

300 SERIES



APPLICATIONS

- Industrial process
- Petrochemical
- Food & beverage processing
- Commercial
- Wastewater



Sanitary options
available

- Highest quality thermometers available on the market
- Easy to calibrate with 1/16" Allen key
- Corrosion-resistant 304 Stainless Steel case and bezel provide a hermetic seal to prevent lens fogging and moisture damage
- Sanitary Tri-Clamp® and 3-A options available
- Single °F, single °C, and dual scale options available
- Accuracy: $\pm 1\%$ full scale, Grade A, ASME B40.3
- 2", 3" and 5" sizes - center back and bottom connections
- 2" Dial Size - 1/4" NPT; 3" & 5" Dial Sizes - 1/2" NPT
- Standard stem lengths 2-1/2" through 42"
- Minimum or maximum indicating pointers are available in 3" and 5" sizes
- Highly sensitive bimetallic helix coil is heat-treated for stress relief, and silicone-coated to minimize pointer vibration and maximize heat transfer and response time
- 360° groove around stem is a visual reference to show minimum immersion point
- Made in the U.S.A.

	SERIES	SPECIFICATIONS
Case & bezel	All 300 Series	304 Stainless Steel
Lens	All 300 Series	Instrument glass
Pointer	All 300 Series	Aluminum, black finish
Stem diameter	300 Series, Standard & 06SAN 300 Series, All Other Sanitary models	.250" (6.35 mm) .375" (9.53 mm)
Accuracy	All 300 Series	$\pm 1\%$ full scale, Grade A, ASME B40.3
Dial	All 300 Series	Anodized Aluminum with large black numbers and graduations
Process connection	300 Series, 2" Dial Size, Standard 300 Series, 3" & 5" Dial Size, Standard 300 Series, Sanitary	1/4" NPT 1/2" NPT 3/4" Tri-Clamp through 4" Tri-Clamp
Wetted parts	300 Series, Standard 300 Series, Sanitary	304 Stainless Steel; 316 Stainless Steel optional 316 Stainless Steel
Hermetic seal	All 300 Series	Per ASME B40.3 dustproof and leakproof
Bimetal coil	All 300 Series	Silicone coated helix coil on ranges below 500 °F for vibration dampening, maximum heat transfer and response time
Over temperature limits	All 300 Series	Up to 250 °F 100%; 250 °F to 550 °F 50%; 550 °F to 1,000 °F continuous use up to 800 °F; intermittent use over 800 °F
Recalibrator	All 300 Series	External reset
Adjustable angle form	320 Series	All Stainless Steel brackets with screws that loosen to allow 360° rotation of head and 180° adjustment of stem position

Thermowells are recommended for pressure, corrosive fluids and high velocity applications, see pages 48-50.



WARNING: This product can expose you to chemicals including Lead and Nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

