in. w.c.	8.8 to 15.7 in. w.c.			17 in. wc	150	160	4 in. w.c.	16 in. w.c. to 1.6 psig	25 in. w.c.
	14 in. w.c.	12.8 to 20.0 in. w.c.	21 in. wc		150	160	4 in. w.c.	24 in. w.c. to 2.8 psig	1.1	
	1	24 in. w.c. to 1.6 psig	1.4		140	150	6.4 in. w.c	1.4 to 4.1	2	
CSB724	2	1.5 to 3.2	2.6		130	140	0.6	2.0 to 7.3	3.5	
	3		3.8		125	140	0.6		5	
	5	3.1 to 5.5	6.2		125	140	0.7	3.2 to 11.0	7	
	10	7.4 to 11.3							5.8 to 13.3 <sup>(1)</sup>	12
CSB754 <sup>(2)(3)</sup>	15	10.2 to 17.3	VSX8H (232 psi)						5.8 to 13.3 <sup>(1)</sup>	12
	20	15.2 to 39.2							13.1 to 39.1 <sup>(1)</sup>	19
	30							13.1 to 43.5	25	
	40	33.4 to 47.1							23.2 to 72.5 <sup>(1)</sup>	35

■ - Gray areas indicate that token relief is not available above 8 psig setpoint.  
 1. Max OPSO setpoint truncated to reflect maximum outlet pressure for spring range.  
 2. Additional OPSO setpoints available, use R30 note when ordering.  
 3. 5 psi difference between OPSO and Regulator setpoint recommended above 20 psi.

**Table 5b. Metric Overpressure Shut-off OPSO Only Ranges**

REGULATOR			SLAM SHUT DEVICE						
Type	Typical Setpoint	Spring Range	Type (Maximum Operating Inlet)	Token Relief Set	Relief Range Shown as a % of Regulator Setpoint		Required Difference Between Token Relief and OPSO	Over Pressure Shut-off (OPSO) Set Range	Factory Set OPSO
	mbar	mbar		mbar	min	max	mbar	mbar	mbar
CSB704F	10	9 to 14	VSX8L (8.6 bar)	17	170	215	8	30 to 60	32
	15	13 to 24		26	170	215	6		
	20	13 to 24		34	170	215	6	30 to 60	40
	21			36	170	215	4		
	27	22 to 39		41	150	160	5	30 to 60	46
	30			45	150	160	10		
	35	22 to 39		53	150	160	10	40 to 110	70
	50	42 to 70		70	140	158	16	60 to 193	90
	60			84	140	158	16		
	75	61 to 110		98	130	140	20	60 to 193	130
CSB704	10	9 to 14	VSX8L (16 bar)	17	170	215	8	30 to 60	40
	15	13 to 24		26	170	215	10		
	20	13 to 24		34	170	215	10	30 to 60	55
	21			36	170	215	10		
	27	22 to 39		41	150	160	10	30 to 60	55
	30			45	150	160	10		
	35	22 to 39		53	150	160	10	40 to 110	70
	50	42 to 70		70	140	158	16	60 to 193	90
	60			84	140	158	16		
	75	61 to 110		98	130	140	20	60 to 193	130
CSB724	100	61 to 110	VSX8L (16 bar)	130	130	140	20	60 to 193	170
	120	105 to 220		156	130	140	40	95 to 280	205
	150			195	130	140	40		
	160	105 to 220		208	130	140	40	95 to 280	265
	200	105 to 220		250	125	140	50	138 to 500	330
	300	210 to 380		375	125	140	50	138 to 500	450
	500	320 to 570		625	125	140	60	221 to 760	700
	600	510 to 780						400 to 915 <sup>(1)</sup>	840
	750							400 to 1100 <sup>(1)</sup>	1050
	CSB724F	300		270 to 325	VSX8L (8.6 bar)				
CSB754 <sup>(2)(3)</sup>	1000	700 to 1190	VSX8H (16 bar)					400 to 1450	1320
	1200	1050 to 2700						900 to 3000	1600
	1500								
	2000	1050 to 2700						1600 to 4000 <sup>(1)</sup>	2400
	3000	2300 to 3250						1600 to 5000 <sup>(1)</sup>	3400
4000	3100 to 4000					4400			

■ - Gray areas indicate that token relief is not available above 500 mbar setpoint.  
 1. Max OPSO setpoint truncated to reflect maximum outlet pressure for spring range.  
 2. Additional OPSO set points available, use R30 note when ordering.  
 3. 0.4 bar difference between OPSO and Regulator Set point recommended above 1.2 barg.



**Table 5c. Overpressure and Underpressure Shut-off UPSO/OPSO Ranges**

REGULATOR			SLAM SHUT DEVICE									
Type	Typical Setpoint	Spring Range	Type (Maximum Operating Inlet)	Token Relief Set	Relief Range Shown as a % of Regulator Setpoint		Required Difference Between Token Relief and OPSO	UPSO	OPSO	Factory Set		
					min	max		Set Range	Shut-off (OPSO) Set Range Over UPSO Setpoint	UPSO	Adjusted OPSO Range	OPSO
	psig	psig		psig			psig	psig	psig	psig	psig	
CSB704F	7 in. w.c.	5.2 to 9.6 in. w.c.	VSX8L (125 psi)	12 in. w.c.	170	215	3.2 in. w.c.	3 to 12 in. w.c.	16 to 29 in. w.c.	3 in. w.c.	19 in. w.c. to 1.2 psig	22 in. w.c.
	11 in. w.c.	8.8 to 15.7 in. w.c.		17 in. w.c.	150	160	4 in. w.c.			6 in. w.c.	22 in. w.c. to 1.3 psig	25 in. w.c.
	14 in. w.c.	12.8 to 20.0 in. w.c.		21 in. w.c.	150	160	4 in. w.c.	4 in. w.c. to 1.1 psig	20 in. w.c. to 1.8 psig	9 in. w.c.	1 to 2.1 psig	1.1
	1	24.0 in. w.c. to 1.6 psig		1.4	140	150	6.4 in. w.c.	10 in. w.c. to 2.3 psig	1.2 to 3.2	14 in. w.c.	1.7 to 3.7	2
CSB724F	2	1.5 to 3.2	VSX8L (232 psi)	2.6	130	140	0.6	1.5 to 7.3	2.6 to 5.6	1	2.2 to 4.2	3.5
	3			3.8	125	140	0.6			2	4.6 to 7.6	5
	5	3.1 to 5.5		6.2	125	140	0.7	1.5 to 7.3	2.6 to 5.6	3	5.6 to 8.6	7
	10	7.4 to 11.3					1.5 to 7.3	3.5 to 8.2	5	8.5 to 13.2	12	
							1.5 to 10.9	6.7 to 13.5	7	13.7 to 20.5	19	
CSB704	7 in. w.c.	5.2 to 9.6 in. w.c.	VSX8L (232 psi)	12 in. w.c.	170	215	3.2 in. w.c.	3 to 12 in. w.c.	18 to 30 in. w.c.	3 in. w.c.	21 in. w.c. to 1.2 psig	22 in. w.c.
	11 in. w.c.	8.8 to 15.7 in. w.c.		17 in. w.c.	150	160	4 in. w.c.			6 in. w.c.	24 in. w.c. to 1.3 psig	25 in. w.c.
	14 in. w.c.	12.8 to 20.0 in. w.c.		21 in. w.c.	150	160	4 in. w.c.	4 in. w.c. to 1.1 psig	25 in. w.c. to 1.9 psig	9 in. w.c.	1.2 to 2.2 psig	1.1
	1	24.0 in. w.c. to 1.6 psig		1.4	140	150	6.4 in. w.c.	10 in. w.c. to 2.3 psig	1.2 to 3.2	14 in. w.c.	1.7 to 3.7	2
CSB724	2	1.5 to 3.2	VSX8L (232 psi)	2.6	130	140	0.6	1.5 to 7.3	2.6 to 5.6	1	2.2 to 4.2	3.5
	3			3.8	125	140	0.6			2	4.6 to 7.6	5
	5	3.1 to 5.5		6.2	125	140	0.7	1.5 to 7.3	2.6 to 5.6	3	5.6 to 8.6	7
	10	7.4 to 11.3					1.5 to 10.9	3.5 to 8.2	5	8.5 to 13.2	12	
							7.3 to 29.0	15.2 to 22.8	10	25.2 to 32.8	25	
CSB754	15	10.2 to 17.3	VSX8H (232 psi)				7.3 to 29.0	18.1 to 33.4	7	13.7 to 20.5	19	
	20	15.2 to 39.2		10	25.2 to 32.8	25						
	30	33.4 to 55.1		15	33.1 to 48.4	35						
	40			38.1 to 53.4	45							

Gray areas indicate that token relief is not available above 8 psig setpoint.

**Table 5d. Metric Overpressure and Underpressure Shut-off UPSO/OPSO Ranges**

REGULATOR			SLAM SHUT DEVICE									
Type	Typical Setpoint	Spring Range	Type (Maximum Operating Inlet)	Token Relief Set	Relief Range Shown as a % of Regulator Setpoint		Required Difference Between Token Relief and OPSO	UPSO	OPSO	Factory Set		
					min	max		Set Range	Shut-off (OPSO) Set Range Over UPSO Setpoint	UPSO	Adjusted OPSO Range	OPSO
	mbar	mbar		mbar			mbar	mbar	mbar	mbar	mbar	
CSB704F	15	13 to 24	VSX8L (8.6 bar)	26	170	215	6	7 to 11	30 to 44	8	38 to 52	40
	20	13 to 24		34	170	215	6	7 to 11	30 to 44	10	40 to 54	40
	21	13 to 24		36	170	215	4	7 to 11	30 to 44	10	40 to 54	40
	27	22 to 39		41	150	160	5	7 to 15	32 to 44	14	46 to 58	46
	30	22 to 39		45	150	160	10	7 to 30	40 to 72	15	55 to 87	60
	35	22 to 39		53	150	160	10	7 to 30	40 to 72	18	58 to 90	70
	50	42 to 70		70	140	158	16	10 to 75	48 to 74	25	73 to 99	90
	60			84	140	158	16		48 to 74	30	78 to 104	100
	75	61 to 110		98	130	140	20	25 to 160	83 to 221	38	121 to 259	130
	CSB704	15		13 to 24	VSX8L (16 bar)	26	170	215	6	7 to 30	40 to 55	8
20		13 to 24	34	170		215	6	7 to 30	40 to 55	10	50 to 65	55
21		13 to 24	36	170		215	4	7 to 30	40 to 55	10	50 to 65	55
27		22 to 39	41	150		160	5	7 to 30	40 to 55	14	54 to 69	55
30		22 to 39	45	150		160	10	7 to 30	45 to 76	15	60 to 91	60
35			53	150		160	10	7 to 30	45 to 76	18	63 to 94	70
50		42 to 70	70	140		158	16	10 to 75	50 to 80	25	75 to 105	90
60			84	140		158	16		50 to 80	30	80 to 110	100
75	61 to 110	98	130	140	20	25 to 160	83 to 221	38	121 to 259	130		
CSB724	100	61 to 110	VSX8L (16 bar)	130	130	140	20	25 to 160	83 to 221	50	133 to 271	170
	120			156	130	140	40			60	143 to 281	205
	150			195	130	140	40			75	158 to 296	250
	160			208	130	140	40			80	163 to 301	265
	200	105 to 220		250	125	140	50	100 to 500	114 to 261	100	214 to 361	330
	300			375	125	140	50		179 to 386	150	329 to 536	450
	500			625	125	140	60		241 to 565	250	491 to 815	700
	600						100 to 500		241 to 565	300	541 to 865	840
750	510 to 780				100 to 750	460 to 932	375	835 to 1120 <sup>(1)</sup>	1050			
CSB724F	300	270 to 325	VSX8L (8.6 bar)				100 to 500	179 to 386	200	379 to 586	400	
	CSB754 GrDF	1000	0.7 to 1.19 bar	VSX8L (16 bar)				100 to 500	460 to 932	750	1210 to 1682	1210
CSB754		1000	0.7 to 1.19 bar	VSX8H (16 bar)				100 to 500	460 to 932	500	960 to 1432	1320
		1200	1.05 to 2.7 bar					500 to 2000	1050 to 1570	600	1650 to 2170	1650
		1500			750	1800 to 2320	1900					
		2000	2.3 to 3.25 bar					500 to 2000	1250 to 2300	1000	2250 to 3300	2400
3000	1500	2750 to 3800		3400								
4000	3.1 to 4 bar				500 to 2800	2100 to 3750	2000	4100 to 5000 <sup>(1)</sup>	4400			

Gray areas indicate that token relief is not available above 500 mbar setpoint.

1. Max OPSO setpoint truncated to reflect maximum outlet pressure for spring range.

**Example:** If a non-standard setpoint is needed, see the following example for the proper use of Tables 5a, 5b, 5c and 5d. In this example, the non-standard regulator setpoint is 2.0 psig / 140 mbar. The minimum factory token relief set pressure is 130% of the non-standard setpoint. The resulting token relief set pressure is 2.6 psig / 183 mbar. The minimum factory OPSO and UPSO set pressures are 165% and 50% of the non-standard setpoint, respectively. The resulting minimum settings are: OPSO = 3.4 psig / 231 mbar and UPSO = 1.0 psig / 70 mbar.



