

## General Specifications

## Small Flange Connection (8Bolt Seals)

### Specification

#### Type SF

**Application**

Primarily used in Petroleum-Chemical processes, and particularly useful when small connection sizes are required for measuring pressure, level and flow.

**Configuration**

Differential or Gauge pressure. In all cases a Low Volume cover flange must be fitted to all DP type transmitter configurations to reduce fill liquid quantities and therefore reduce errors induced by ambient temperature change. Gauge pressure transmitters require a G1/2" process connection.

**Process Connection**

ASME RF, FF, RTJ, Large Tongue, Large Groove. DIN, Table & JIS

**Process Connection Size**

DN15 (1/2"), DN20 (3/4"), DN25 (1") & DN40 (1-1/2")

For Larger sizes refer to **GS LF**

**Seal Construction**

Machined from bar stock.

Diaphragm in Upper housing.

The Upper and Lower chamber are bolted together with 8, 304 Stainless Steel bolts and sealed with a Viton O-ring.

**Packing surface finish:**

To connection standard.

**Wetted Materials**

316/316L Dual Certified Stainless Steel (standard)  
Other materials available upon request.

**Capillary**

Available in 1 to 10 metre lengths. Capillaries must be of matching lengths for differential systems.

**Capillary Armour**

PVC coated 304 Stainless Steel (standard)

For processes with temperatures over 100°C or sanitary applications spiral wound 304 Stainless Steel.

**Zero Stability**

Stability will be affected by the instrument configuration, ambient temperature, process temperature, connection size (diaphragm size) and the measuring range. Please contact to discuss temperature effects and instrument accuracy.

**Dimensional Drawings & System Configuration**

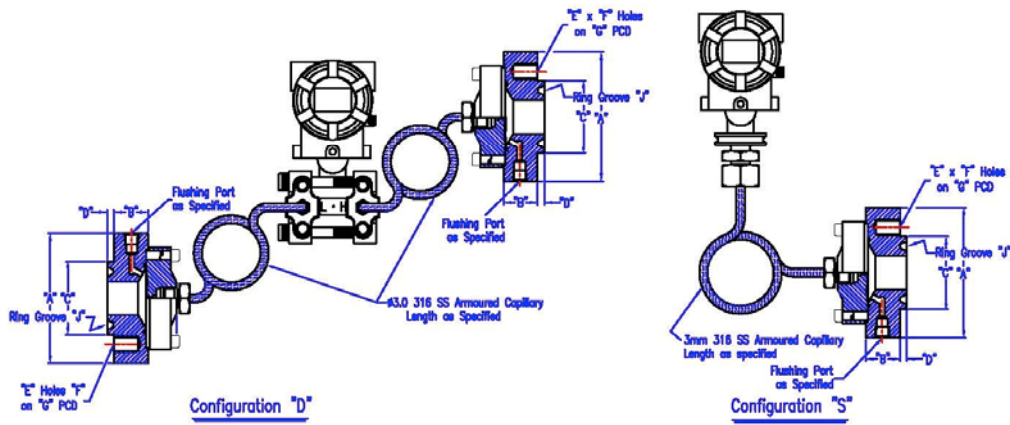
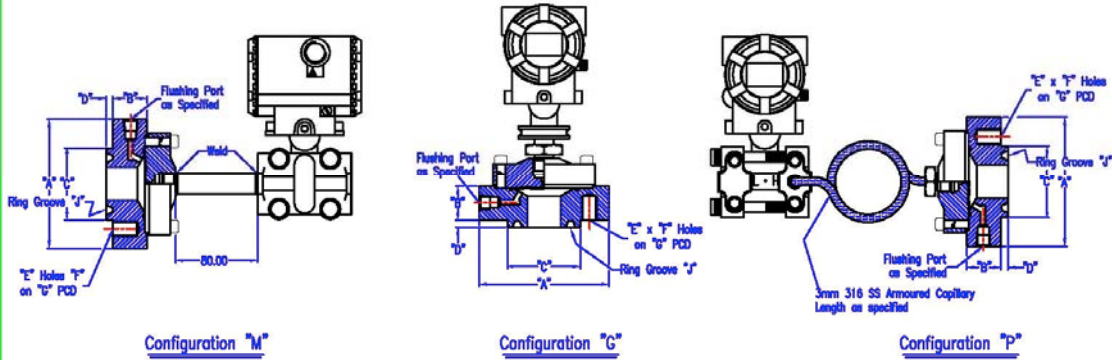
Refer to Dimensional Drawings.