ORDERING INFORMATION						
DIAL SIZES	20	2" (Back connected only)	30	3"	50	5"
CASE TYPES	300	Bottom connection	310	Back connection	320	Adjustable angle connection **
STEM LENGTHS	025	2-1/2"	120	12"	300	30"
	040	4"	150	15"	360	36"
	060	6"	180	18"	420	42"
	090	9"	240	24"	Available up to 120"	
TEMPERATURE RANGES	-100/100 F/C	-100 °F/°C to 100 °F/°C	0/250 F/C	0 °F/°C to 250 °F/°C	50/500 F/C	50 °F/°C to 500 °F/°C
	-40/160 F/C	-40 °F/°C to 160 °F/°C	20/240 F/C	20 °F/°C to 240 °F/°C	150/750 F/C	150 °F/°C to 750 °F/°C
	0/140 F/C	0 °F/°C to 140 °F/°C	25/125 F/C	25 °F/°C to 125 °F/°C †	200/1000 F/C	200 °F/°C to 1,000 °F/°C *
	0/180 F/C	0 °F/°C to 180 °F/°C	50/300 F/C	50 °F/°C to 300 °F/°C		
	0/220 F/C	0 °F/°C to 220 °F/°C	50/400 F/C	50 °F/°C to 400 °F/°C		
Single Scale °F	-100/100 F	-100 °F to 100 °F	0/250 F	0 °F to 250 °F	50/400 F	50 °F to 400 °F
	-50/120 F	-50 °F to 120 °F	0/300 F	0 °F to 300 °F**	50/500 F	50 °F to 500 °F
	-40/160 F	-40 °F to 160 °F	0/500 F	0 °F to 500 °F**	50/550 F	50 °F to 550 °F
	0/140 F	0 °F to 140 °F	20/240 F	20 °F to 240 °F	100/800 F	100 °F to 800 °F**
	0/180 F	0 °F to 180 °F	25/125 F	25 °F to 125 °F	150/750 F	150 °F to 750 °F
	0/200 F	0 °F to 200 °F	50/250 F	50 °F to 250 °F	200/1000 F	200 °F to 1,000 °F*
	0/220 F	0 °F to 220 °F	50/300 F	50 °F to 300 °F		
Single Scale °C	-75/175 C	-75 °C to 175 °C	0/50 C	0 °C to 50 °C	0/300 C	0 °C to 300 °C
	-70/70 C	-70 °C to 70 °C **	0/60 C	0 °C to 60 °C **	0/400 C	0 °C to 400 °C
	-50/100 C	-50 °C to 100 °C **	0/80 C	0 °C to 80 °C **	0/450 C	0 °C to 450 °C
	-50/50 C	-50 °C to 50 °C	0/100 C	0 °C to 100 °C	100/400 C	100 °C to 400 °C
	-40/70 C	-40 °C to 70 °C	0/150 C	0 °C to 150 °C	100/550 C	100 °C to 550 °C *
	-20/120 C	-20 °C to 120 °C **	0/200 C	0 °C to 200 °C	(Consult factory for additional temperature ranges)	
	-10/110 C	-10 °C to 110 °C **	0/250 C	0 °C to 250 °C		
OPTIONS	6	6 mm stem diameter **	HD	Heavy-Duty Stem (0.375" Dia.) **	SG	Safety Glass Lens **
	8	8 mm stem diameter **	LL	Polycarbonate Lens	SL	Silicone Filled †††
	316	316 SS Connection & Stem **	MIP	Min or Max Indicating Pointer***	ST	Stainless Steel Tagging
	AU	1/2" NPT Adjustable Union**	MIP2	Min and Max Indicating Pointers***	TG	Tempered Glass Lens ††
	GD	Glow Dial †	PL	Acrylic Lens		

Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

Note: All 316 Stainless Steel construction (case, bezel, wetted parts) is available. Please consult factory.

* Thermometers with temperature ranges 200/1000 °F and 100/500 °C are not recommended for continuous use above 800 °F/425 °C.

For intermittent use only.

** Available for 3" and 5" dial sizes only.

*** Available only on 30-310 and 50-310 models.

† Available only on 50-310 and 50-320 model. Includes reflective pointer and two reflective clips.

†† Only available with 3 inch dial size and without silicone filling (-SL).

††† Available only for ranges from -50 °F (-45 °C) to 500 °F (260 °C). Polycarbonate lens is standard with Silicone Fill.

ORDERING INFORMATION - SANITARY TRI-CLAMP						
DIAL SIZES	30	3"	50	5"		
CASE TYPES	300	Bottom connection	310	Back connection	320	Adjustable angle connection
STEM LENGTHS	01625	1.625"	045	4.5"	135	13.5"
	025	2.5"	075	7.5"	165	16.5"
	0275	2.75"	105	10.5"	225	22.5"
TEMPERATURE RANGES	0/220 F/C	0 °F/°C to 220 °F/°C	20/240 F/C	20 °F/°C to 240 °F/°C		
	0/250 F/C	0 °F/°C to 250 °F/°C	50/300 F/C	50 °F/°C to 300 °F/°C		
Single Scale °F	-40/160 F	-40 °F to 160 °F	0/250 F	0 °F to 250 °F	50/300 F	50 °F to 300 °F
	0/140 F	0 °F to 140 °F	0/300 F	0 °F to 300 °F		
	0/220 F	0 °F to 220 °F	20/240 F	20 °F to 240 °F		
Single Scale °C	-20/120 C	-20 °C to 120 °C	0/100 C	0 °C to 100 °C		
	-10/110 C	-10 °C to 110 °C	0/150 C	0 °C to 150 °C		
PROCESS CONNECTIONS	06SAN	3/4" Sanitary Tri-Clamp®	16SAN	2" Sanitary Tri-Clamp®	24SAN	3" Sanitary Tri-Clamp®
	12SAN	1-1/2" Sanitary Tri-Clamp®	20SAN	2-1/2" Sanitary Tri-Clamp®	32SAN	4" Sanitary Tri-Clamp®

Note: Most standard bimetal thermometer options are available with Sanitary Tri-Clamp connection, consult factory.