# CSB700 Series

**Table 7. Types CSB700 and CSB720 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 1:1 PIPING											
		Type CSB700				Type CSB720							
Accuracy		Body Size: 1-1/2 in. / DN 40											
Droop	Boost	Setpoint, psig / bar											
-1% ABS	+1% ABS	1 / 0.07		1 / 0.07		2 / 0.14		5 / 0.34		7 / 0.48		10 / 0.68	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
2	0.14	5860	166	5930	168								
3	0.21	8680	246	6450	183	4380	124						
5	0.34	9240	262	7350	208	7150	202						
10	0.69	12510	354	10640	301	9930	281	5500	156	4770	135		
15	1.0	15290	433	13930	394	13600	385	6830	193	6380	181	5670	161
20	1.4	18810	533	17670	500	17280	489	9030	256	7990	226	6770	192
25	1.7	22320	632	21410	606	20640	585	11220	318	9220	261	7860	223
30	2.1	25790	730	25020	709	23990	679	14310	405	10440	296	10440	296
40	2.8	33060	936	33150	939	32760	928	17410	493	13540	383	13020	369
50	3.4	44980	1274	45600	1291	43210	1224	22440	635	16640	471	15090	427
60	4.1	56900	1611	58050	1644	61920	1754	27340	774	20250	573	17800	504
80	5.5	57790	1637	58560	1658	62300	1764	37660	1067	25800	731	24630	698
100	6.9	57200	1620	58300	1651	62240	1763	55720	1578	33730	955	30630	867
125	8.6	57120	1618	58050	1644	62170	1761	73780	2089	41660	1180	36630	1037
150	10.3			57920	1640	62300	1764	73850	2091	52300	1481	44440	1259
175	12.1			57790	1637	62430	1768	73910	2093	62950	1783	52240	1479
200	13.8			58170	1647	62690	1775	73980	2095	72360	2049	64040	1814
232	16.0			58560	1658	62950	1783	74040	2097	81780	2316	75850	2148
BODY SIZE: 2 IN. / DN 50													
Inlet Pressure		1 / 0.07		1 / 0.07		2 / 0.14		5 / 0.34		7 / 0.48		10 / 0.68	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
2	0.14	3150	89	4810	136								
3	0.21	3470	98	5550	157	4360	123						
5	0.34	3650	103	6290	178	6240	177						
10	0.69	12920	366	9840	279	8120	230	6200	176	5190	147		
15	1.0	22200	629	13400	379	11370	322	12480	353	6820	193	6940	197
20	1.4	26790	759	17710	502	14630	414	12820	363	8460	240	7830	222
25	1.7	31380	889	22020	624	17740	502	13160	373	10040	284	8710	247
30	2.1	40520	1148	29640	839	20850	590	16840	477	11620	329	11820	335
40	2.8	49650	1406	37250	1055	28980	821	20530	581	15680	444	14930	423
50	3.4	54000	1529	45710	1294	37110	1051	25640	726	19740	559	18280	518
60	4.1	58340	1652	54170	1534	61270	1735	30760	871	22910	649	21640	613
80	5.5	58580	1659	55550	1573	62100	1759	43770	1240	28960	820	27640	783
100	6.9	58410	1654	55330	1567	62450	1769	59440	1683	36790	1042	35570	1007
125	8.6	58230	1649	55120	1561	62800	1778	75110	2127	44620	1264	43510	1232
150	10.3			54520	1544	61980	1755	75140	2128	63240	1791	54470	1543
175	12.1			53920	1527	61160	1732	75160	2129	81870	2319	65430	1853
200	13.8			54030	1530	61180	1733	74660	2114	81440	2306	79450	2250
232	16.0			54140	1533	61200	1733	74160	2100	81010	2294	93470	2647

- Blank areas indicate limited capacities due to boost effect.  
 - Gray areas indicate where the inlet pressure exceeds the ratings for the setpoint.

# CSB700 Series

**Table 8. Type CSB750 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 1:1 PIPING											
Accuracy		Type CSB750											
Accuracy		Body Size: 1-1/2 in. / DN 40											
Droop	Boost	Setpoint, psig / bar											
-1% ABS	+1% ABS	12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
15	1.0	6410	182										
20	1.4	8460	240	8470	240								
25	1.7	10500	297	9630	273	8710	247						
30	2.1	12430	352	10780	305	11250	319	10580	300				
40	2.8	14360	407	13570	384	13790	391	13540	383				
50	3.4	15990	453	16360	463	15670	444	16500	467	14710	417		
60	4.1	17620	499	17890	507	17560	497	20630	584	18320	519	13920	394
80	5.5	23920	677	24120	683	21970	622	23840	675	22920	649	19520	553
100	6.9	28780	815	30360	860	28160	797	28330	802	27870	789	25810	731
125	8.6	33640	953	36610	1037	34350	973	32820	929	32810	929	32090	909
150	10.3	41940	1188	45910	1300	42440	1202	39230	1111	38110	1079	37050	1049
175	12.1	50230	1423	55210	1564	50530	1431	45650	1293	43410	1229	42010	1190
200	13.8	75420	2136	83690	2370	59890	1696	53360	1511	52310	1481	46970	1330
232	16.0	100620	2850	112170	3177	69240	1961	61080	1730	61210	1733	51940	1471
BODY SIZE: 2 IN. / DN 50													
Inlet Pressure		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
15	1.0	7780	220										
20	1.4	8390	238	9170	260								
25	1.7	9000	255	9540	270	9770	277						
30	2.1	12,920	366	9910	281	12,200	346	10,870	308				
40	2.8	16,850	477	14,590	413	14,640	415	14,030	397				
50	3.4	19,840	562	19,270	546	16,530	468	17,200	487	12,220	346		
60	4.1	22,830	647	26,110	739	18,410	521	19,360	548	15,490	439	14,190	402
80	5.5	27,760	786	29,290	829	23,160	656	20,570	583	19,290	546	19,070	540
100	6.9	31,780	900	30,510	864	30,330	859	27,460	778	25,090	711	23,970	679
125	8.6	35,800	1014	31,740	899	37,510	1062	34,340	973	30,890	875	28,870	818
150	10.3	43,320	1227	38,760	1098	43,280	1226	39,000	1104	38,000	1076	37,120	1051
175	12.1	50,850	1440	45,780	1296	49,050	1389	43,660	1236	45,110	1278	45,370	1285
200	13.8	76,610	2170	57,000	1614	58,620	1660	51,170	1449	52,240	1479	52,740	1494
232	16.0	102,370	2899	68,220	1932	68,190	1931	58,670	1662	59,370	1681	60,100	1702

\_\_\_\_ - Blank areas indicate limited capacities due to boost effect.

# CSB700 Series

**Table 9. Types CSB700 and CSB720 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 1:1 PIPING											
		Type CSB700				Type CSB720							
Accuracy		Body Size: 1-1/2 in. / DN 40											
Droop	Boost	Setpoint, psig / bar											
-2% ABS	+2% ABS	1 / 0.07		1 / 0.07		2 / 0.14		5 / 0.34		7 / 0.48		10 / 0.68	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
2	0.14	8760	79	8900	84								
3	0.21	11,190	90	10,440	90	6570	87						
5	0.34	12,400	112	12,250	99	11,090	104						
10	0.69	18,730	146	17,150	137	15,600	146	8100	125	6320	136		
15	1.0	23,060	182	22,050	174	21,600	184	9410	165	8830	164	6830	196
20	1.4	27,710	223	26,760	211	27,600	222	13,410	206	11,350	193	8770	251
25	1.7	32,360	266	31,470	248	32,310	279	17,410	247	13,090	227	10,700	306
30	2.1	38,520	309	35,990	272	37,020	334	22,180	286	14,830	260	14,250	371
40	2.8	56,830	396	57,790	411	47,850	447	26,960	365	19,670	329	17,800	504
50	3.4	56,870	481	57,920	484	61,920	575	35,340	456	24,510	399	21,930	623
60	4.1	56,900	566	58,050	558	61,920	722	43,860	555	29,790	496	25,800	733
80	5.5	57,790	733	58,560	750	62,300	994	73,270	756	38,820	623	36,240	994
100	6.9	57,200	915	58,300	1059	62,240	1334	73,530	966	51,210	782	45,270	1235
125	8.6	57,120	1609	58,050	1444	62,170	1762	73,780	1232	63,590	977	54,300	1538
150	10.3			57,920	1416	62,300	1762	73,850	1662	72,430	1206	73,200	2073
175	12.1			57,790	1388	62,430	1762	73,910	2093	81,270	1439	92,100	2611
200	13.8			58,170	1379	62,690	1742	73,980	2096	81,520	1824	92,420	2617
232	16.0			58,560	1368	62,950	1719	74,040	2099	81,780	2317	92,750	2625
BODY SIZE: 2 IN. / DN 50													
Inlet Pressure		1 / 0.07		1 / 0.07		2 / 0.14		5 / 0.34		7 / 0.48		10 / 0.68	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
2	0.14	5200	35	8380	76								
3	0.21	6060	51	9480	82	6220	84						
5	0.34	9210	81	10,580	92	9770	98						
10	0.69	19,260	157	16,880	129	13,320	131	8870	231	6820	133		
15	1.0	29,320	233	23,170	167	18,550	178	19,110	244	9510	173	9860	279
20	1.4	36,080	337	29,310	203	23,780	224	19,900	258	12,200	213	11,110	314
25	1.7	42,840	442	35,460	239	28,810	266	20,690	272	14,720	248	12,360	348
30	2.1	50,430	436	44,100	289	33,850	309	27,070	320	17,250	283	17,820	453
40	2.8	58,020	425	52,750	391	47,500	399	33,450	422	22,590	379	23,280	657
50	3.4	58,180	552	53,460	490	61,160	493	41,930	521	27,940	479	27,680	782
60	4.1	58,340	677	54,170	592	61,270	544	50,400	620	33,490	538	32,070	906
80	5.5	58,580	1093	55,550	915	62,100	830	74,450	844	44,470	697	42,200	1195
100	6.9	58,410	1102	55,330	1161	62,450	1249	74,780	1070	62,910	844	60,710	1660
125	8.6	58,230	1113	55,120	1467	62,800	1778	75,110	1354	81,350	1028	79,220	2243
150	10.3			54,520	1447	61,980	1739	75,140	1742	81,610	1263	86,830	2458
175	12.1			53,920	1424	61,160	1702	75,160	2127	81,870	1495	94,430	2673
200	13.8			54,030	1379	61,180	1685	74,660	2116	81,440	1846	93,950	2662
232	16.0			54,140	1323	61,200	1665	74,160	2099	81,010	2294	93,470	2645

- Blank areas indicate limited capacities due to boost effect.  
 - Gray areas indicate where the inlet pressure exceeds the ratings for the setpoint.

# CSB700 Series

**Table 10. Type CSB750 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 1:1 PIPING											
Accuracy		Type CSB750											
Accuracy		Body Size: 1-1/2 in. / DN 40											
Droop	Boost	Setpoint, psig / bar											
-2% ABS	+2% ABS	12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
15	1.0	9540	272										
20	1.4	12,830	362	12,220	346								
25	1.7	16,120	456	14,080	396	11,920	337						
30	2.1	18,960	510	15,940	450	16,620	425	15,630	442				
40	2.8	21,800	617	19,780	558	21,330	603	20,530	581				
50	3.4	25,670	728	23,610	668	22,870	646	25,430	719	19,750	558		
60	4.1	29,540	835	27,930	790	24,410	691	32,130	909	25,670	671	17,760	501
80	5.5	42,570	1206	38,630	1093	32,360	915	31,920	903	35,090	991	28,110	796
100	6.9	71,330	1931	74,810	2002	42,250	1164	37,830	1051	41,390	1150	37,920	1042
125	8.6	100,100	2832	110,990	3115	52,130	1475	43,730	1238	47,690	1348	47,740	1351
150	10.3	100,360	2832	111,940	3144	69,800	1977	51,980	1470	55,020	1558	52,020	1473
175	12.1	100,620	2832	112,890	3172	87,480	2475	60,240	1705	62,360	1764	56,300	1594
200	13.8	100,620	2832	112,530	3172	109,480	3002	71,290	1980	73,490	2042	64,920	1807
232	16.0	100,620	2832	112,170	3172	131,490	3710	82,350	2331	84,620	2396	73,540	2082
BODY SIZE: 2 IN. / DN 50													
Inlet Pressure		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
15	1.0	11,060	312										
20	1.4	13,480	379	14,070	385								
25	1.7	15,910	450	16,280	453	14,210	402						
30	2.1	23,650	595	18,480	521	18,160	476	16,180	456				
40	2.8	31,380	886	23,740	671	22,110	626	21,410	606				
50	3.4	41,450	1172	29,010	821	26,150	739	26,630	753	16,480	464		
60	4.1	51,510	1458	49,960	1413	30,180	852	31,620	895	21,530	609	18,030	510
80	5.5	57,960	1640	52,830	1495	33,880	957	31,860	901	27,240	770	25,980	708
100	6.9	77,220	2124	78,440	2141	45,240	1243	41,290	1138	34,820	960	34,940	946
125	8.6	96,470	2730	104,060	2945	56,600	1603	50,730	1436	42,400	1201	43,900	1243
150	10.3	99,450	2815	108,190	3059	67,660	1914	54,310	1538	51,560	1458	52,160	1475
175	12.1	102,420	2889	112,320	3172	78,710	2229	57,900	1640	60,710	1719	60,430	1711
200	13.8	102,400	2889	112,500	3172	102,070	2809	74,030	2039	71,050	1974	69,980	1948
232	16.0	102,370	2889	112,690	3172	125,430	3540	90,160	2552	81,390	2302	79,540	2251

□ - Blank areas indicate limited capacities due to boost effect.



