Product Data Sheet
00813-0100-4435, Rev AD
February 2026

Rosemount™ 9935 Level Bypass Chamber



- Allows external mounting of process level instrumentation, which enables isolation of the process for live maintenance.
- Optimized for use with the Rosemount Guided Wave Radar, Non-Contacting Radar, and Vertical Level Switches.
- Rated for pressures up to ASME B16.5 Class 2500.
- Designed to ASME B31.3 Process Piping Code. ASME B31.1 Power Piping Code is available upon request.
- Used worldwide by major industries: power, petro-chemical, refining, oil & gas, chemical, and process steam raising sectors. Ideal for critical areas and general purpose applications.
- Custom design service available.

Reliable performance in challenging applications

Overview of the Rosemount 9935 Level Bypass Chamber

The 9935 Level Bypass Chamber is the result of more than 35 years of experience in designing and manufacturing level bypass chambers (also known as bridles) in accordance with international codes.

The 9935 is a self-contained chamber for externally mounting a range of Rosemount process level instruments to a vessel. It is also useful for in-tank restrictions that do not allow mounting of the instrument in a vessel.

Figure 1: 9935 Level Bypass Chamber

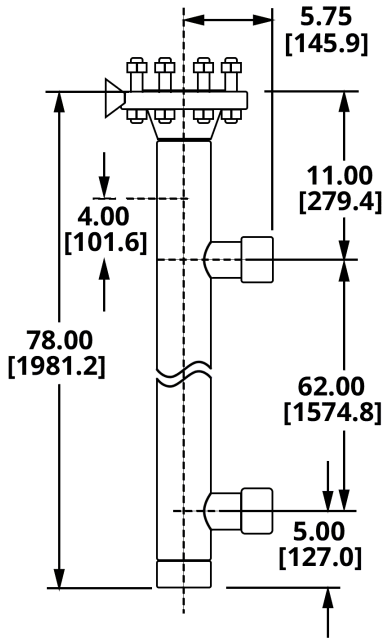
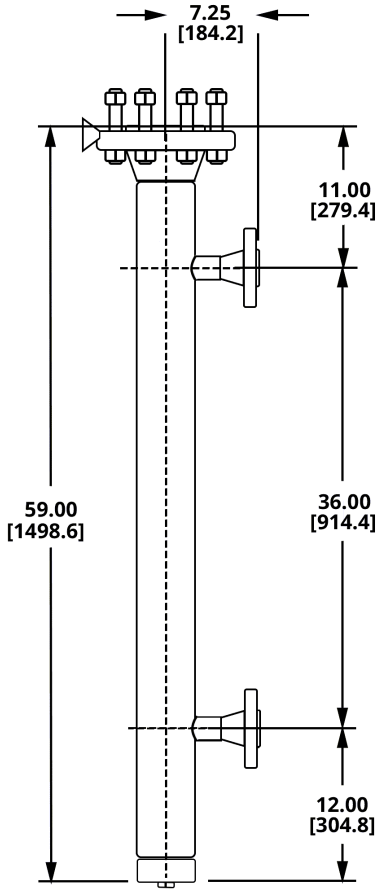