EXAMPLE

50 - 310 - 120 - 50/300 F/C - SL

Dial size5"

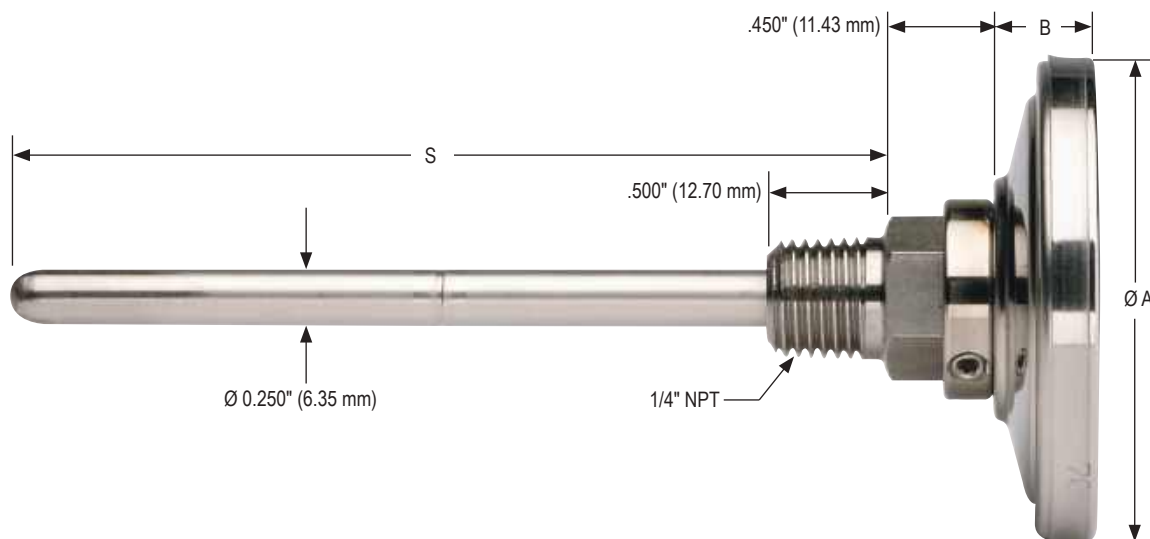
Case type Back connection

Stem length12"

