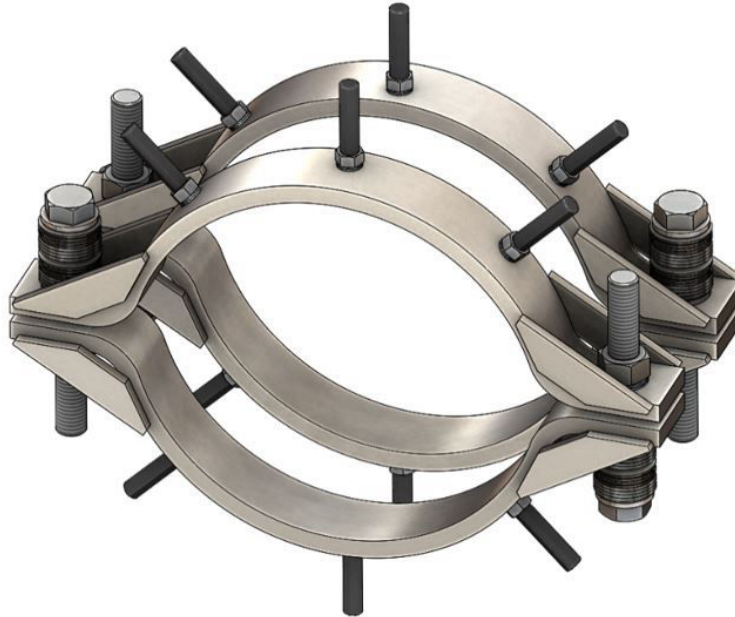


Rosemount™ Sensor Clamps 200

for Rosemount Wireless WT210 Transmitters



- Alternative to stud welding on pipes operating up to 570 °F (300 °C)
- Compatible with Rosemount™ Wireless WT210 Transmitters
- Clamps range in size from 2 in to 42 in

Sensor Clamps 200 Series

Sensor clamps 200 is a series of commonly used clamp sizes accommodating up to 2 sensors spaced evenly on pipe diameters of 2 NPS – 4 NPS, 6 sensors spaced evenly on pipe diameters of 6 NPS – 42 NPS.

Sensor clamps 200 series are designed to optimize the ultrasonic performance of the sensors that are attached with it. The key to achieve high performance is to deliver constant coupling pressure for the ultrasonic sensors. The bands and spring assemblies of these clamps are engineered to deliver consistent performance at a wide range of temperatures, on a range of pipe materials, despite substantial differential thermal expansion between pipe and clamp. The painted option is available for all locations where the temperature doesn't exceed 200 °C.

Specifications

Physical Specifications

Material selection

Emerson provides a variety of Rosemount products with various product options and configurations including materials of construction that can be expected to perform well in a wide range of applications. The Rosemount product information presented is intended as 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.

Weight

Varies on pipe size

Materials of construction

Clamp material	Stainless Steel 316L
Optional coating	Intertherm 228 + Grey: Ral code 7004
Stud material	Stainless Steel 316L

Performance Specifications

Temperature limits

Operating temperature limit for unpainted clamp:	-22 to 570 °F (-30 to 300 °C)
Operating temperature limit for painted clamp:	-22 to 390 °F (-30 to 200 °C)

Compatibility

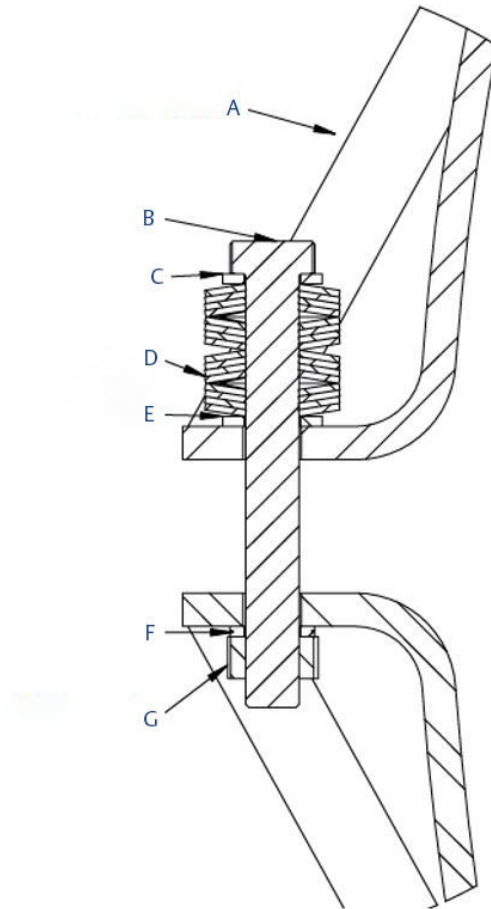
Rosemount™ WT210 Wireless Corrosion Transmitter

Supplied hardware

Each clamp assembly is supplied with four clamp quarters and the following fixings (see table below).