**Table 11. Types CSB700 and CSB720 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 1:1 PIPING																			
		Type CSB700								Type CSB720											
Accuracy		Body Size: 1-1/2 in. / DN 40																			
Droop	Boost	Setpoint, in. w.c. / mbar																			
		-10%		+10%		4 / 10		7 / 17		11 / 27		14 / 35		1 psig / 0.07 bar		1 psig / 0.07 bar		2 psig / 0.14 bar		5 psig / 0.34 bar	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
1	0.07	2890	82	3420	97	3350	95	3560	101												
2	0.14	3240	92	4500	127	4810	136	4000	113	6860	194	4490	127								
3	0.21	3860	109	5800	164	6270	178	4430	125	7130	202	4940	140	4920	139						
5	0.34	5350	152	6510	184	6500	184	5310	150	7670	217	5340	151	6720	190						
10	0.69	6190	175	7220	204	7220	204	7510	213	9500	269	7990	226	11,220	318	9120	258				
15	1.0	7280	206	8510	241	8960	254	9620	272	11,230	318	10,700	303	15,350	435	11,220	318				
20	1.4	8380	237	9800	278	10,700	303	11,730	332	14,260	404	13,480	382	19,470	551	15,800	447				
25	1.7	9480	268	11,020	312	12,440	352	13,830	392	17,280	489	16,250	460	23,150	656	20,380	577				
30	2.1	10,570	299	12,250	347	14,190	402	15,930	451	21,100	598	18,440	522	26,830	760	26,500	750				
40	2.8	13,540	383	14,830	420	18,570	526	21,070	597	27,160	769	25,920	734	35,990	1019	32,630	924				
50	3.4	13,800	391	17,410	493	22,960	650	26,210	742	37,980	1076	32,180	911	61,920	1754	41,530	1176				
60	4.1	16,640	471	20,760	588	25,020	709	27,990	793	47,890	1356	38,440	1089	61,920	1754	51,720	1465				
80	5.5	18,570	526	23,990	679	32,890	931	55,810	1581	57,790	1637	58,560	1658	62,300	1764	73,270	2075				
100	6.9	24,120	683	29,020	822	54,430	1541	55,050	1559	57,200	1620	58,300	1651	62,240	1763	73,530	2082				
125	8.6	29,410	833	45,660	1293	54,300	1538	55,080	1560	57,120	1618	58,050	1644	62,170	1761	73,780	2089				
150	10.3											57,920	1640	62,300	1764	73,850	2091				
175	12.1											57,790	1637	62,430	1768	73,910	2093				
200	13.8											58,170	1647	62,690	1775	73,980	2095				
232	16.0											58,560	1658	62,950	1783	74,040	2097				
<b>BODY SIZE: 2 IN. / DN 50</b>																					
Inlet Pressure		4 / 10		7 / 17		11 / 27		14 / 35		1 psig / 0.07 bar		1 psig / 0.07 bar		2 psig / 0.14 bar		5 psig / 0.34 bar					
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h				
1	0.07	3790	107	4480	127	2480	70	2400	68												
2	0.14	4760	135	6040	171	2720	77	2350	67	6860	194	3760	106								
3	0.21	8300	235	7590	215	2960	84	2760	78	7130	202	4160	118	4730	134						
5	0.34	7310	207	7060	200	4880	138	4670	132	7670	217	4570	129	7020	199						
10	0.69	6310	179	6530	185	6800	193	6580	186	10,170	288	7090	201	9310	264	9120	258				
15	1.0	8560	242	9500	269	9500	269	9320	264	17,100	484	9620	272	12,760	361	22,170	628				
20	1.4	10,810	306	12,460	353	12,200	346	12,060	342	21,850	619	12,320	349	16,210	459	23,290	660				
25	1.7	13,840	392	14,630	414	15,620	442	15,520	440	26,590	753	15,020	425	20,260	574	24,400	691				
30	2.1	16,870	478	16,800	476	19,050	539	18,990	538	29,430	833	21,810	618	24,300	688	31,830	901				
40	2.8	27,330	774	21,270	602	35,540	1006	36,320	1029	32,270	914	28,610	810	33,690	954	39,250	1112				
50	3.4	37,780	1070	25,740	729	52,030	1473	53,650	1519	45,300	1283	41,390	1172	43,090	1220	49,500	1402				
60	4.1	33,950	961	28,830	816	52,220	1479	53,740	1522	58,340	1652	54,170	1534	61,270	1735	59,760	1692				
80	5.5	32,130	910	33,970	962	35,970	1019	37,990	1076	58,580	1659	55,550	1573	62,100	1759	74,450	2108				
100	6.9	33,040	936	41,820	1184	36,880	1044	38,530	1091	58,410	1654	55,330	1567	62,450	1769	74,780	2118				
125	8.6	30,570	866	49,680	1407	37,790	1070	39,070	1106	58,230	1649	55,120	1561	62,800	1778	75,110	2127				
150	10.3											54,520	1544	61,980	1755	75,140	2128				
175	12.1											53,920	1527	61,160	1732	75,160	2129				
200	13.8											54,030	1530	61,180	1733	74,660	2114				
232	16.0											54,140	1533	61,200	1733	74,160	2100				

- Blank areas indicate limited capacities due to boost effect.  
 - Gray areas indicate where the inlet pressure exceeds the ratings for the setpoint.

**Table 12. Types CSB720 and CSB750 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 1:1 PIPING															
		Type CSB720				Type CSB750											
Accuracy		Body Size: 1-1/2 in. / DN 40															
Droop	Boost	Setpoint, psig / bar															
-10%	+10%	7 / 0.48		10 / 0.68		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
10	0.69	8640	245														
15	1.0	11,730	332	10,190	289	15,600	442										
20	1.4	14,830	420	13,350	378	23,020	652	23,920	677								
25	1.7	17,670	500	16,510	468	30,440	862	30,530	865	23,950	678						
30	2.1	20,510	581	22,700	643	39,210	1110	37,140	1052	34,660	982	30,520	864				
40	2.8	27,020	765	28,890	818	47,980	1359	50,600	1433	45,370	1285	46,060	1304				
50	3.4	33,540	950	35,210	997	59,590	1688	64,070	1814	56,440	1598	61,610	1745	47,070	1333		
60	4.1	40,240	1140	41,530	1176	71,200	2016	82,360	2332	67,510	1912	72,120	2042	62,590	1773	43,950	1245
80	5.5	54,430	1541	55,720	1578	97,260	2754	107,860	3055	92,650	2624	97,230	2754	85,880	2432	76,290	2161
100	6.9	67,400	1909	73,400	2079	98,680	2795	109,420	3099	110,130	3119	121,180	3432	109,590	3104	104,160	2950
125	8.6	80,360	2276	91,070	2579	100,100	2835	110,990	3143	127,610	3614	145,140	4110	133,300	3775	132,030	3739
150	10.3	80,810	2289	91,590	2594	100,360	2842	111,940	3170	128,960	3652	146,480	4148	164,370	4655	154,820	4384
175	12.1	81,270	2302	92,100	2608	100,620	2850	112,890	3197	130,320	3691	147,810	4186	195,440	5535	177,610	5030
200	13.8	81,520	2309	92,420	2617	100,620	2850	112,530	3187	130,910	3707	147,660	4182	197,690	5599	204,180	5782
232	16.0	81,780	2316	92,750	2627	100,620	2850	112,170	3177	131,490	3724	147,510	4177	199,940	5662	230,750	6535
BODY SIZE: 2 IN. / DN 50																	
Inlet Pressure		7 / 0.48		10 / 0.68		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
10	0.69	9050	256														
15	1.0	13,050	370	16,390	464	19,540	553										
20	1.4	17,050	483	19,070	540	26,260	744	25,610	725								
25	1.7	20,930	593	21,740	616	32,980	934	33,080	937	28,610	810						
30	2.1	24,820	703	31,010	878	43,970	1245	40,540	1148	38,120	1080	32,100	909				
40	2.8	31,700	898	40,290	1141	54,960	1556	54,250	1536	47,630	1349	47,810	1354				
50	3.4	38,570	1092	49,450	1400	68,500	1940	67,960	1925	59,090	1673	63,510	1799	43,900	1243		
60	4.1	45,610	1292	58,620	1660	82,050	2324	83,820	2374	70,550	1998	75,960	2151	53,110	1504	46,490	1317
80	5.5	64,840	1836	83,860	2375	100,500	2846	110,940	3142	92,350	2615	98,780	2797	75,030	2125	73,180	2072
100	6.9	73,100	2070	88,590	2509	101,180	2865	111,520	3158	111,180	3149	123,830	3507	100,660	2851	97,390	2758
125	8.6	81,350	2304	93,310	2643	101,860	2885	112,100	3175	130,010	3682	148,880	4216	126,290	3577	121,600	3444
150	10.3	81,610	2311	93,870	2658	102,140	2893	112,210	3178	130,970	3709	149,860	4244	154,770	4383	149,130	4223
175	12.1	81,870	2319	94,430	2674	102,420	2901	112,320	3181	131,920	3736	150,830	4271	183,250	5190	176,670	5003
200	13.8	81,440	2306	93,950	2661	102,400	2900	112,500	3186	132,290	3746	151,020	4277	194,310	5503	207,210	5868
232	16.0	81,010	2294	93,470	2647	102,370	2899	112,690	3191	132,660	3757	151,210	4282	205,380	5816	237,760	6733

□ - Blank areas indicate limited capacities due to boost effect.

**Table 13. Types CSB700 and CSB720 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 1:1 PIPING															
		Type CSB700								Type CSB720							
Accuracy		Body Size: 1-1/2 in. / DN 40															
Droop	Boost	Setpoint, in. w.c. / mbar															
-20%	+20%	4 / 10		7 / 17		11 / 27		14 / 35		1 psig / 0.07 bar		2 psig / 0.14 bar		5 psig / 0.34 bar			
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
1	0.07	3710	105	4140	117	4250	120	4280	121								
2	0.14	4200	119	4540	129	6320	179	5120	145	9560	271	7030	199				
3	0.21	4600	130	7740	219	8390	238	5950	169	9810	278	7880	223	7740	219		
5	0.34	7200	204	8900	252	8770	248	8360	237	10290	291	9030	256	12830	363		
10	0.69	8380	237	10060	285	10830	307	11810	334	14350	406	12700	360	17930	508	16000	453
15	1.0	9730	276	11730	332	13020	369	14390	408	17840	505	16380	464	24510	694	19470	551
20	1.4	11090	314	13410	380	15220	431	16980	481	21790	617	20570	583	31080	880	26310	745
25	1.7	12310	349	15410	436	17730	502	20030	567	25740	729	24760	701	36120	1023	33150	939
30	2.1	13540	383	17410	493	20250	573	23070	653	29120	825	28250	800	41150	1165	42690	1209
40	2.8	16380	464	20890	592	26700	756	29630	839	37640	1066	37150	1052	62040	1757	52240	1479
50	3.4	17020	482	24380	690	33150	939	36180	1025	47270	1339	47600	1348	61920	1754	71980	2038
60	4.1	19860	562	28380	804	38440	1089	40380	1144	56900	1611	58050	1644	61920	1754	72620	2057
80	5.5	21930	621	53530	1516	56110	1589	55810	1581	57790	1637	58560	1658	62300	1764	73270	2075
100	6.9	28630	811	53270	1509	54430	1541	55050	1559	57200	1620	58300	1651	62240	1763	73530	2082
125	8.6	47470	1344	53010	1501	54300	1538	55080	1560	57120	1618	58050	1644	62170	1761	73780	2089
150	10.3											57920	1640	62300	1764	73850	2091
175	12.1											57790	1637	62430	1768	73910	2093
200	13.8											58170	1647	62690	1775	73980	2095
232	16.0											58560	1658	62950	1783	74040	2097
BODY SIZE: 2 IN. / DN 50																	
Inlet Pressure		4 / 10		7 / 17		11 / 27		14 / 35		1 psig / 0.07 bar		1 psig / 0.07 bar		2 psig / 0.14 bar		5 psig / 0.34 bar	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
1	0.07	6100	173	6080	172	3510	99	2980	84								
2	0.14	6170	175	8020	227	3270	93	2540	72	3150	89	5620	159				
3	0.21	10,870	308	9960	282	3030	86	2950	84	3590	102	6610	187	6920	196		
5	0.34	10,380	294	10,270	291	7090	201	6830	193	4220	120	7590	215	11,040	313		
10	0.69	9880	280	10,580	300	11,150	316	10,700	303	13,970	396	12,020	340	15,160	429	15,400	436
15	1.0	12,460	353	13,950	395	14,750	418	14,890	422	23,720	672	16,450	466	21,050	596	28,740	814
20	1.4	15,040	426	17,310	490	18,350	520	19,080	540	28,590	810	21,260	602	26,930	763	33,660	953
25	1.7	17,980	509	19,800	561	22,710	643	24,030	681	33,460	948	26,060	738	32,300	915	38,590	1093
30	2.1	20,920	592	22,290	631	27,070	767	28,980	821	45,740	1295	39,410	1116	37,670	1067	49,280	1396
40	2.8	30,750	871	36,190	1025	39,550	1120	41,310	1170	58,020	1643	52,750	1494	49,410	1399	59,980	1699
50	3.4	40,590	1150	50,100	1419	52,030	1473	53,650	1519	58,180	1648	53,460	1514	61,160	1732	66,960	1896
60	4.1	37,040	1049	49,870	1412	52,220	1479	53,740	1522	58,340	1652	54,170	1534	61,270	1735	73,950	2094
80	5.5	34,440	975	44,250	1253	52,950	1500	54,610	1547	58,580	1659	55,550	1573	62,100	1759	74,450	2108
100	6.9	34,880	988	46,960	1330	50,290	1424	54,120	1533	58,410	1654	55,330	1567	62,450	1769	74,780	2118
125	8.6	32,210	912	49,680	1407	47,630	1349	53,640	1519	58,230	1649	55,120	1561	62,800	1778	75,110	2127
150	10.3											54,520	1544	61,980	1755	75,140	2128
175	12.1											53,920	1527	61,160	1732	75,160	2129
200	13.8											54,030	1530	61,180	1733	74,660	2114
232	16.0											54,140	1533	61,200	1733	74,160	2100

- Blank areas indicate limited capacities due to boost effect.  
 - Gray areas indicate where the inlet pressure exceeds the ratings for the setpoint.