Temperature range50 °F/°C to 300 °F/°C

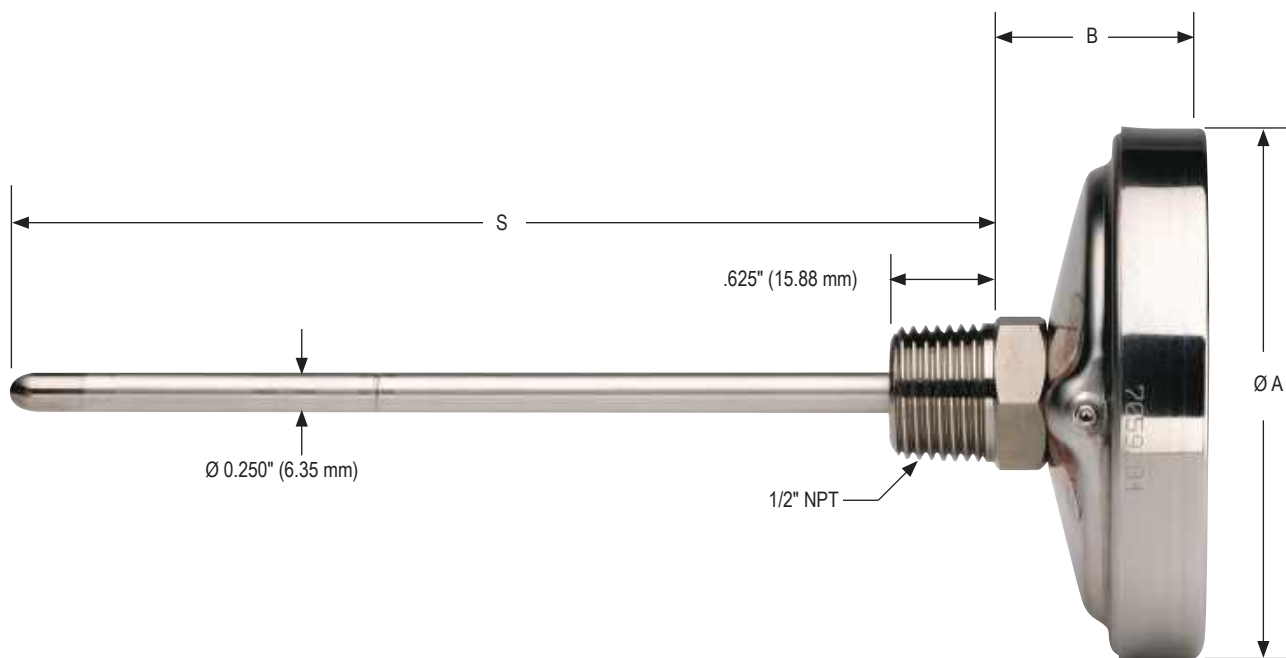
Options.....Silicone Filled

20-310



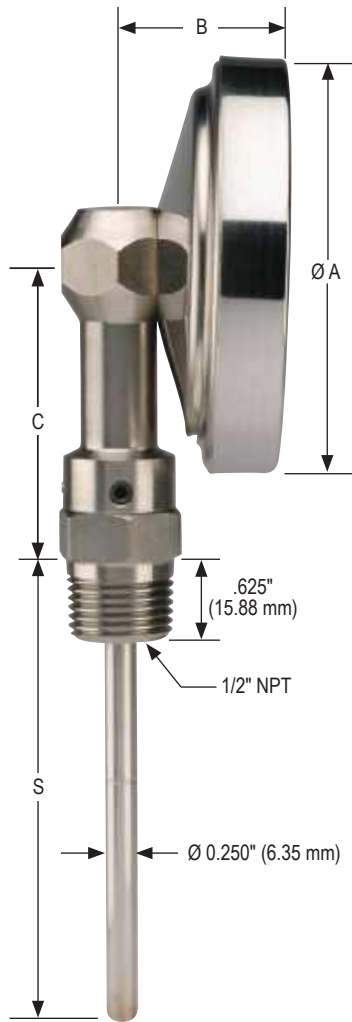
See page 15 for dimension chart.

30-310/50-310

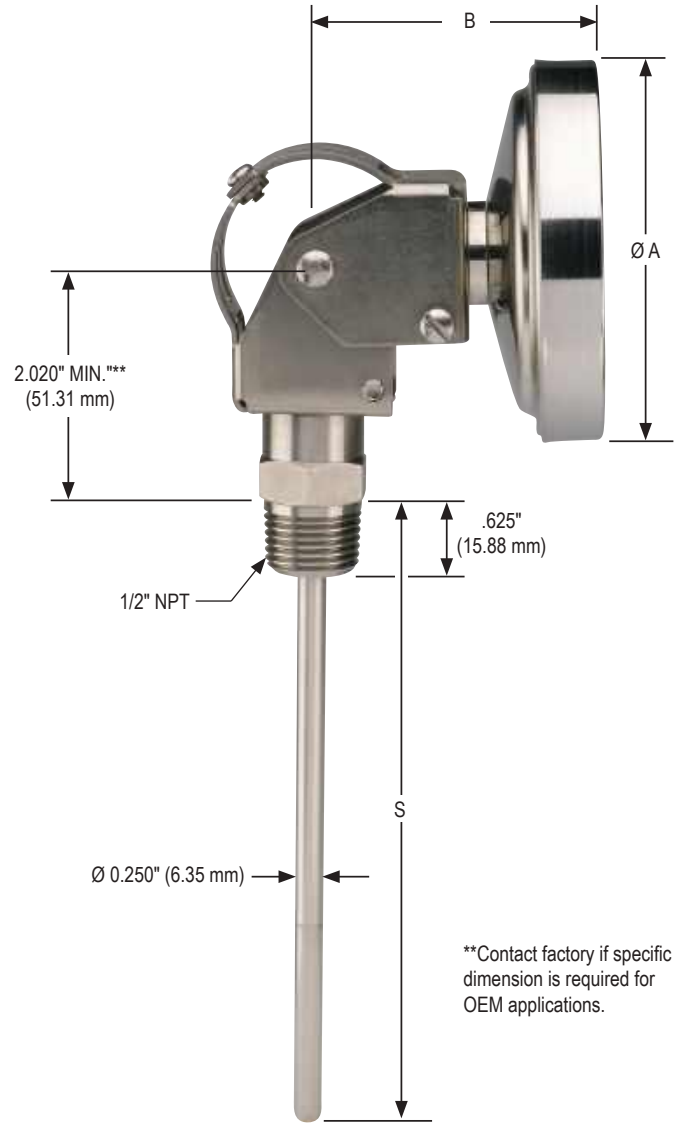


See page 15 for dimension chart.