A. Threaded process connections
B. Flanged process connections

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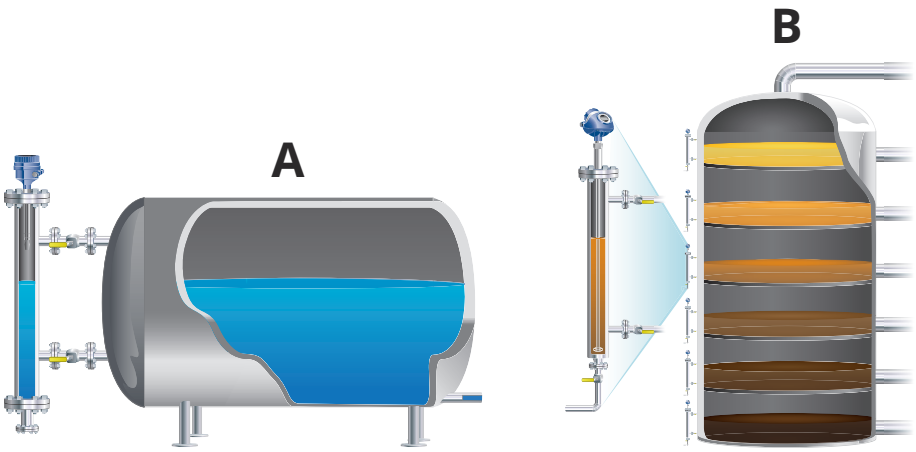
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Table 1: Level Bypass Chamber side view and dimensions

Threaded process connections	Flanged process connections
	

Note
Dimensions are in inches (mm).

Figure 2: Application examples



A. Horizontal tank with 9935
B. Distillation column with 9935 and Rosemount 5300 Guided Wave Radar

The Rosemount approach offers many advantages when solving application challenges:

In-tank constraints:

- Agitator
- Heat exchanger
- Internal structures

Isolation of instrument:

- Live maintenance
- Safety
- Hazardous liquids
- High pressures and temperatures

Turbulent vessel conditions:

- Level bypass chamber acts as a stilling well

Features and benefits

- Emerson's level bypass chambers are manufactured to meet exact process specifications by focusing on customer needs.
- Industry-preferred weld neck flanges are used throughout, increasing safety by minimizing stress levels and, if requested, the number of welds. All welds are full penetration to increase integrity and reduce crevice corrosion.
- Drain options for even easier maintenance of the instrument. Optional vent allows gas in the upper zone above the liquid to be vented off.

Level bypass chamber design

- Global quality assured, level bypass chambers are designed and manufactured according to the ASME B31.3 Process Piping Code. ASME B31.1 Power Piping Code is available upon request.
- All welders are qualified to ASME Boiler and Pressure Vessel Code Section IX.

- All construction materials have full traceability in accordance with the EN 10204 type 3.1.
- Hydrostatic certificate
- Designs are independently assessed by a third-party organization, if requested.

Rosemount 9935 Level Bypass Chamber ordering information



- Allows external mounting of process level instrumentation
- Enables isolation of the process for live maintenance
- Designed to the ASME B31.3 Process Piping Code. ASME B31.1 Power Piping Code is available upon request.
- Variety of process connections and optional drain and vent connections

Specification and selection of product materials, options, or components must be made by the purchaser of the equipment.

Note
For further ordering information, refer to the Rosemount 9935 Level Bypass Chamber Quick Data Sheet and contact a Rosemount salesperson.

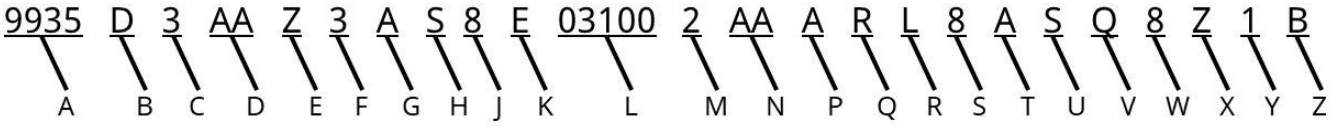
Related information

Material selection

Model number

Typical model number: 9935D3AAZ3AS8E031002AAARL8ASQ8Z1B

Figure 3: Model number components



A.	Level bypass chamber model designation	J.	Level bypass chamber schedule	S.	Vent size
B.	Mounting style	K.	Mounting dimension unit of measure	T.	Vent rating
C.	Instrument flange size	L.	Mounting dimension	U.	Vent orientation
D.	Instrument flange rating	M.	Process connection size	V.	Drain type
E.	Guided wave radar (GWR) vapor compensation	N.	Process connection rating	W.	Drain size
F.	Level bypass chamber construction design	P.	Process connection type	X.	Drain rating
G.	Instrument flange type	Q.	Process connection design	Y.	Instrument bolting
H.	Level bypass chamber material	R.	Vent type	Z.	Instrument gasket

The starred offerings (★) represent the most common options and should be selected for the fastest delivery. The non-starred offerings are subject to additional delivery lead time.