# CSB700 Series

**Table 14. Types CSB720 and CSB750 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 1:1 PIPING																		
		Type CSB720				Type CSB750														
Accuracy		Body Size: 1-1/2 in. / DN 40																		
Droop	Boost	Setpoint, psig / bar																		
		-20%		+20%		7 / 0.48		10 / 0.68		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	
10	0.69	14,570	413																	
15	1.0	19,990	566	17,020	482	21,020	595													
20	1.4	25,410	720	22,570	639	29,990	849	29,100	824											
25	1.7	29,470	835	28,120	796	38,950	1103	37,280	1056	31,170	883									
30	2.1	33,540	950	37,340	1057	49,980	1415	45,460	1287	42,840	1213	37,380	1059							
40	2.8	44,690	1266	46,560	1319	61,010	1728	60,660	1718	54,520	1544	53,880	1526							
50	3.4	55,850	1582	58,820	1666	75,140	2128	75,860	2148	70,280	1990	70,380	1993	60,520	1714					
60	4.1	67,330	1907	67,330	1907	89,260	2528	91,210	2583	86,040	2437	80,460	2279	76,140	2156	61,230	1734			
80	5.5	79,330	2247	88,620	2510	97,260	2754	107,860	3055	115,350	3267	111,970	3171	103,060	2919	98,520	2790			
100	6.9	79,850	2261	89,840	2544	98,680	2795	109,420	3099	121,480	3440	128,550	3641	130,320	3691	131,270	3718			
125	8.6	80,360	2276	91,070	2579	100,100	2835	110,990	3143	127,610	3614	145,140	4110	157,580	4463	164,030	4645			
150	10.3	80,810	2289	91,590	2594	100,360	2842	111,940	3170	128,960	3652	146,480	4148	176,510	4999	194,000	5494			
175	12.1	81,270	2302	92,100	2608	100,620	2850	112,890	3197	130,320	3691	147,810	4186	195,440	5535	223,980	6343			
200	13.8	81,520	2309	92,420	2617	100,620	2850	112,530	3187	130,910	3707	147,660	4182	197,690	5599	227,360	6439			
232	16.0	81,780	2316	92,750	2627	100,620	2850	112,170	3177	131,490	3724	147,510	4177	199,940	5662	230,750	6535			
BODY SIZE: 2 IN. / DN 50																				
Inlet Pressure		7 / 0.48		10 / 0.68		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45				
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h			
10	0.69	15,840	449																	
15	1.0	21,970	622	24,410	691	23,380	662													
20	1.4	28,100	796	28,430	805	31,410	890	28,750	814											
25	1.7	34,300	971	32,460	919	39,440	1117	37,250	1055	34,040	964									
30	2.1	40,510	1147	46,800	1325	50,350	1426	45,750	1296	45,490	1288	37,630	1066							
40	2.8	51,870	1469	61,140	1731	61,260	1735	59,770	1693	56,930	1612	53,510	1515							
50	3.4	63,240	1791	75,360	2134	74,120	2099	73,790	2090	70,620	2000	69,390	1965	58,460	1656					
60	4.1	78,690	2228	89,580	2537	86,990	2464	86,410	2447	84,320	2388	83,090	2353	74,780	2118	64,420	1824			
80	5.5	80,090	2268	92,460	2618	100,500	2846	110,940	3142	111,050	3145	110,090	3118	104,590	2962	98,160	2780			
100	6.9	80,720	2286	92,880	2630	101,180	2865	111,520	3158	120,530	3413	129,490	3667	134,470	3808	129,560	3669			
125	8.6	81,350	2304	93,310	2643	101,860	2885	112,100	3175	130,010	3682	148,880	4216	164,360	4655	160,950	4558			
150	10.3	81,610	2311	93,870	2658	102,140	2893	112,210	3178	130,970	3709	149,860	4244	182,450	5167	194,490	5508			
175	12.1	81,870	2319	94,430	2674	102,420	2901	112,320	3181	131,920	3736	150,830	4271	200,540	5679	228,020	6457			
200	13.8	81,440	2306	93,950	2661	102,400	2900	112,500	3186	132,290	3746	151,020	4277	202,960	5748	232,890	6595			
232	16.0	81,010	2294	93,470	2647	102,370	2899	112,690	3191	132,660	3757	151,210	4282	205,380	5816	237,760	6733			

□ - Blank areas indicate limited capacities due to boost effect.

# CSB700 Series

**Table 15. Types CSB700 and CSB720 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 2:1 PIPING																	
Accuracy		Type CSB700										Type CSB720							
Droop	Boost	Body Size: 1-1/2 in. / DN 40																	
-1 in w.c.	+2 in w.c.	Setpoint, in. w.c. / mbar																	
-2.5 mbar	+5 mbar	4 / 10		7 / 17		11 / 27		14 / 35		1 psig / 0.07 bar		1 psig / 0.07 bar		2 psig / 0.14 bar		5 psig / 0.34 bar		7 psig / 0.48 bar	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
1	0.07	3560	101	3930	111	2200	62	2510	71										
2	0.14	6030	171	4940	140	4070	115	5190	147	3000	85	3190	90						
3	0.21	10,580	300	8550	242	7110	201	9360	265	3130	89	6210	176	2970	84				
5	0.34	12,540	355	9510	269	7860	223	8810	249	5040	143	8310	235	4130	117				
10	0.69	14,490	410	10,470	297	8610	244	8260	234	6570	186	7750	219	5290	150	4200	119	3610	102
15	1.0	17,960	509	12,770	362	10,350	293	10,470	297	8230	233	7190	204	6770	192	4730	134	4640	131
20	1.4	21,420	607	15,070	427	12,080	342	12,670	359	10,120	287	8940	253	8250	234	6120	173	5680	161
25	1.7	26,060	738	17,500	496	15,160	429	15,530	440	12,000	340	10,700	303	9860	279	7520	213	6440	182
30	2.1	30,710	870	19,940	565	18,240	517	18,400	521	14,300	405	12,690	359	11,460	325	8930	253	7190	204
40	2.8	39,530	1119	25,890	733	24,040	681	24,970	707	20,170	571	19,230	545	15,130	428	10,350	293	8860	251
50	3.4	47,510	1345	31,850	902	29,850	845	31,540	893	25,530	723	25,580	724	17,150	486	13,290	376	10,520	298
60	4.1	52,360	1483	36,080	1022	34,900	988	35,020	992	30,890	875	31,940	905	19,400	549	15,760	446	13,230	375
80	5.5	65,640	1859	45,460	1287	46,960	1330	47,990	1359	44,700	1266	48,040	1360	24,770	701	20,440	579	15,780	447
100	6.9	69,540	1969	57,330	1624	58,010	1643	59,740	1692	53,980	1529	57,930	1641	37,380	1059	26,590	753	20,270	574
125	8.6	84,200	2385	65,240	1848	74,970	2123	76,690	2172	72,270	2047	67,810	1920	49,980	1415	32,740	927	24,760	701
150	10.3											83,970	2378	65,270	1848	40,080	1135	29,340	831
175	12.1											100,130	2836	80,550	2281	47,420	1343	33,920	961
200	13.8											120,360	3409	94,140	2666	58,280	1650	46,880	1328
232	16.0											140,590	3981	107,730	3051	69,150	1958	59,830	1694
BODY SIZE: 2 IN. / DN 50																			
Inlet Pressure		4 / 10		7 / 17		11 / 27		14 / 35		1 psig / 0.07 bar		1 psig / 0.07 bar		2 psig / 0.14 bar		5 psig / 0.34 bar		7 psig / 0.48 bar	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
1	0.07	3970	112	3780	107	2990	85	2760	78										
2	0.14	7460	211	6570	186	3210	91	3010	85	2200	62	2800	79						
3	0.21	10,900	309	9360	265	3430	97	3270	93	2540	72	3030	86	2970	84				
5	0.34	11,450	324	9210	261	4440	126	4100	116	3220	91	3500	99	3440	97				
10	0.69	11,950	338	8830	250	7170	203	6430	182	5030	142	4880	138	4620	131	4000	113	4167	118
15	1.0	17,610	499	11,600	329	9480	268	8390	238	6610	187	6260	177	5810	165	4980	141	4840	137
20	1.4	23,270	659	14,670	415	11,790	334	10,360	293	8190	232	8110	230	7000	198	6160	174	5520	156
25	1.7	25,300	716	18,160	514	14,600	413	12,980	368	9770	277	9960	282	8300	235	7350	208	6190	175
30	2.1	27,320	774	21,650	613	17,420	493	15,610	442	12,250	347	10,980	311	9600	272	8800	249	6860	194
40	2.8	34,410	974	30,540	865	25,040	709	22,380	634	16,900	479	15,260	432	14,440	409	10,250	290	8700	246
50	3.4	41,500	1175	39,430	1117	32,670	925	29,150	826	22,560	639	20,760	588	16,520	468	13,250	375	10,500	297
60	4.1	51,690	1464	44,000	1246	39,820	1128	37,800	1070	28,220	799	26,270	744	19,860	562	15,910	451	13,100	371
80	5.5	59,290	1679	55,390	1569	52,390	1484	49,270	1395	44,230	1253	44,550	1262	25,910	734	19,880	563	15,800	447
100	6.9	70,680	2002	70,380	1993	67,810	1920	62,690	1775	54,790	1552	59,260	1678	38,590	1093	24,740	701	19,500	552
125	8.6	87,590	2481	86,890	2461	84,630	2397	82,230	2329	72,660	2058	73,960	2095	51,280	1452	29,600	838	24,200	685
150	10.3											85,750	2428	68,360	1936	35,710	1011	28,800	816
175	12.1											97,530	2762	85,430	2419	41,830	1185	33,400	946
200	13.8											114,550	3244	103,980	2945	60,360	1709	40,080	1135
232	16.0											131,560	3726	122,530	3470	78,880	2234	46,700	1323

- Blank areas indicate limited capacities due to boost effect.  
 - Gray areas indicate where the inlet pressure exceeds the ratings for the setpoint.