30-300/50-300



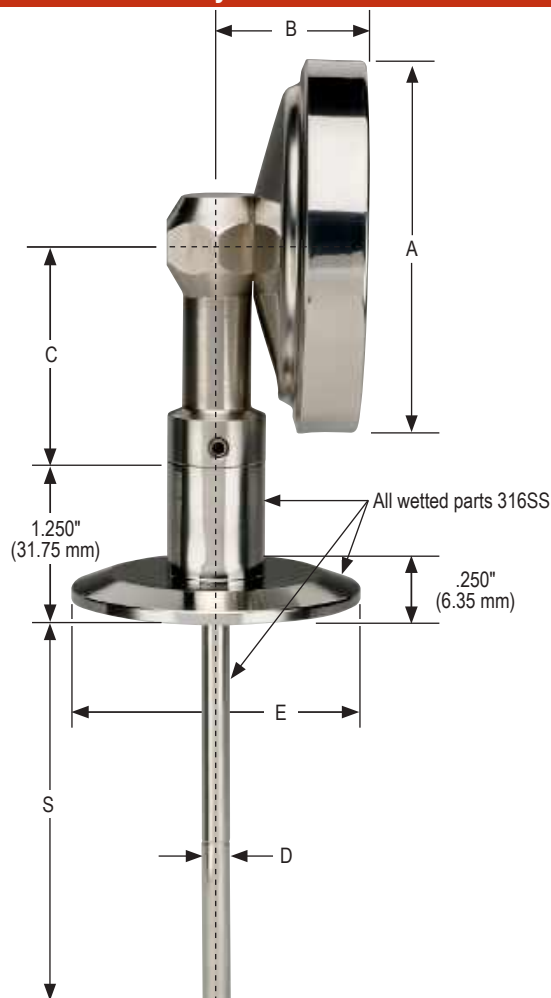
30-320/50-320



**Contact factory if specific dimension is required for OEM applications.

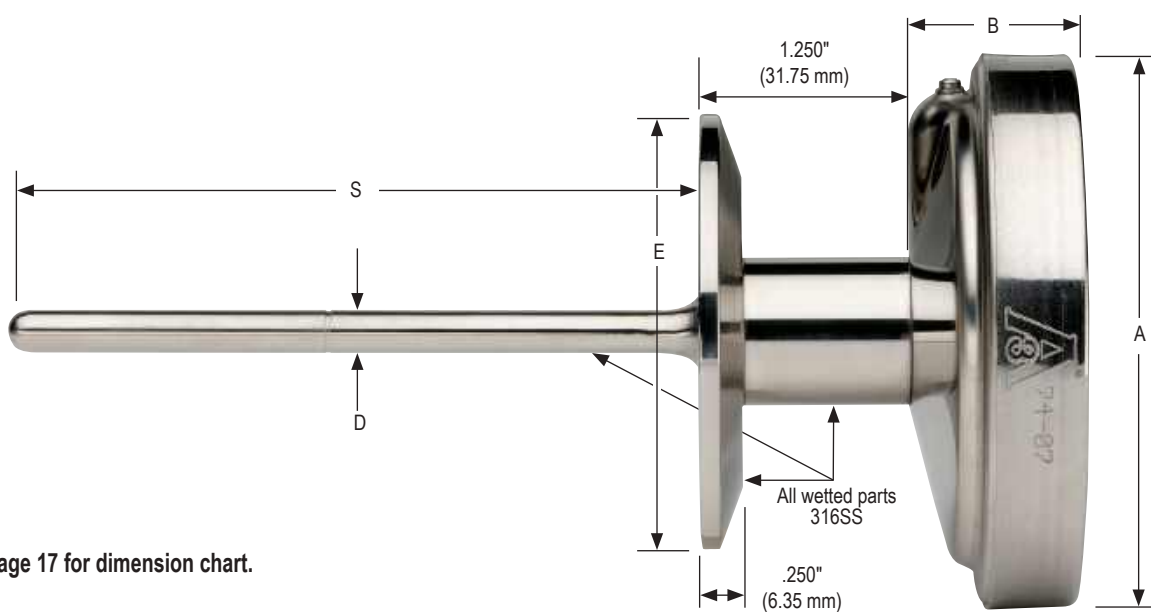
Series	Ø A	B	C	S (Stem Length)
20-310	2.089" 53.06 mm	.438" 11.13 mm	—	As specified
30-310	3.187" 80.95 mm	1.375" 34.93 mm	—	As specified
50-310	5.040" 128.02 mm	1.718" 43.63 mm	—	As specified
30-300	3.187" 80.95 mm	1.187" 30.15 mm	2.300" (58.42 mm)	As specified
50-300	5.040" 128.02 mm	1.625" 41.28 mm	3.000" (76.20 mm)	As specified
30-320	3.187" 80.95 mm	2.430" 61.72 mm	—	As specified
50-320	5.040" 128.02 mm	2.660" 67.56 mm	—	As specified