Mounting style

	Code	Style	Description
	B	Style B	Flanged top and bottom with side-side process connection
★	D	Style D	Flanged top Closed bottom with side-side process connection
	F	Style F	Flanged top Top side and bottom side process connection

Instrument flange size

	Code	Description
	2	2 in. / 50 mm (DN50)
★	3	3 in. / 80 mm (DN80)
	4	4 in. / 100 mm (DN100)

Instrument flange rating

	Code	Description
★	AA	ANSI B16.5 Class 150
	AB	ANSI B16.5 Class 300
	AC	ANSI B16.5 Class 600
	AD	ANSI B16.5 Class 900
	AE	ANSI B16.5 Class 1500
	AF	ANSI B16.5 Class 2500

Guided wave radar (GWR) vapor compensation

	Code	Dynamic vapor compensation (DVC) long reflector code	Level bypass chamber dimension
★	Z	None	None
	S	R1	22 in.
	L	R2	28 in.

The GWR vapor compensation option codes ensure the Rosemount 9935 Level Bypass Chamber has correct dimensions for a vapor compensation probe. Select S with GWR option R1; select L with GWR option R2. (active voice)

Level bypass chamber construction design

	Code	Description
	2	Industrial Grade

	Code	Description
★	3	ASME B31.3
	1	ASME B31.1

Instrument flange type

	Code	Description
★	A	Raised Face (RF) Weld Neck
	B	RF Slip-On
	D	Ring Type Joint (RTJ) Weld Neck

Level bypass chamber material

	Code	Description
★	C	Carbon Steel (Standard)
	S	Stainless Steel 316/316L

Level bypass chamber schedule

	Code	Description
	1(1)	S10
★	4	S40
	8	S80
	6	S160

(1) *Only available with stainless steel chambers.*

Mounting dimension unit of measure

	Code	Description
★	E	English (default in inches)
	M	Metric (default in millimeters)

Mounting dimension

	Code	Center-to-center measurement	Example
	XXXXX	XXX.XX inches or XXXXX mm	04863 = 48.63 inches or 4863 mm

Process connection size

	Code	Description
	8	½-in.
	9	¾-in.
	1	1-in.
	6	1½-in.
	2	2-in.
	3	3-in.
	4	4-in.

Process connection rating

	Code	Description
★	AA	ANSI B16.5 Class 150
	AB	ANSI B16.5 Class 300
	AC	ANSI B16.5 Class 600
	AD	ANSI B16.5 Class 900
	AE	ANSI B16.5 Class 1500
	AF	ANSI B16.5 Class 2500
	FA	ANSI B16.11 Class 3000
	FB	ANSI B16.11 Class 6000
	SA	STD ANSI B16.9
	SB	XS ANSI B16.9
	SC	S160 ANSI B16.9
	SD	Sch 10 ANSI B16.9

Process connection type

	Code	Description
★	A	Raised face (RF) Weld Neck
	B	RF Slip-On
	D	Ring type join (RTJ) Weld Neck
	G	Nipple - Plain End
	H	Nipple - Beveled End (37.5°)
	J	Nipple - Male NPT
	L	Coupling - Female NPT
	N	Coupling - Socket weld (SW)

Process connection design

	Code	Description
★	D	Drill (Set-On)
	E	Extrusion
	T	Tee's (ASME B16.9)
	R	Reinforced - (O-LET)

Vent type

	Code	Description
	Z	None
	A	Raised face (RF) Weld Neck
	B	RF Slip-On
	D	Return type joint (RTJ) Weld Neck
	F	RTJ Socketweld
★	L	Coupling - Female NPT
	N	Coupling - SW

Vent size

	Code	Description
	0	None
	8	½-in.
★	9	¾-in.
	1	1-in.