# CSB700 Series

**Table 16. Types CSB700 and CSB720 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 2:1 PIPING											
		Type CSB700				Type CSB720							
Accuracy		Body Size: 1-1/2 in. / DN 40											
Droop	Boost	Setpoint, psig / bar											
-1% ABS	+1% ABS	1 / 0.07		1 / 0.07		2 / 0.14		5 / 0.34		7 / 0.48		10 / 0.68	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
2	0.14	7500	212	9820	278								
3	0.21	8540	242	10,820	306	5270	149						
5	0.34	10,750	304	12,110	343	8830	250						
10	0.69	16,050	455	14,450	409	12,400	351	7000	198	5790	164		
15	1.0	20,520	581	16,790	475	16,080	455	9680	274	7670	217	6920	196
20	1.4	24,500	694	21,280	603	19,760	560	12,490	354	9540	270	9930	281
25	1.7	28,480	807	25,770	730	23,850	675	15,290	433	11,550	327	12,940	366
30	2.1	34,020	963	30,240	856	27,930	791	19,000	538	13,570	384	15,570	441
40	2.8	42,640	1208	40,180	1138	36,200	1025	22,710	643	16,870	478	18,200	515
50	3.4	51,600	1461	48,310	1368	40,770	1155	28,600	810	20,170	571	23,910	677
60	4.1	60,560	1715	56,450	1599	47,980	1359	34,330	972	24,470	693	27,580	781
80	5.5	76,620	2170	69,100	1957	63,090	1787	47,920	1357	30,690	869	35,770	1013
100	6.9	89,300	2529	84,790	2401	80,230	2272	60,480	1713	39,310	1113	49,560	1404
125	8.6	106,530	3017	100,490	2846	97,380	2758	73,030	2068	47,940	1358	63,350	1794
150	10.3			122,010	3455	119,810	3393	88,550	2508	58,560	1658	75,420	2136
175	12.1			143,540	4065	142,240	4028	104,070	2947	69,180	1959	87,480	2477
200	13.8			157,890	4471	162,200	4593	121,900	3452	74,450	2108	87,020	2464
232	16.0			172,230	4878	182,160	5159	139,730	3957	79,720	2258	86,570	2452
BODY SIZE: 2 IN. / DN 50													
Inlet Pressure		1 / 0.07		1 / 0.07		2 / 0.14		5 / 0.34		7 / 0.48		10 / 0.68	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
2	0.14	5210	148	5500	156								
3	0.21	7100	201	6750	191	5590	158						
5	0.34	8130	230	8010	227	7140	202						
10	0.69	12,200	346	11,140	315	8690	246	7000	198	5510	156		
15	1.0	16,280	461	14,260	404	11,750	333	10,070	285	7080	201	7210	204
20	1.4	21,030	596	18,810	533	14,800	419	12,970	367	8650	245	9810	278
25	1.7	25,790	730	23,370	662	18,120	513	15,880	450	10,600	300	12,420	352
30	2.1	31,820	901	28,540	808	21,440	607	20,170	571	12,550	355	14,400	408
40	2.8	40,940	1159	37,500	1062	30,900	875	24,460	693	15,920	451	16,380	464
50	3.4	48,660	1378	45,650	1293	37,460	1061	31,070	880	19,280	546	20,130	570
60	4.1	56,370	1596	53,800	1524	43,620	1235	36,620	1037	23,650	670	23,890	677
80	5.5	75,810	2147	72,020	2040	57,770	1636	49,040	1389	30,100	852	36,250	1027
100	6.9	93,540	2649	88,090	2495	77,610	2198	63,260	1792	38,890	1101	45,550	1290
125	8.6	110,770	3137	104,170	2950	97,440	2759	77,490	2195	47,670	1350	54,860	1554
150	10.3			120,800	3421	112,050	3173	93,170	2639	58,440	1655	65,830	1864
175	12.1			137,440	3892	126,650	3587	108,850	3083	69,200	1960	76,810	2175
200	13.8			157,470	4460	145,480	4120	126,170	3573	81,740	2315	90,620	2566
232	16.0			177,510	5027	164,320	4654	143,490	4064	94,270	2670	104,430	2957

- Blank areas indicate limited capacities due to boost effect.  
 - Gray areas indicate where the inlet pressure exceeds the ratings for the setpoint.



**Table 17. Type CSB750 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 2:1 PIPING											
		Type CSB750											
Accuracy		Body Size: 1-1/2 in. / DN 40											
Droop	Boost	Setpoint, psig / bar											
-1 % ABS	+1% ABS	12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
15	1.0	7030	199										
20	1.4	9070	257	9270	263								
25	1.7	11,110	315	11,720	332	9440	267						
30	2.1	14,630	414	14,160	401	12,550	355	11,410	323				
40	2.8	18,150	514	17,950	508	15,670	444	15,120	428				
50	3.4	19,290	546	21,750	616	19,280	546	18,830	533	14,160	401		
60	4.1	21,500	609	25,090	711	22,880	648	20,940	593	17,460	494	15,920	451
80	5.5	32,360	916	34,200	969	29,540	837	30,140	854	23,050	653	22,430	635
100	6.9	43,090	1220	43,380	1229	37,930	1074	35,500	1005	27,280	773	25,440	720
125	8.6	53,820	1524	52,560	1488	46,190	1308	47,890	1356	31,500	892	28,450	806
150	10.3	74,280	2104	77,460	2194	54,950	1556	57,760	1636	40,522	1148	39,352	1114
175	12.1	94,740	2683	102,350	2899	63,710	1804	67,620	1915	46,159	1307	44,670	1265
200	13.8	119,050	3371	124,190	3517	80,180	2271	76,200	2158	2262	64	49,244	1395
232	16.0	143,360	4060	146,030	4136	96,650	2737	84,790	2401	65,091	1843	55,200	1563
BODY SIZE: 2 IN. / DN 50													
Inlet Pressure		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
15	1.0	7210	204										
20	1.4	9810	278	10,520	298								
25	1.7	12,420	352	13,550	384	9510	269						
30	2.1	14,400	408	16,580	470	12,840	364	9620	272				
40	2.8	16,380	464	21,170	600	16,170	458	14,140	400				
50	3.4	20,130	570	25,770	730	19,710	558	18,660	528	14,630	414		
60	4.1	23,890	677	30,180	855	23,260	659	23,530	666	15,690	444	14,220	403
80	5.5	36,250	1027	41,750	1182	28,290	801	29,150	826	21,650	613	22,590	640
100	6.9	45,550	1290	50,050	1417	36,960	1047	35,970	1019	28,020	794	26,540	752
125	8.6	54,860	1554	58,350	1652	48,580	1376	24,330	689	34,380	974	30,480	863
150	10.3	65,830	1864	76,340	2162	61,670	1746	52,310	1481	40,416	1145	39,459	1117
175	12.1	76,810	2175	94,320	2671	74,770	2117	80,290	2274	51,225	1451	48,180	1364
200	13.8	90,620	2566	115,600	3274	86,630	2453	92,940	2632	55,725	1578	55,093	1560
232	16.0	104,430	2957	136,880	3876	98,500	2789	105,600	2991	63,864	1809	63,921	1810

□ - Blank areas indicate limited capacities due to boost effect.

# CSB700 Series

**Table 18. Types CSB700 and CSB720 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 2:1 PIPING											
		Type CSB700				Type CSB720							
Accuracy		Body Size: 1-1/2 in. / DN 40											
Droop	Boost	Setpoint, psig / bar											
-2% ABS	+2% ABS	1 / 0.07		1 / 0.07		2 / 0.14		5 / 0.34		7 / 0.48		10 / 0.68	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
2	0.14	9750	276	10,380	294								
3	0.21	10,120	287	11,570	328	6940	197						
5	0.34	14,030	397	15,670	444	13,190	374						
10	0.69	22,860	647	21,930	621	19,440	551	10,500	297	8570	243		
15	1.0	30,620	867	28,190	798	25,770	730	14,720	417	11,620	329	10,640	301
20	1.4	35,510	1006	34,200	969	32,100	909	19,010	538	14,660	415	15,020	425
25	1.7	40,400	1144	40,210	1139	36,630	1037	23,310	660	17,370	492	19,410	550
30	2.1	49,270	1395	43,000	1218	41,150	1165	29,740	842	20,080	569	23,050	653
40	2.8	59,940	1697	55,910	1583	52,020	1473	36,160	1024	25,890	733	26,700	756
50	3.4	69,270	1962	64,700	1832	59,870	1696	45,230	1281	31,700	898	34,650	981
60	4.1	78,610	2226	73,490	2081	67,330	1907	52,300	1481	37,890	1073	40,090	1135
80	5.5	97,480	2761	86,950	2462	85,560	2423	71,480	2024	48,150	1364	53,490	1515
100	6.9	112,730	3192	109,080	3089	104,460	2958	87,330	2473	62,980	1784	69,350	1964
125	8.6	138,260	3915	131,200	3716	123,350	3493	103,180	2922	77,810	2204	85,210	2413
150	10.3			151,260	4284	151,870	4301	122,450	3468	90,650	2567	101,650	2879
175	12.1			171,320	4852	180,400	5109	141,730	4014	103,490	2931	118,090	3344
200	13.8			171,780	4865	181,280	5134	170,410	4826	116,350	3295	136,190	3857
232	16.0			172,230	4878	182,160	5159	199,090	5638	129,210	3659	154,280	4369
BODY SIZE: 2 IN. / DN 50													
Inlet Pressure		1 / 0.07		1 / 0.07		2 / 0.14		5 / 0.34		7 / 0.48		10 / 0.68	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
2	0.14	7250	205	7140	202								
3	0.21	10,120	287	9750	276	8580	243						
5	0.34	13,190	374	12,360	350	11,060	313						
10	0.69	19,950	565	18,050	511	13,540	383	10,300	292	8000	227		
15	1.0	26,720	757	23,750	673	18,650	528	15,270	432	10,870	308	10,270	291
20	1.4	32,540	922	30,090	852	23,760	673	20,180	571	13,740	389	13,960	395
25	1.7	38,360	1086	36,430	1032	28,630	811	25,090	711	16,050	455	17,650	500
30	2.1	44,850	1270	41,490	1175	33,490	948	31,380	889	18,360	520	21,740	616
40	2.8	54,460	1542	51,970	1472	44,980	1274	37,670	1067	23,910	677	25,830	732
50	3.4	65,170	1846	62,420	1768	53,710	1521	47,540	1346	29,470	835	30,740	871
60	4.1	75,880	2149	72,880	2064	62,660	1775	53,980	1529	36,760	1041	39,040	1106
80	5.5	98,220	2782	92,540	2621	77,270	2188	74,020	2096	47,910	1357	56,990	1614
100	6.9	113,580	3217	110,500	3129	99,840	2827	91,280	2585	59,960	1698	71,390	2022
125	8.6	136,160	3856	128,460	3638	122,400	3466	108,530	3074	72,010	2039	85,790	2430
150	10.3			148,600	4208	142,390	4032	128,730	3646	87,770	2486	101,610	2878
175	12.1			168,750	4779	162,380	4599	148,930	4218	103,530	2932	117,430	3326
200	13.8			196,110	5554	185,370	5250	169,110	4789	119,420	3382	135,280	3831
232	16.0			223,460	6328	208,360	5901	189,290	5361	135,300	3832	153,120	4336

- Blank areas indicate limited capacities due to boost effect.  
 - Gray areas indicate where the inlet pressure exceeds the ratings for the setpoint.

**Table 19. Type CSB750 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 2:1 PIPING													
		Type CSB750													
Accuracy		Body Size: 1-1/2 in. / DN 40													
Droop	Boost	Setpoint, psig / bar													
-2 % ABS	+2% ABS	12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45			
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h		
15	1.0	11,230	318												
20	1.4	15,010	425	15,050	426										
25	1.7	18,780	532	19,330	547	13,820	391								
30	2.1	24,230	686	23,620	669	18,640	528	17,820	505						
40	2.8	29,680	841	30,100	852	23,460	664	23,950	678						
50	3.4	30,850	874	36,590	1036	28,340	803	30,080	852	19,290	546				
60	4.1	37,490	1062	42,000	1189	33,230	941	34,590	980	24,800	702	21,890	620		
80	5.5	62,490	1770	56,000	1586	44,350	1256	47,120	1334	35,620	1009	29,040	822		
100	6.9	78,300	2217	76,270	2160	57,640	1632	59,950	1698	42,320	1198	34,880	988		
125	8.6	94,110	2665	96,540	2734	70,700	2002	75,990	2152	49,010	1388	40,730	1153		
150	10.3	112,980	3200	115,160	3261	85,850	2431	89,610	2538	55,000	1558	52,000	1473		
175	12.1	131,850	3734	133,780	3789	101,000	2860	103,230	2923	62,300	1764	56,300	1594		
200	13.8	157,630	4464	158,900	4500	120,560	3414	120,820	3422	72,100	2042	63,800	1807		
232	16.0	183,400	5194	184,020	5211	140,120	3968	138,420	3920	84,600	2396	73,500	2082		
BODY SIZE: 2 IN. / DN 50															
Inlet Pressure		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45			
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h		
15	1.0	10,600	300												
20	1.4	15,270	432	15,400	436										
25	1.7	19,940	565	20,130	570	12,680	359								
30	2.1	25,340	718	24,850	704	18,420	522	14,550	412						
40	2.8	30,740	871	32,840	930	24,150	684	21,280	603						
50	3.4	37,930	1074	40,830	1156	29,870	846	28,020	794	19,500	552				
60	4.1	46,450	1315	46,220	1309	35,600	1008	35,490	1005	22,520	638	20,000	566		
80	5.5	63,100	1787	66,120	1873	44,920	1272	43,670	1237	31,500	892	31,500	892		
100	6.9	80,740	2287	82,020	2323	58,770	1664	58,510	1657	42,530	1204	36,600	1037		
125	8.6	98,390	2786	97,920	2773	72,570	2055	33,660	953	53,560	1517	42,900	1215		
150	10.3	119,630	3388	117,100	3316	91,120	2580	71,170	2016	51,500	1458	52,100	1475		
175	12.1	140,870	3989	136,280	3859	109,670	3106	108,680	3078	60,700	1719	60,400	1711		
200	13.8	160,560	4547	161,410	4571	125,570	3556	125,450	3553	69,700	1974	68,800	1948		
232	16.0	180,250	5105	186,540	5283	141,460	4006	142,220	4028	81,300	2302	79,500	2251		

□ - Blank areas indicate limited capacities due to boost effect.