## General Specifications

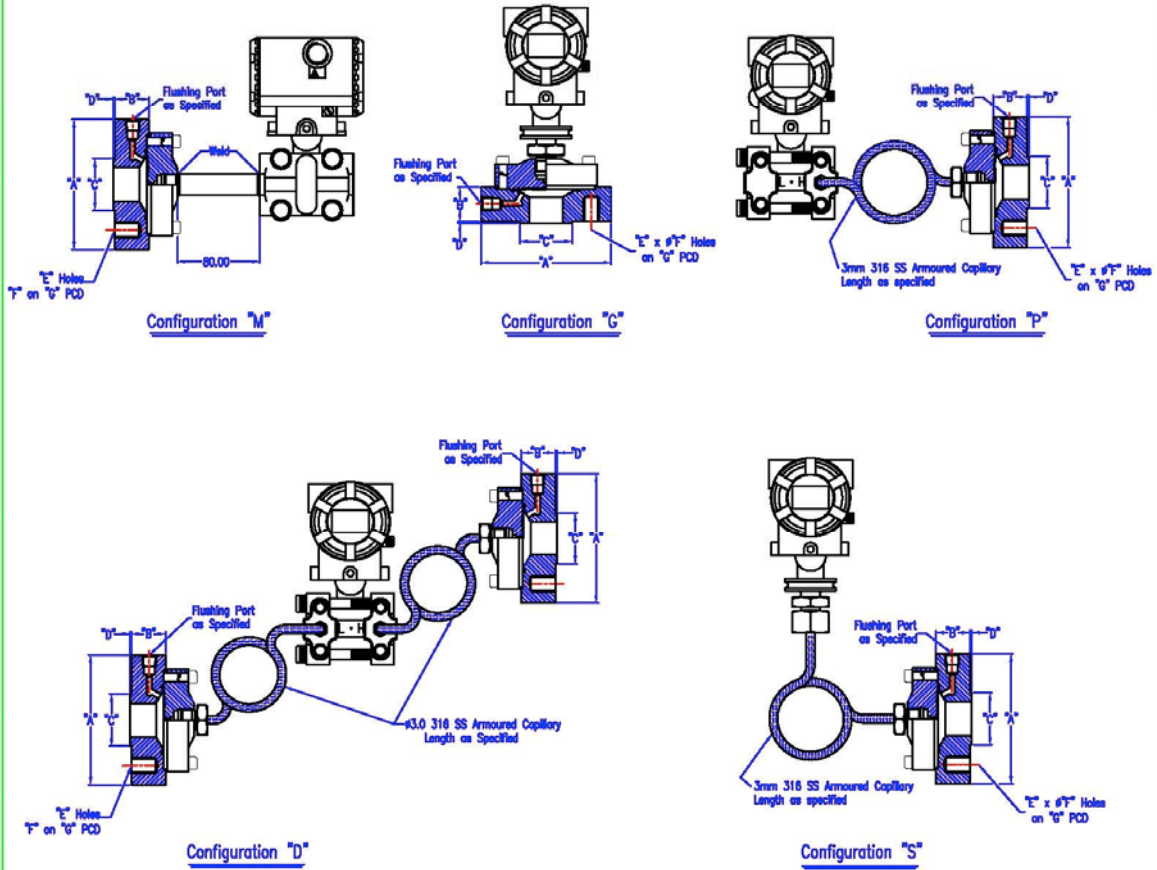
Small Flange Connection (8 Bolt) – Type SF		Suffix Code
Process Connection	Small Flange	CW
Connection Type	ASME B16.5 Raised Face	AR
	ASME B16.5 Flat Face	AF
	ASME B16.5 Ring Type Joint (RTJ)	RT
	DIN (EN1092-1)	DN
	JIS B 2220	JI
	Table AS2129	TB
	Special	XX
Connection Size	DN15 (1/2")	04
	DN20 (3/4")	06
	DN25 (1")	08
	DN40 (1-1/2")	12
	Special	XX
Connection Rating	ASME 150lb, Table E	1
	ASME 300lb, DIN PN10-16, JIS 10K, Table F	2
	ASME 600lb, DIN PN25-40, JIS 16K, Table H	3
	ASME 900lb, DIN PN64, JIS20K Table J (ASME 900lb for DN80 (3") & above)	4
	ASME 1500lb, DIN PN100, JIS 30K, Table K	5
Diaphragm Material	316/316L Stainless Steel	S
	304/304L Stainless Steel	A
	Hastelloy C-276 (MUST have the same Wetted parts)	H
	Monel 400 (MUST have the same Top & Wetted parts)	M
	Titanium Grade 2 (MUST have the same Top & Wetted parts)	I
	Tantalum	T
	PFA (316/316L Stainless Steel coated)	F
	Gold Plated 316/316L Stainless Steel	G
	Duplex 2205	U
	Special	X
Wetted Parts	316/316L Stainless Steel	S
	304/304L Stainless Steel	A
	Hastelloy C-276 (MUST have the same Diaphragm Material)	H
	Monel 400 (MUST have the same Top & Diaphragm Material)	M
	Titanium Grade 2 (MUST have the same Top & Diaphragm Material)	I
	Duplex 2205	U
	PFA (316/316L Stainless Steel coated)	F
Special	X	