Vent rating

	Code	Description
	Z	None
★	A	ANSI B16.1 Class 3000
	B	ANSI B16.11 Class 6000
	D	Standard (STD) ANSI B16.9
	E	XS ANSI B16.9
	F	S160 ANSI B16.9
	G	Sch 10 ANSI B16.9

Vent orientation

	Code	Description
	Z	None
★	S	Standard Orientation with 2 in. (50 mm) positive offset (180° from process connection)
	N	Standard Orientation, no offset (180° from process connection)
	L	Left mount
	R	Right mount

Drain type

	Code	Description
	Z	None
	A	Raised face (RF) Weld Neck
	B	RF Slip-On
	D	Ring type joint (RTJ) Weld Neck
	L	Coupling - Female NPT
	N	Coupling - SW
★	Q	Flat Cap End - Female NPT
	S	Flat Cap End - SW
	T	Blind - Female NPT
	V	Blind - SW Tap

Drain size

	Code	Description
	0	None
	8	½-in.
★	9	¾-in.
	1	1-in.

Drain rating

	Code	Description
★	Z	None
	A	ANSI B16.11 Class 3000
	B	ANSI B16.11 Class 6000
	D	STD ANSI B16.9
	E	XS ANSI B16.9

	Code	Description
	G	Sch 10 ANSI B16.9

Instrument bolting

	Code	Description
	0	None
★	1	Carbon Steel Bolting (A193 B7 studs with 2H nuts)
	2	Stainless Steel Bolting (A193 B8M Cl 2 studs with 8M nuts)
	3	Stainless Steel Bolting (A320 L7 studs with A194 Gr. 7 nuts)

Instrument gasket

	Code	Description
	Z	None
	A	Flat Ring (non-asbestos)
★	B	Spiral Wound Center ring, Gasket, Inner ring (CGI) Type (316 Stainless Steel 316/Graphite)
	C	Ring Joint

Order options – must be specified at time of order

Paint

The standard is high-quality, high heat, and anti-corrosion black paint.

Available upon request:

- The level bypass chamber can be provided with just a primer for on-site painting.
- White epoxy paint, which consists of a primer, two layers of a two-pack high-build undercoat, and a final coat of a two-pack epoxy full gloss finish.
- The Rosemount 9935 can be painted to a customer specification.

Test and inspection

All Rosemount chambers can be hydrostatically tested to 1.5 times the maximum allowable working pressure (MAWP) of the specified flange/pressure rating prior to shipment to ensure pressure tolerance.

Consult the factory for additional testing and documentation are available for all other testings.

- Material traceability reports (MTRs)
- Dye penetrant
- Radiography
- Hydrostatic pressure test certificates
- Postive material identification (PMI)
- Witness testing

Material certification

Material traceability certification conforming to EN 10204 3.1 is available, and positive material identification (PMI) can also be ordered. PMI is a process to identify the composition of the material of the level bypass chamber and can be requested to support any material certificates that have been supplied. Requests for PMI should be made when making an inquiry.

Documentation available:

- Outline dimensional drawings for approval prior to construction
- Weld procedures
- Quality control plans define activities planned to deliver the product while meeting customer’s quality expectation

We can accommodate any request for inspections by a customer or third party organizations. This normally takes place prior to shipping. Requests for inspections should be made when making an inquiry.

Valves

Valves are commonly mounted on the drain or vent connection to allow draining or venting of the chamber. It is common practice to also mount valves on the process connection to allow isolation of the level bypass chamber. Valves can be supplied with the Rosemount 9935, and details are available upon request.