# CSB700 Series

**Table 20. Types CSB700 and CSB720 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRES-SURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 2:1 PIPING																				
		Type CSB700								Type CSB720												
Accuracy		Body Size: 1-1/2 in. / DN 40																				
Droop	Boost	Setpoint, in. w.c. / mbar																				
		-10%		+10%		4 / 10		7 / 17		11 / 27		14 / 35		1 psig / 0.07 bar		1 psig / 0.07 bar		2 psig / 0.14 bar		5 psig / 0.34 bar		
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	
1	0.07	3030	86	4360	123	3010	85	3610	102													
2	0.14	5050	143	6050	171	5130	145	6770	192	6260	177	7100	201									
3	0.21	7070	200	7730	219	7260	206	9920	281	7050	200	10,400	295	5810	165							
5	0.34	7740	219	8020	227	7720	219	9930	281	8610	244	10,300	292	8080	229							
10	0.69	9430	267	8740	248	8860	251	9930	281	12,400	351	11,300	320	13,700	388	12,400	351					
15	1.0	11,800	334	10,700	303	10,700	303	12,400	351	14,900	422	12,300	348	18,100	513	17,400	493					
20	1.4	14,170	401	12,710	360	12,620	357	14,990	425	18,380	521	16,010	453	22,610	640	22,360	633					
25	1.7	18,160	514	15,310	434	15,770	447	18,010	510	21,810	618	19,660	557	26,960	764	27,310	773					
30	2.1	22,160	628	17,900	507	18,910	536	21,030	596	25,490	722	23,430	664	31,310	887	34,650	981					
40	2.8	32,530	921	23,670	670	24,950	707	27,550	780	34,840	987	32,880	931	39,380	1115	41,990	1189					
50	3.4	34,140	967	29,440	834	30,990	878	34,070	965	42,250	1197	39,900	1130	44,950	1273	53,060	1503					
60	4.1	40,670	1152	33,410	946	36,290	1028	41,890	1186	49,650	1406	46,930	1329	53,500	1515	59,300	1679					
80	5.5	58,330	1652	38,520	1091	48,640	1377	53,280	1509	63,470	1797	61,820	1751	67,450	1910	80,880	2291					
100	6.9	46,090	1305	56,050	1587	59,540	1686	64,300	1821	77,700	2200	73,470	2081	85,030	2408	97,520	2762					
125	8.6	77,090	2183	62,480	1769	76,910	2178	82,540	2338	93,010	2634	85,130	2411	102,610	2906	114,170	3233					
150	10.3											110,110	3118	124,420	3524	135,850	3847					
175	12.1											135,100	3826	146,220	4141	157,540	4461					
200	13.8											153,670	4352	164,190	4650	185,600	5256					
232	16.0											172,230	4878	182,160	5159	213,660	6051					
BODY SIZE: 2 IN. / DN 50																						
Inlet Pressure		4 / 10		7 / 17		11 / 27		14 / 35		1 psig / 0.07 bar		1 psig / 0.07 bar		2 psig / 0.14 bar		5 psig / 0.34 bar						
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	
1	0.07	2800	79	3280	93	3070	87	3020	86													
2	0.14	4590	130	5610	159	3320	94	3290	93	2740	78	4100	116									
3	0.21	6380	181	7930	225	3570	101	3560	101	3430	97	4730	134	6450	183							
5	0.34	6640	188	7660	217	4600	130	4710	133	4790	136	5980	169	7460	211							
10	0.69	6890	195	6980	198	7170	203	7600	215	8210	233	8320	236	9980	283	12,400	351					
15	1.0	10,880	308	9190	260	9740	276	10,170	288	11,620	329	10,650	302	13,300	377	18,040	511					
20	1.4	14,870	421	11,620	329	12,580	356	12,520	355	15,230	431	14,220	403	16,630	471	23,640	669					
25	1.7	15,880	450	14,910	422	15,480	438	15,890	450	18,830	533	17,790	504	20,470	580	29,240	828					
30	2.1	16,890	478	18,200	515	18,390	521	19,270	546	23,180	656	21,270	602	24,310	688	36,860	1044					
40	2.8	24,330	689	26,140	740	26,200	742	27,150	769	31,930	904	29,300	830	33,450	947	44,470	1259					
50	3.4	31,770	900	34,080	965	34,010	963	35,030	992	39,810	1127	36,690	1039	41,790	1183	54,600	1546					
60	4.1	40,890	1158	40,610	1150	40,870	1157	41,980	1189	47,690	1351	44,070	1248	48,010	1360	61,500	1742					
80	5.5	50,430	1428	51,230	1451	54,370	1540	55,350	1568	60,150	1703	58,450	1655	62,190	1761	83,900	2376					
100	6.9	61,460	1741	66,490	1883	68,590	1942	66,780	1891	80,520	2280	75,450	2137	82,080	2324	102,630	2906					
125	8.6	81,400	2305	82,700	2342	85,620	2425	87,780	2486	97,400	2758	92,450	2618	101,970	2888	121,350	3437					
150	10.3											107,070	3032	118,400	3353	142,510	4036					
175	12.1											121,700	3447	134,820	3818	163,670	4635					
200	13.8											138,320	3917	153,820	4356	187,150	5300					
232	16.0											154,930	4388	172,830	4895	210,640	5965					

- Blank areas indicate limited capacities due to boost effect.  
 - Gray areas indicate where the inlet pressure exceeds the ratings for the setpoint.

**Table 21. Types CSB720 and CSB750 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 2:1 PIPING																	
		Type CSB720				Type CSB750													
Accuracy		Body Size: 1-1/2 in. / DN 40																	
Droop	Boost	Setpoint, psig / bar																	
		-10%	+10%	7 / 0.48		10 / 0.68		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
10	0.69	11,720	332																
15	1.0	16,000	453	16,940	480	18,240	517												
20	1.4	20,280	574	24,000	680	26,560	752	24,300	688										
25	1.7	24,790	702	31,060	880	34,890	988	32,100	909	26,660	755								
30	2.1	29,290	829	38,640	1094	44,530	1261	39,890	1130	36,870	1044	31,420	890						
40	2.8	36,400	1031	46,220	1309	54,170	1534	53,240	1508	47,090	1334	47,440	1343						
50	3.4	43,510	1232	57,450	1627	61,950	1754	66,590	1886	60,050	1701	63,450	1797	46,300	1311				
60	4.1	52,960	1500	67,360	1908	75,050	2125	76,770	2174	73,010	2068	75,310	2133	61,710	1748	49,610	1405		
80	5.5	67,890	1923	88,630	2510	98,730	2796	96,770	2741	96,330	2728	100,120	2835	90,330	2558	78,020	2210		
100	6.9	85,370	2418	106,360	3012	119,980	3398	120,900	3424	113,660	3219	124,230	3518	103,230	2923	101,410	2872		
125	8.6	102,850	2913	124,080	3514	141,230	4000	145,030	4107	139,760	3958	144,620	4096	116,140	3289	124,790	3534		
150	10.3	121,600	3444	147,250	4170	164,240	4651	166,480	4715	159,620	4520	164,950	4671	164,020	4645	154,000	4361		
175	12.1	140,350	3975	170,420	4826	187,260	5303	187,920	5322	179,470	5083	185,280	5247	195,130	5526	190,978	5408		
200	13.8	158,660	4493	192,350	5447	214,370	6071	214,710	6081	207,500	5876	215,530	6104	197,080	5581	221,489	6273		
232	16.0	176,980	5012	214,280	6068	241,490	6839	241,500	6839	235,530	6670	245,780	6960	199,050	5637	248,505	7038		
BODY SIZE: 2 IN. / DN 50																			
Inlet Pressure		7 / 0.48		10 / 0.68		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45			
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h		
10	0.69	11,340	321																
15	1.0	14,800	419	16,610	470	17,660	500												
20	1.4	18,260	517	22,030	624	25,550	724	23,730	672										
25	1.7	22,230	630	27,450	777	33,440	947	31,830	901	25,410	720								
30	2.1	26,200	742	34,260	970	42,650	1208	39,920	1131	36,400	1031	27,830	788						
40	2.8	34,080	965	41,080	1163	51,860	1469	53,460	1514	47,390	1342	44,400	1257						
50	3.4	41,970	1189	49,850	1412	61,460	1741	67,000	1897	58,740	1664	60,960	1726	44,560	1262				
60	4.1	50,000	1416	62,670	1775	71,800	2033	76,390	2163	70,080	1985	75,740	2145	56,520	1601	47,220	1337		
80	5.5	64,670	1831	83,110	2354	96,820	2742	103,510	2931	89,930	2547	94,540	2677	80,820	2289	70,840	2006		
100	6.9	80,390	2277	103,500	2931	118,380	3352	123,450	3496	110,800	3138	113,830	3224	102,480	2902	92,640	2624		
125	8.6	96,110	2722	123,890	3509	139,930	3963	143,380	4060	132,400	3750	139,660	3955	124,140	3516	114,450	3241		
150	10.3	115,810	3280	145,720	4127	162,460	4601	167,400	4741	157,690	4466	163,270	4624	164,000	4644	165,000	4673		
175	12.1	135,520	3838	167,540	4745	184,990	5239	191,430	5421	182,990	5182	186,880	5292	195,000	5522	201,000	5692		
200	13.8	153,490	4347	191,190	5414	208,440	5903	221,280	6267	208,360	5901	214,610	6078	197,000	5579	234,979	6655		
232	16.0	171,450	4855	214,840	6084	231,900	6567	251,140	7112	233,730	6619	242,340	6863	199,000	5636	261,006	7392		

□ - Blank areas indicate limited capacities due to boost effect.

# CSB700 Series

**Table 22. Types CSB700 and CSB720 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 2:1 PIPING															
		Type CSB700								Type CSB720							
Accuracy		Body Size: 1-1/2 in. / DN 40															
Droop	Boost	Setpoint, in. w.c. / mbar															
		4 / 10		7 / 17		11 / 27		14 / 35		1 psig / 0.07 bar		1 psig / 0.07 bar		2 psig / 0.14 bar		5 psig / 0.34 bar	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
1	0.07	4180	118	5570	158	5100	144	4770	135								
2	0.14	6860	194	7610	216	7400	210	7980	226	8250	234	9930	281				
3	0.21	9530	270	9660	274	9700	275	11,100	314	9390	266	11,040	313	7320	207		
5	0.34	11,300	320	10,960	310	11,570	328	12,850	364	11,650	330	13,500	382	14,570	413		
10	0.69	13,080	370	12,260	347	13,440	381	14,520	411	18,510	524	17,080	484	21,820	618	18,240	517
15	1.0	16,370	464	15,540	440	16,570	469	18,780	532	23,900	677	20,660	585	28,450	806	25,950	735
20	1.4	19,650	556	18,820	533	19,700	558	23,030	652	28,070	795	25,320	717	35,090	994	32,680	925
25	1.7	24,080	682	21,530	610	24,110	683	27,210	771	32,230	913	29,970	849	39,940	1131	39,420	1116
30	2.1	28,500	807	24,240	686	28,530	808	31,390	889	38,720	1097	34,640	981	44,790	1268	48,700	1379
40	2.8	37,780	1070	29,790	844	34,410	974	39,170	1109	48,660	1378	45,150	1279	55,770	1579	57,990	1642
50	3.4	43,480	1231	35,340	1001	40,290	1141	46,940	1329	57,520	1629	53,580	1517	63,610	1801	73,230	2074
60	4.1	49,530	1403	40,570	1149	46,750	1324	53,390	1512	66,380	1880	62,010	1756	73,980	2095	78,410	2221
80	5.5	63,700	1804	51,280	1452	59,660	1690	68,200	1931	84,210	2385	74,720	2116	92,300	2614	106,150	3006
100	6.9	66,610	1886	60,170	1704	72,420	2051	82,650	2341	95,720	2711	91,020	2578	113,630	3218	131,240	3717
125	8.6	80,510	2280	68,470	1939	87,610	2481	96,680	2738	125,640	3558	107,330	3040	134,970	3822	156,330	4427
150	10.3											128,740	3646	157,680	4465	175,780	4978
175	12.1											150,150	4252	180,400	5109	195,240	5529
200	13.8											161,190	4565	181,280	5134	204,450	5790
232	16.0											172,230	4878	182,160	5159	213,660	6051
BODY SIZE: 2 IN. / DN 50																	
Inlet Pressure		4 / 10		7 / 17		11 / 27		14 / 35		1 psig / 0.07 bar		1 psig / 0.07 bar		2 psig / 0.14 bar		5 psig / 0.34 bar	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
1	0.07	3560	101	4150	118	3750	106	3630	103								
2	0.14	6560	186	7360	208	5520	156	5700	161	6140	174	6420	182				
3	0.21	9560	271	10,500	297	7280	206	7770	220	7180	203	7470	212	9200	261		
5	0.34	9900	280	10,700	303	8530	242	9000	255	9270	263	9570	271	10,800	306		
10	0.69	10,250	290	11,330	321	11,860	336	12,340	349	14,750	418	13,430	380	15,120	428	19,300	547
15	1.0	15,810	448	14,830	420	15,620	442	16,100	456	19,690	558	17,290	490	20,650	585	26,490	750
20	1.4	21,370	605	18,330	519	19,380	549	19,870	563	24,950	707	22,370	634	26,190	742	33,630	952
25	1.7	21,980	622	22,880	648	23,880	676	24,860	704	30,220	856	27,460	778	31,490	892	40,770	1155
30	2.1	22,600	640	27,420	777	28,380	804	29,850	845	36,650	1038	32,520	921	36,800	1042	50,540	1431
40	2.8	31,230	884	34,940	989	36,200	1025	38,110	1079	45,610	1292	42,220	1196	48,660	1378	60,310	1708
50	3.4	39,850	1129	42,460	1202	44,030	1247	46,360	1313	54,560	1545	50,280	1424	58,230	1649	72,160	2044
60	4.1	46,590	1319	51,490	1458	52,970	1500	55,620	1575	63,500	1798	58,340	1652	68,750	1947	81,630	2312
80	5.5	57,250	1621	60,480	1713	64,720	1833	69,550	1970	82,680	2341	78,820	2232	82,990	2350	105,440	2986
100	6.9	68,550	1941	77,970	2208	81,840	2318	84,370	2389	98,770	2797	95,390	2701	106,430	3014	125,330	3549
125	8.6	86,280	2443	91,170	2582	96,370	2729	100,980	2860	118,390	3353	111,970	3171	129,880	3678	145,230	4113
150	10.3											129,810	3676	150,420	4260	169,320	4795
175	12.1											147,640	4181	170,960	4842	193,410	5477
200	13.8											171,010	4843	196,600	5568	219,700	6222
232	16.0											194,380	5505	222,240	6294	245,990	6966

\_\_\_\_\_ - Blank areas indicate limited capacities due to boost effect.  
 \_\_\_\_\_ - Gray areas indicate where the inlet pressure exceeds the ratings for the setpoint.