Flushing Ports	None	0
	1 x 1/4" NPT= 2 Ports supplied with 1 Plug	1
	2 x 1/4" NPT Ports	2
	1 x 1/2" NPT = 2 Ports supplied with 1 Plug	3
	2 x 1/2" NPT Ports	4
System Configuration	Gauge Pressure System with G-1/2" Connection Direct Mounted TX	G
	Gauge Pressure System with G-1/2" Connection Capillary mounted TX	S
	Gauge Pressure System with DP Type TX Direct Mounted	M
	Gauge pressure System with DP Type TX Capillary Mounted	P
	Differential Pressure System with Capillary	D
Capillary / Standoff	Standoff (System Configuration "M") / Heat Neck (System Configuration "G")	AA
	None <i>Note: Only available with System Configuration "G"</i>	00
	1 Metre	01
	2 Metres	02
	3 Metres	03
	4 Metres	04
	5 Metres	05
	6 Metres	06
	7 Metres	07
	8 Metres	08
	9 Metres	09
10 Metres	10	
Fill Liquid	KN32 704 Silicon Oil 30cs (-10°C to +300°C)	A
	KN22 Silicon Oil 100cs (-40°C to +290°C)	B
	KN33 705 Silicon Oil 320cs (-10°C to +400°C)	C
	KN21 Fluorolube 7cs (-20°C to +120°C)	D
	KN55 Ethylene Glycol (-13°C to +196°C)	E
	KN59 Neobee 10.1cs (FDA app) (-20°C to +160°C for less than 0Bar. -20°C to +204°C for greater than 0Bar)	F
	Vegetable Oil (Food Grade) (10°C to +100°C)	V
	KN17 Silicon Oil 2cs (-90°C to +80°C for less than 1Bar. -90°C to +180°C for greater than 1Bar)	L
	Special	X

Model SFRT  
 Small Flange Connections to  
 ANSI B16.5:2003  
 Type : - Ring Joint (RTJ)