300 Series Sanitary Bimetal Thermometer



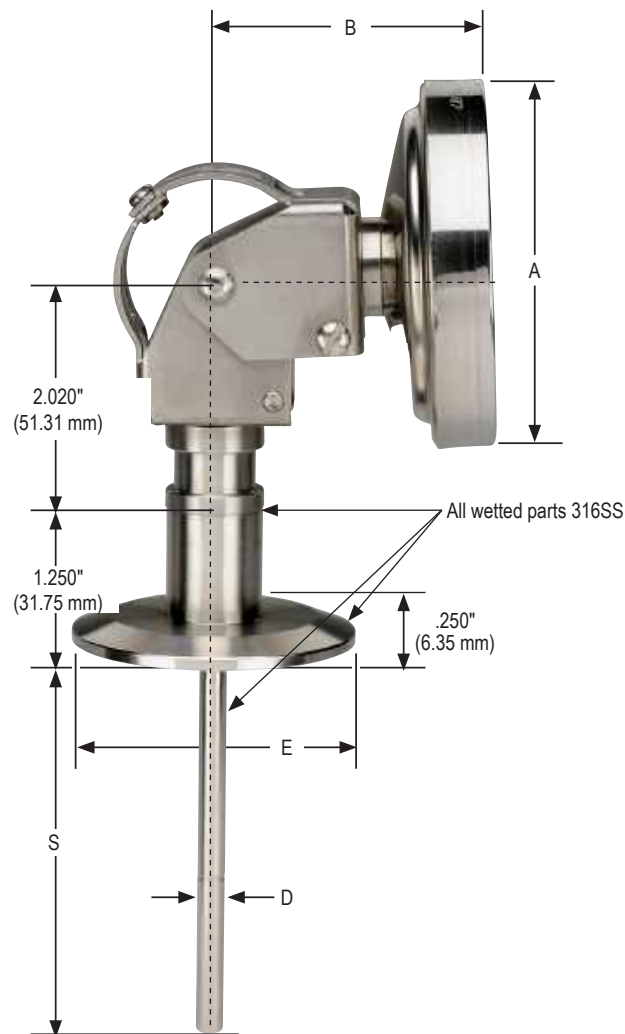
See page 17 for dimension chart.

310 Series Sanitary Bimetal Thermometer



See page 17 for dimension chart.

320 Series Sanitary Bimetal Thermometer



300 SERIES BIMETAL THERMOMETERS - SANITARY TRI-CLAMP® MODELS					
Series	A	B	C	D	S (Stem Length)
30-300	3.187" 80.95 mm	1.187" 30.15 mm	1.875" 47.63 mm	.375" 9.53 mm	As specified
30-310	3.187" 80.95 mm	.890" 22.61 mm	—	.375" 9.53 mm	As specified
30-320	3.187" 80.95 mm	2.430" 61.72 mm	—	.375" 9.53 mm	As specified
50-300	5.040" 128.02 mm	1.625" 41.28 mm	2.625" (66.68 mm)	.375" 9.53 mm	As specified
50-310	5.040" 128.02 mm	1.328" 33.73 mm	—	.375" 9.53 mm	As specified
50-320	5.040" 128.02 mm	2.660" 67.56 mm	—	.375" 9.53 mm	As specified

TRI-CLAMP® FITTING		
Part Number Designation	Tri-Clamp Connection Size	E
06SAN *	3/4"	.984" 25.00 mm
12SAN **	1-1/2"	1.984" 50.40 mm
16SAN	2"	2.516" 63.90 mm
20SAN	2-1/2"	3.047" 77.40 mm
24SAN	3"	3.579" 90.90 mm
32SAN	4"	4.682" 118.90 mm

* Used on both 1/2" and 3/4" lines

** Used on both 1" and 1-1/2" lines