Clamp diameter (NPS)	2 - 4	6 - 28	30 - 42	
Clamp parts	Quantity			Material
Clamp bolt M16 X 100	4	N/A		A4
Clamp bolt M16 X 130	N/A	4	N/A	
Clamp bolt M16 X 200	N/A		4	
Clamp M16 flat washer	8			
Clamp M16 disc springs	64		96	Stainless Steel
Clamp M16 Nord-Lock washer	4			A4
Clamp M16 hex nut	4			
Parts for sensor mounting	Quantity			Material
M8 hex nuts	4	12		A4
M8 Nord-Lock washer	4	12		

Figure 1: Fixings supplied as part of each clamp assembly



- A. Clamp quarter
- B. M16 bolt
- C. Flat washer
- D. Disc springs
- E. Flat washer
- F. Nord-Lock washer
- G. M16 hex nut

Configuration

Pipe size		Weight lb (kg) fully assembled	Number of sensor mounting positions	Torque lbf-ft (N-m)	Disc spring configuration on each M16 bolt
NPS	DN (Diameter Nominal)				
2	50	8.2 (3.7)	2 equispaced; See Figure 2 .	22 (30)	4 - 4 - 4 - 4 (4 groups stacked back to back, each group has 4 stacked discs) See Figure 1 .
3	80	9.5 (4.3)			
4	100	11 (5)			
6	150	15.5 (7)	6 equispaced; See Figure 3 .		
8	200	17.6 (8)			
10	250	21 (9.5)			
12	300	23 (10.5)			
14	350	25.4 (11.5)			
16	400	27.6 (12.5)			
18	450	31 (14)			
20	500	33 (15)			
22	550	35 (16)			
24	600	40 (18)			
26	650	45 (20.5)	30 (40)	4 - 4 - 4 - 4 - 4 - 4 (6 groups stacked back to back, each group has 4 stacked discs)	
28	700	51 (23)			
30	750	55 (25)			
32	800	60.5 (27.5)			
34	850	66 (30)			
36	900	74 (33.5)			
42	1050	88 (40)			

Clamps are sized to fit Nominal Pipe Size (NPS). When ordering clamps, please quote the NPS in inches or DN (Diameter Nominal, mm) of the pipe on which the clamp is to be installed. Actual clamp dimensions are detailed in the [Dimensional drawings](#) of this document.

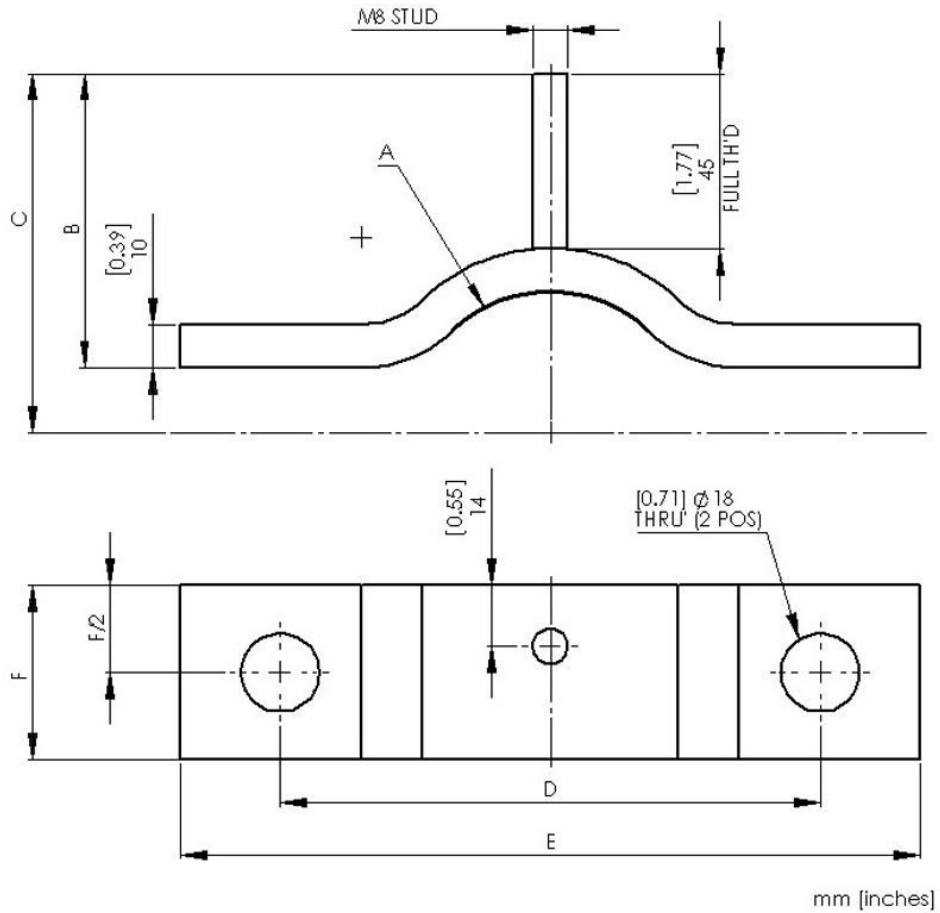
If installing clamps on elbows, you will only be able to use mounting locations on the extrados (outside) of the elbow. Clamps for pipe size NPS 3 and above may be installed to long radius elbow sections of piping. For short radius elbows, the minimum size to install a clamp is NPS 6.