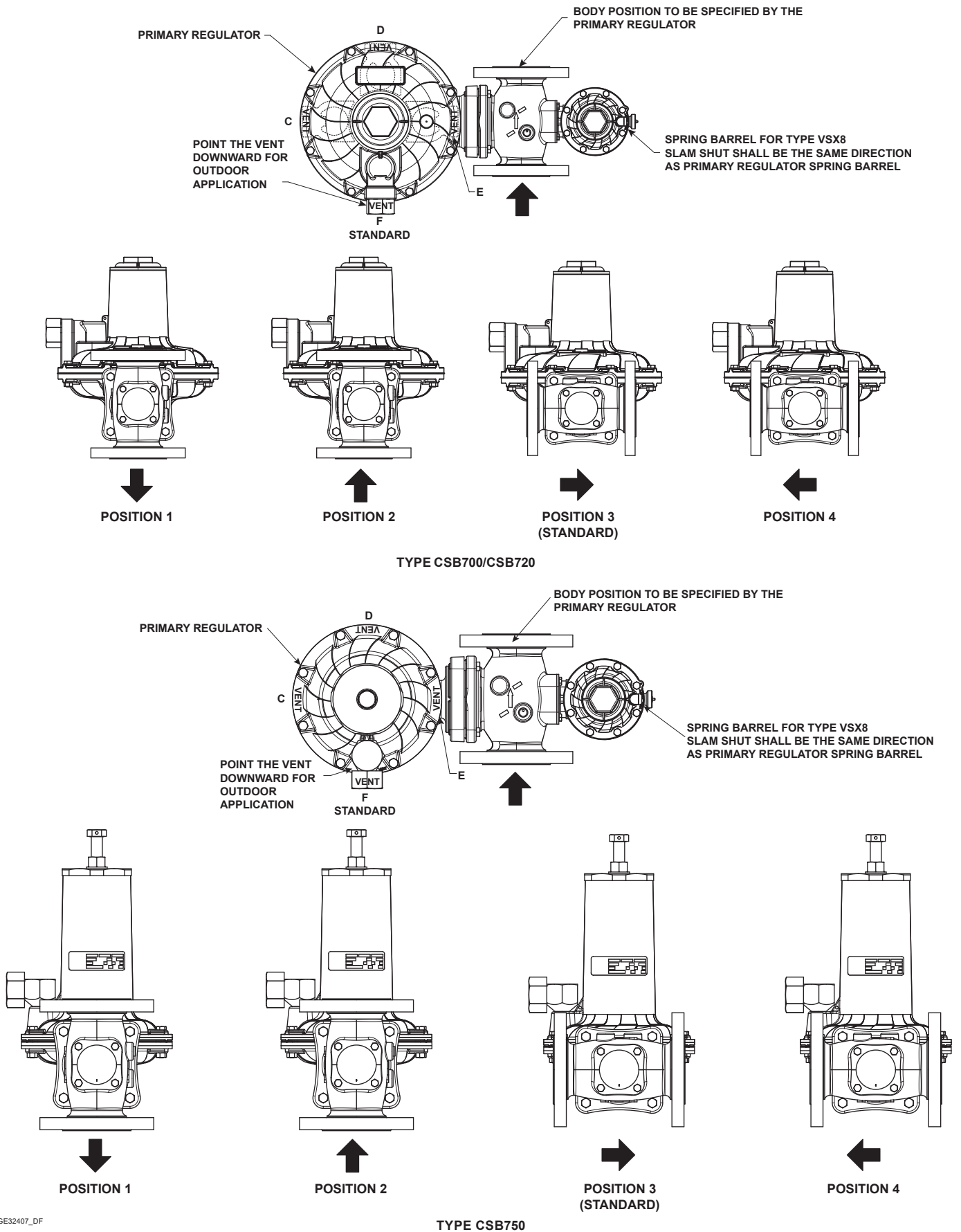
# CSB700 Series

**Table 23. Types CSB720 and CSB750 External Registration Flow Capacities for 1-1/2 and 2 in. / DN 40 and 50 Body Sizes**

INLET PRESSURE		CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS, 2:1 PIPING																	
		Type CSB720				Type CSB750													
Accuracy		Body Size: 1-1/2 in. / DN 40																	
Droop	Boost	Setpoint, psig / bar																	
		-20%	+20%	7 / 0.48		10 / 0.68		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45	
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h
10	0.69	17,610	499																
15	1.0	24,300	688	22,930	649	22,520	638												
20	1.4	31,000	878	31,990	906	31,610	895	28,240	800										
25	1.7	38,080	1078	41,040	1162	40,700	1153	36,050	1021	32,700	926								
30	2.1	45,170	1279	51,050	1446	51,320	1453	43,860	1242	45,030	1275	36,850	1044						
40	2.8	55,640	1576	61,050	1729	61,940	1754	58,310	1651	57,360	1624	54,200	1535						
50	3.4	66,120	1873	73,720	2088	75,770	2146	72,750	2060	70,700	2002	71,550	2026	57,140	1618				
60	4.1	79,900	2263	84,690	2398	87,540	2479	82,610	2339	84,040	2380	84,740	2400	75,080	2126	67,370	1908		
80	5.5	99,810	2827	108,980	3086	110,490	3129	104,350	2955	109,810	3110	109,330	3096	103,860	2941	96,970	2746		
100	6.9	121,880	3452	129,570	3669	138,030	3909	133,700	3786	135,390	3834	136,120	3855	122,850	3479	123,760	3505		
125	8.6	143,950	4077	150,160	4252	165,570	4689	163,050	4618	162,320	4597	156,350	4428	141,840	4017	150,540	4263		
150	10.3	168,540	4773	174,480	4941	187,930	5322	181,750	5147	181,920	5152	178,430	5053	176,000	4984	194,000	5494		
175	12.1	193,130	5469	198,790	5630	210,280	5955	200,450	5677	201,530	5707	200,510	5678	195,000	5522	223,000	6315		
200	13.8	211,800	5998	229,920	6511	235,150	6659	227,550	6444	226,110	6403	226,020	6401	197,000	5579	226,000	6400		
232	16.0	230,480	6527	261,040	7393	260,020	7364	254,660	7212	250,690	7099	251,540	7124	199,000	5636	248,500	7037		
BODY SIZE: 2 IN. / DN 50																			
Inlet Pressure		7 / 0.48		10 / 0.68		12 / 0.82		15 / 1.03		20 / 1.38		25 / 1.72		40 / 2.76		50 / 3.45			
psig	bar	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h	SCFH	Nm <sup>3</sup> /h		
10	0.69	16,720	474																
15	1.0	22,930	649	22,300	632	21,340	604												
20	1.4	29,150	826	29,990	849	30,220	856	28,520	808										
25	1.7	35,930	1018	37,670	1067	39,110	1108	36,610	1037	31,490	892								
30	2.1	42,720	1210	47,250	1338	49,480	1401	44,710	1266	43,840	1242	34,560	979						
40	2.8	53,690	1520	56,840	1610	59,860	1695	58,780	1665	56,190	1591	51,750	1466						
50	3.4	64,670	1831	68,870	1950	70,850	2006	72,850	2063	69,470	1967	68,940	1952	57,750	1635				
60	4.1	75,740	2145	83,210	2356	83,980	2378	82,400	2334	82,760	2344	83,940	2377	73,670	2086	63,550	1800		
80	5.5	97,400	2758	104,740	2966	107,020	3031	112,190	3177	105,240	2980	104,990	2973	96,840	2742	91,710	2597		
100	6.9	118,850	3366	127,350	3607	130,380	3692	131,730	3731	123,850	3507	122,560	3471	116,730	3306	111,820	3167		
125	8.6	140,310	3974	149,970	4247	153,750	4354	151,280	4284	145,940	4133	152,080	4307	136,630	3869	131,920	3736		
150	10.3	164,750	4666	172,560	4887	175,970	4983	175,520	4971	172,080	4873	174,840	4951	182,000	5154	194,000	5494		
175	12.1	189,200	5358	195,150	5527	198,190	5613	199,770	5657	198,210	5613	197,600	5596	200,000	5664	228,000	6457		
200	13.8	214,920	6086	222,100	6290	224,380	6354	229,540	6501	225,160	6376	224,940	6370	202,000	5721	232,000	6570		
232	16.0	240,640	6815	249,050	7053	250,580	7096	259,310	7344	252,110	7140	252,270	7144	205,000	5806	266,250	7540		

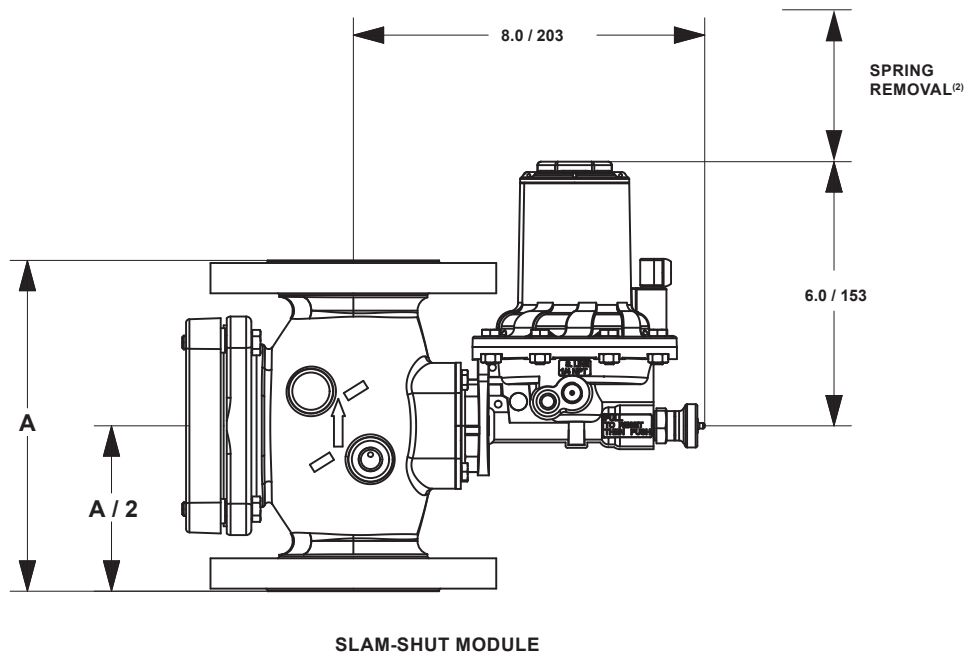
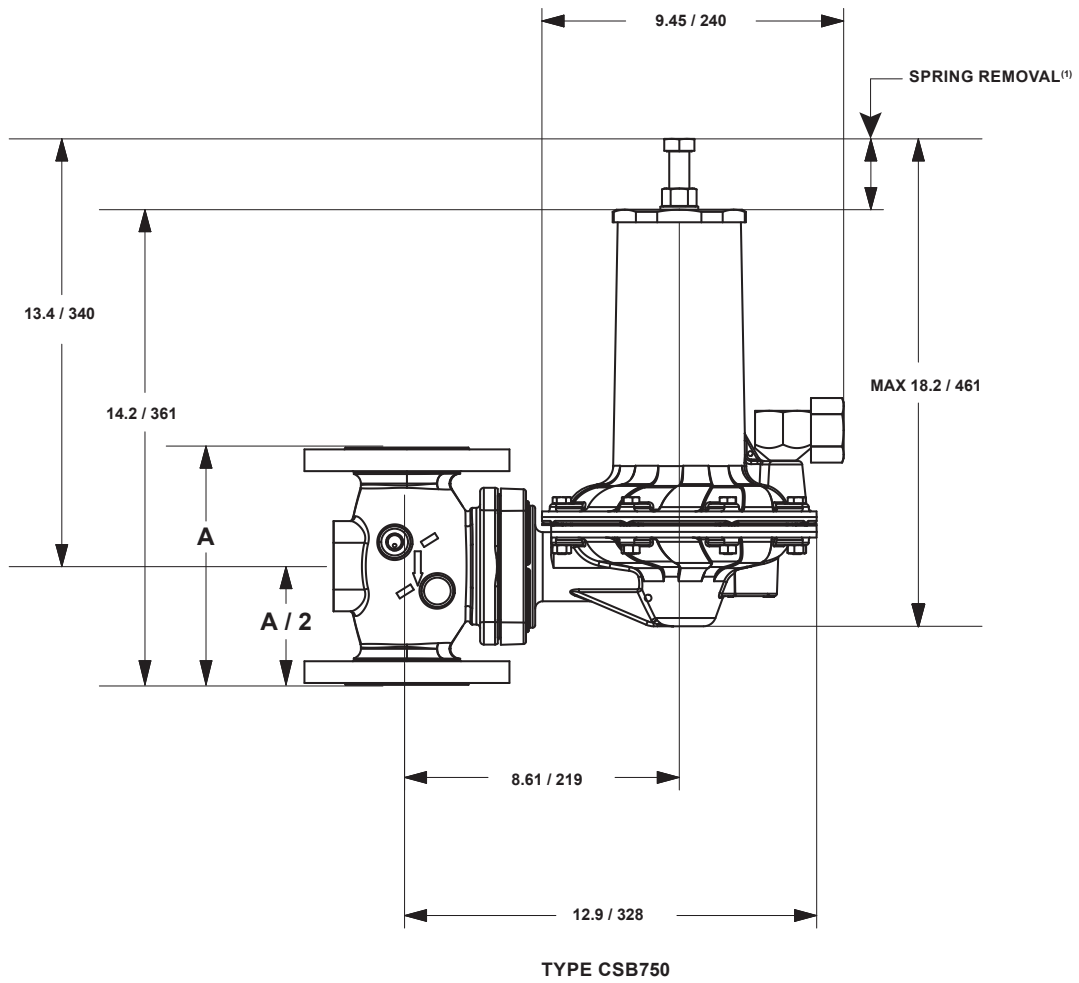
□ - Blank areas indicate limited capacities due to boost effect.