Technical specifications

Material selection

Emerson provides a variety of products with various product options and configurations including materials of construction ensuring optimal performance in a wide range of applications. The product information presented is intended to be a guide for the purchaser to make an appropriate selection for the application. It is the purchaser's sole responsibility to make a careful analysis of all process parameters (such as all chemical components, temperature, pressure, flow rate, abrasives, contaminants, etc.), when specifying product, materials, options and components for the particular application. Emerson is not in a position to evaluate or guarantee the compatibility of the process fluid or other process parameters with the product, options, configuration or materials of construction selected.

Level bypass chamber pressure and temperature ratings

Table 2: Level bypass chamber pressure and temperature ratings (standard alloy steel bolting and stainless steel bolting)

Class/Rating		Working pressure for the Rosemount 9935 Level Bypass Chambers			
		Carbon steel		Stainless steel [1]	
		Psi	Bar	Psi	Bar
ASME B16.5 Class 150	Ps max (RT) [2]	285	19.6	275	19.0
	Ps max (752 °F) / (400 °C)	95	6.5	95	6.5
	Pt	428	30	413	29
ASME B16.5 Class 300	Ps max (RT)	740	51.1	720	49.6
	Ps max (752 °F) / (400 °C)	505	34.7	425	29.4
	Pt	1110	78	1080	75
ASME B16.5 Class 600	Ps max (RT)	1480	102.1	1440	99.3
	Ps max (752 °F) / (400 °C)	1015	69.4	855	58.9
	Pt	2220	154	2160	149
ASME B16.5 Class 900	Ps max (RT)	2220	153.2	2160	148.9
	Ps max (752 °F) / (400 °C)	1520	104.2	1280	88.3
	Pt	3330	230	3240	224
ASME B16.5 Class 1500	Ps max (RT)	3705	255.3	3600	248.2
	Ps max (752 °F) / (400 °C)	2535	173.6	2135	147.2
	Pt	5558	383	5400	373

(1) *Ts min is –148 °F (–100 °C).*
(2) *RT is Room Temperature of 68 °F (20 °C).*

Temperature ratings

Table 3: Level bypass chamber temperature ratings

Material	Level bypass chamber temperature range
Carbon Steel chamber	-20 to +850 °F (-29 to +455 °C)
Stainless Steel chamber	-260 to +850 °F (-162 to +455 °C)

Materials of construction

Only materials suitable for pressure use and certified to ASME B31.3 are used in the construction of level bypass chambers. Other materials are available to special order.

Table 4: Level bypass chamber materials

Component	Carbon Steel (1)	Stainless steel
Instrument mounting flange	ASTM A105	ASTM A182 F316/F316L
Level bypass chamber body tube	ASTM A106 Grade B	ASTM A312 TP316/TP316L
Level bypass chamber end cap	ASTM A105	ASTM A182 F316/F316L
Process flange / fitting	ASTM A105	ASTM A182 F316/F316L
T-Pieces and reducers	ASTM A234 WPB	ASTM A403 WP316/WP316L–S
Studbolts	ASTM A193 B7	ASTM A193 B8M CL.2
Nuts	ASTM A194 2H	ASTM A194 Grade 8M

(1) *Consult factory if low temperature carbon steel chamber is required.*

Engineered solutions

When standard model codes are not sufficient to fulfill requirements, please consult the factory to explore possible engineered solutions. This is typically, but not exclusively, related to the choice of wetted materials or the design of a process connection. These engineered solutions are part of the expanded offerings and may be subject to additional delivery lead time.

When ordering, use Rosemount™ 9935 Level Bypass Chamber Configuration Data Sheet.

Note
The aramid fibers with nitrile binder gasket that is shipped with the product is supplied only to protect flange faces during shipping. The user is responsible for suppling appropriate gasket for the process conditions.

Note
Bolts on the product are only hand tight for shipping purposes, and will need to be torqued to process specifications when installing.

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For more information: **Emerson.com/global**

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