Dimensional drawings

Dimensions

The dimensions for clamps in the range of 2 NPS – 4 NPS are shown in Figure 2 and Table 1.

Figure 2: Dimensions for clamps in the range of 2 NPS – 4 NPS



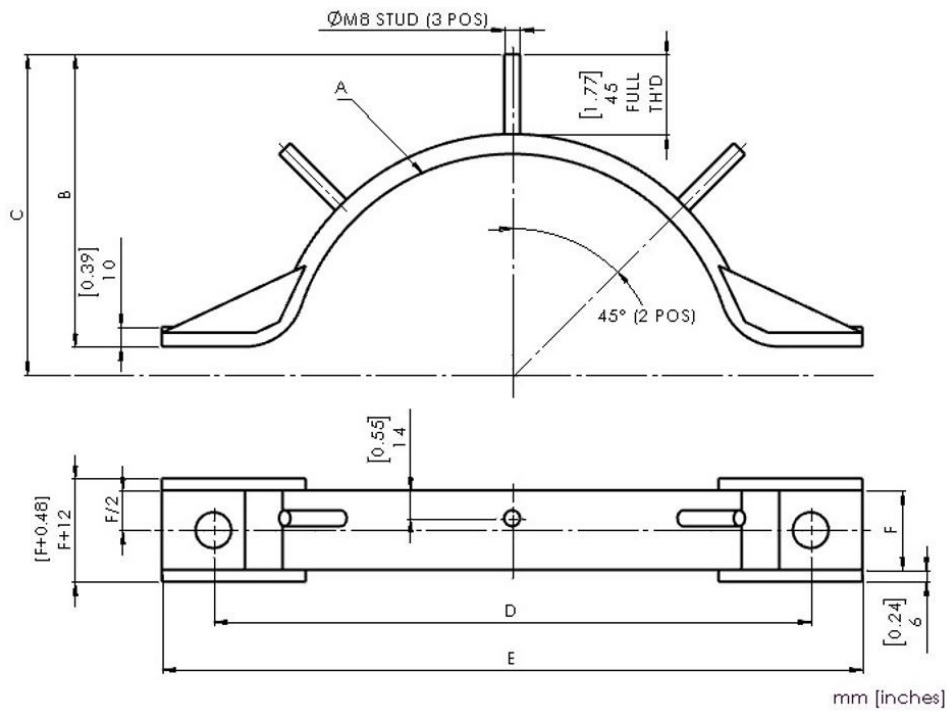
Dimensions are in mm [inches].

Table 1: Dimensions for clamps in the range of 2 NPS – 4 NPS

Pipe size (NPS)	A	B	C	D	E	F
[Inches] mm						
2	[2.56] 65	[2.85] 72.5	[3.43] 87.5	[4.88] 124	[6.69] 170	[1.57] 40
3	[3.54] 90	[3.34] 85	[3.93] 100	[6.46] 164	[8.27] 210	[1.57] 40
4	[4.68] 119	[3.90] 94	[4.49] 114	[8.27] 210	[10.08] 256	[1.57] 40

The dimensions for clamps in the range of 6 NPS – 28 NPS are shown in Figure 3 and Table 2.

Figure 3: Dimensions for clamps in the range of 6 NPS – 28 NPS



Dimensions are in mm [inches].