# CSB700 Series



GE32407\_DF

Figure 5. CSB700 Series Vent and Body Positions

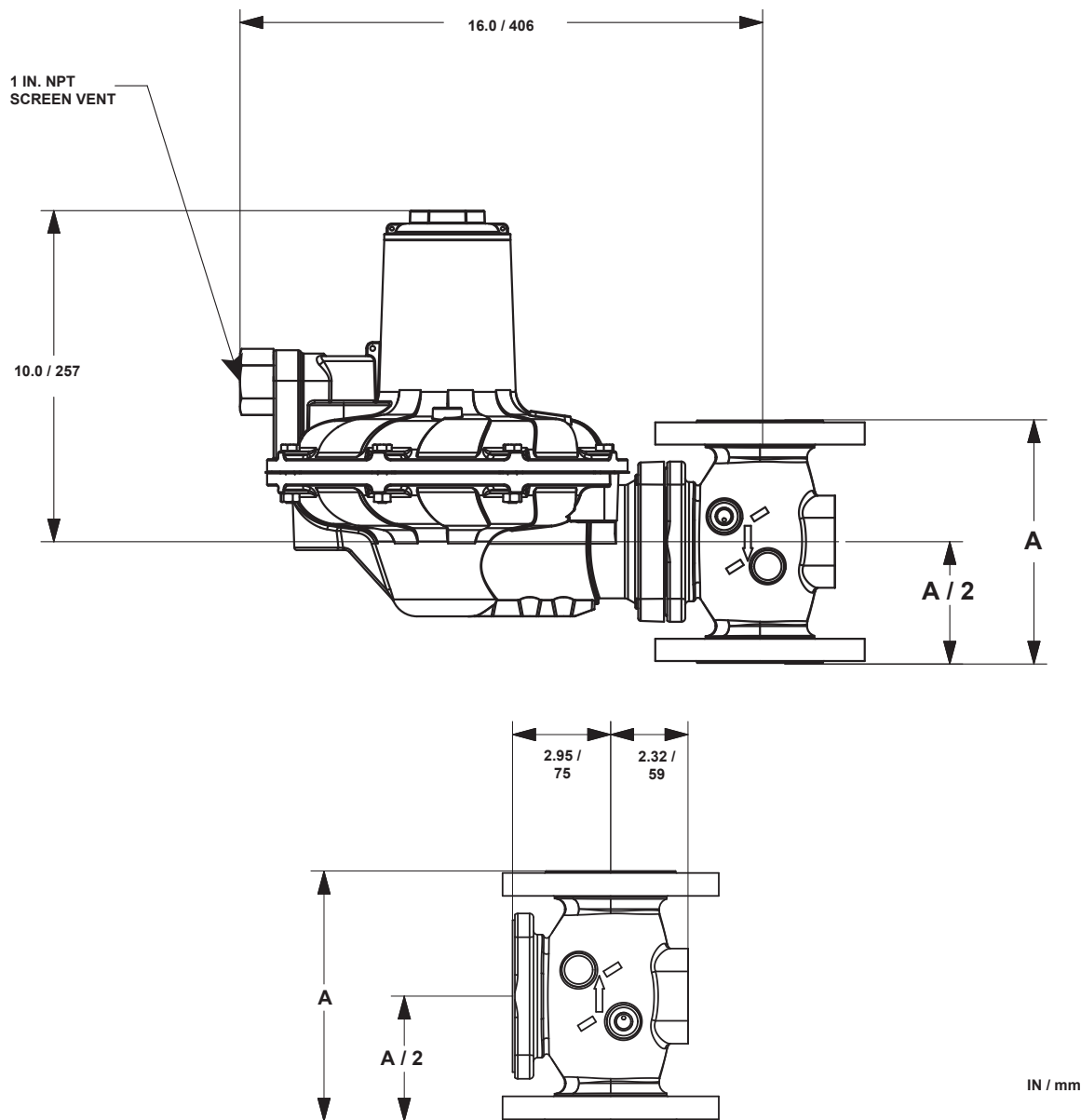


ERSA01617\_AB

1. Maximum spring removal clearance for the primary regulator is 6.2 in / 158 mm.
2. Maximum spring removal clearance for the slam shut is 3.1 in / 80 mm.

**Figure 6. CSB700 Series Dimensions**

# CSB700 Series



ERSA01617\_AB

TYPES CSB700, CSB700F, CSB720F AND CSB720

Table 24. CSB700 Series Dimensions

BODY SIZE		BODY END CONNECTION STYLE	FACE-TO-FACE DIAMETER (A)	
NPS	DN		In.	mm
1-1/2	40	NPT or Rp	6.10	155
2	50	NPT or Rp	6.10	155
2	50	CL125 FF or CL150 FF	7.52	191
			10.0	254
			10.5	267
		CL150 RF	10.0	254
		PN 10/16	7.52	191
			7.87	200
1-1/2	40	PN 16 Slip-on	10.0	254
			8.74	222

## Ordering Information

When ordering, complete the ordering guide on this page. Refer to the Specifications section on page 2. Review the description to the right of each

specification and the information in each referenced table or figure. Specify your choice whenever a selection is offered.

## Ordering Guide

**Type (See Table 1 for Construction details)**  
(Select One)

**Body Size and End Connection Style (Select One)**

### Stand-Alone Regulator

- |                                    |                                    |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> CSB700EN  | <input type="checkbox"/> CSB720FEN |
| <input type="checkbox"/> CSB700ET  | <input type="checkbox"/> CSB720EN  |
| <input type="checkbox"/> CSB700FEN | <input type="checkbox"/> CSB720ET  |
| <input type="checkbox"/> CSB700FET | <input type="checkbox"/> CSB750EN  |

### With Type VSX8 Slam-Shut Module

- |                                    |                                    |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> CSB704EN  | <input type="checkbox"/> CSB724FEN |
| <input type="checkbox"/> CSB704ET  | <input type="checkbox"/> CSB724EN  |
| <input type="checkbox"/> CSB704FEN | <input type="checkbox"/> CSB724ET  |
| <input type="checkbox"/> CSB704FET | <input type="checkbox"/> CSB754EN  |

### Ductile Iron

- 1-1/2 NPT
- 2 NPT\*\*\*
- Rp 1-1/2\*\*\*
- Rp 2\*\*\*
- NPS 2 / DN 50, CL125 FF\*\*\*
- NPS 2 / DN 50, CL150 FF\*\*\*
- NPS 2 / DN 50, PN 10/16\*\*\*
- NPS 1-1/2 / DN 40, PN 16 slip-on flanged body

### WCC Steel

- 1-1/2 NPT\*\*\*
- 2 NPT\*\*\*
- Rp 1-1/2\*\*\*
- Rp 2\*\*\*
- NPS 2 / DN 50, CL150 RF
- NPS 2 / DN 50, PN 10/16

**Outlet Pressure Range (Select One)**

### Type CSB700/CSB704

- 3.6 to 5.6 in. w.c. / 9 to 14 mbar, Silver\*\*\*
- 5.2 to 9.6 in. w.c. / 13 to 24 mbar, Red\*\*\*
- 8.8 to 15.7 in. w.c. / 22 to 39 mbar, Black Stripe\*\*\*
- 12.8 to 20.1 in. w.c. / 32 to 50 mbar, Purple\*\*\*
- 16.9 to 28.1 in. w.c. / 42 to 70 mbar, White Stripe\*\*\*
- 0.9 to 1.6 psig / 61 to 110 mbar, Dark Green\*\*\*

### Type CSB700F/CSB704F

- 5.2 to 9.6 in. w.c. / 13 to 24 mbar, Red\*\*\*
- 8.8 to 15.7 in. w.c. / 22 to 39 mbar, Black Stripe\*\*\*

### Type CSB720/CSB724

- 0.9 to 1.6 psig / 61 to 110 mbar, Dark Green\*\*\*
- 1.5 to 3.2 psig / 105 to 220 mbar, Blue\*\*\*
- 3.1 to 5.5 psig / 210 to 380 mbar, Black\*\*\*
- 4.6 to 8.3 psig / 320 to 570 bar, Red with White Stripe\*\*\*
- 7.40 to 11.3 psig / 510 to 780 bar, Blue with White Stripe\*\*\*

### Type CSB720F/CSB724F

- 3.9 to 4.7 psig / 270 to 325 mbar, Black with White Stripe

### Type CSB750/CSB754

- 10.2 to 17.3 psig / 0.7 to 1.19 bar, Purple Stripe\*\*\*
- 15.2 to 39.2 psig / 1.05 to 2.7 bar, Brown\*\*\*
- 33.4 to 47.1 psig / 2.3 to 3.25 bar, Gray with Red Stripe\*\*\*
- 45 to 58 psig / 3.1 to 4 bar, Gray with Orange Stripe\*\*\*

- continued -

# CSB700 Series

## Ordering Guide (continued)

### Body Orientation<sup>(1)</sup> (See Figure 5, Select One)

- Position 1\*\*\*
- Position 2\*\*\*
- Position 3 (standard)\*\*\*
- Position 4\*\*\*

### Vent Orientation<sup>(2)</sup> (See Figure 5, Select One)

- Position C\*\*\*
- Position D\*\*\*
- Position E\*\*\*
- Position F (standard)\*\*\*

### Slam-Shut Trip Pressure Setting

(Select One if applicable)

- Overpressure (OPSO) trip only  
Indicate Overpressure Trip Point \_\_\_\_\_
- Over and Underpressure (OPSO/UPSO) trip  
Indicate Overpressure Trip Point \_\_\_\_\_  
Indicate Underpressure Trip Point \_\_\_\_\_

1. For the Type CSB704, choose the body orientation of the primary regulator only. The slam-shut spring barrel will be oriented in the same direction as the primary regulator spring barrel.
2. For the Type CSB704, choose the vent orientation of the primary regulator only. The slam-shut vent will be oriented to point in the same direction as the primary regulator.

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 \_\_\_\_\_  
 Gas Type and Specific Gravity \_\_\_\_\_  
 Gas Temperature \_\_\_\_\_  
 Does the Application Require Overpressure Protection?  
 Yes     No    If yes, which is preferred:  
 Relief Valve    Monitor Regulator    Shutoff Device  
 Is overpressure protection equipment selection assistance desired? \_\_\_\_\_

**Pressure:**  
 Maximum Inlet Pressure ( $P_{1max}$ ) \_\_\_\_\_  
 Minimum Inlet Pressure ( $P_{1min}$ ) \_\_\_\_\_  
 Downstream Pressure Setting(s) ( $P_2$ ) \_\_\_\_\_  
 Maximum Flow ( $Q_{max}$ ) \_\_\_\_\_

**Performance Required:**  
 Accuracy Requirements? \_\_\_\_\_  
 Need for Extremely Fast Response? \_\_\_\_\_

**Other Requirements:** \_\_\_\_\_

-  [Webadmin.Regulators@emerson.com](mailto:Webadmin.Regulators@emerson.com)
-  [Facebook.com/EmersonAutomationSolutions](https://Facebook.com/EmersonAutomationSolutions)
-  [Fisher.com](http://Fisher.com)
-  [LinkedIn.com/company/emerson-automation-solutions](https://LinkedIn.com/company/emerson-automation-solutions)
-  [Twitter.com/emr\\_automation](https://Twitter.com/emr_automation)

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