Table 2: Dimensions for clamps in the range of 6 NPS – 28 NPS

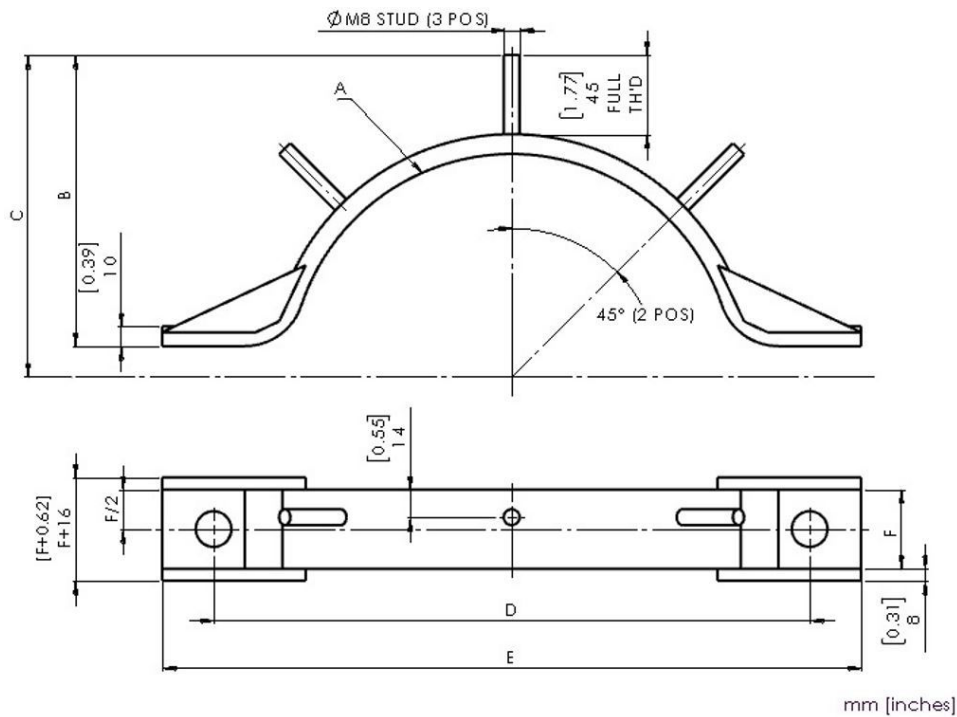
Pipe size (NPS)	A	B	C	D	E	F
[Inches] mm						
6	[6.77] 172	[4.96] 126	[5.55] 141	[9.72] 247	[11.54] 293	[1.57] 40
8	[8.82] 224	[5.99] 152	[6.58] 167	[11.85] 301	[13.90] 353	[1.57] 40
10	[10.94] 278	[7.05] 179	[7.64] 194	[14.21] 361	[16.26] 413	[1.57] 40
12	[12.99] 330	[8.07] 205	[8.66] 220	[16.26] 413	[18.31] 465	[1.57] 40
14	[14.17] 360	[8.66] 220	[9.26] 235	[17.52] 445	[19.80] 503	[1.57] 40
16	[16.22] 412	[9.69] 246	[10.28] 261	[19.49] 495	[21.69] 551	[1.57] 40
18	[18.27] 464	[10.71] 272	[11.30] 287	[21.69] 551	[24.06] 611	[1.57] 40
20	[20.31] 516	[11.73] 298	[12.32] 313	[23.78] 604	[26.14] 664	[1.57] 40
22	[22.29] 566	[12.72] 323	[13.31] 338	[25.79] 655	[28.15] 715	[1.97] 50

Table 2: Dimensions for clamps in the range of 6 NPS – 28 NPS (continued)

Pipe size (NPS)	A	B	C	D	E	F
24	[24.33] 618	[13.74] 349	[14.33] 364	[27.83] 707	[30.20] 767	[1.97] 50
26	[26.38] 670	[14.77] 375	[15.36] 390	[30.35] 771	[32.24] 819	[1.97] 50
28	[28.43] 722	[15.67] 398	[16.38] 416	[32.76] 832	[35.12] 892	[1.97] 50

The dimensions for clamps in the range of 30 NPS – 42 NPS are shown in Figure 4 and Table 3.

Figure 4: Dimensions for clamps in the range of 30 NPS – 42 NPS



Dimensions are in mm [inches].

Table 3: Dimensions for clamps in the range of 30 NPS – 42 NPS

Pipe size (NPS)	A	B	C	D	E	F
[Inches] mm						
30	[30.91] 785	[16.44] 417.5	[17.62] 447.5	[35.08] 891	[37.21] 945	[2.36] 60
32	[32.88] 835	[17.42] 442.5	[18.60] 472.5	[37.05] 941	[39.18] 995	[2.36] 60
34	[34.85] 885	[18.41] 467.5	[19.59] 497.5	[39.02] 991	[41.15] 1045	[2.36] 60
36	[36.82] 935	[19.39] 492.5	[20.573] 522.5	[40.99] 1041	[43.16] 1095	[2.36] 60

Table 3: Dimensions for clamps in the range of 30 NPS - 42 NPS (continued)

Pipe size (NPS)	A	B	C	D	E	F
42	[42.92] 1090	[22.44] 570	[23.63] 600	[47.09] 1196	[49.22] 1250	[2.36] 60

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