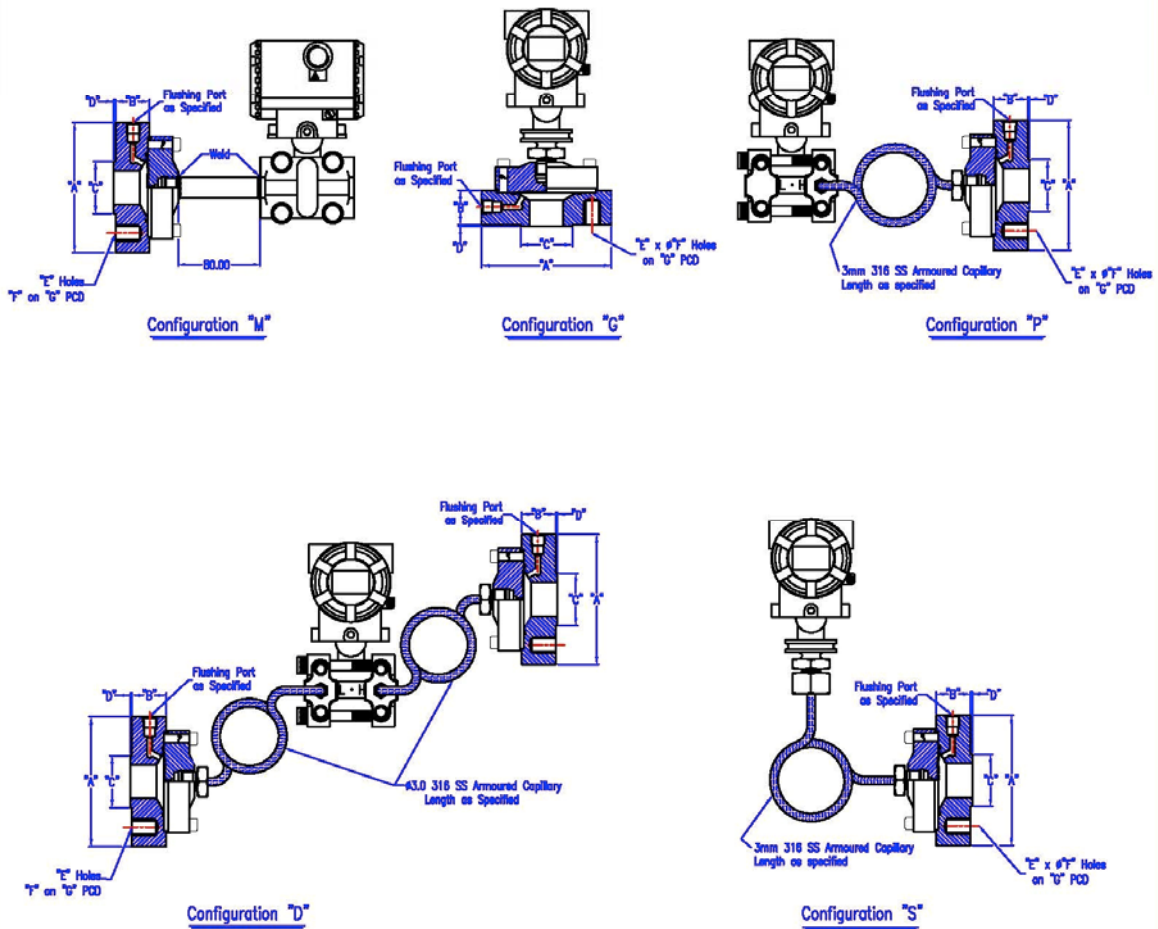
Size	Rating	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"J"
1/2"	#300/#600	100.0	31.0	51.0	5.6	4	1/2" UNC	66.7	R11
	#900/#1500	120.0	34.0	60.5	6.4		3/4" UNC	82.6	R12
	#2500	135.0	34.0	65.0	6.4		3/4" UNC	88.9	R13
3/4"	#300/#600	115.0	34.0	63.5	6.4	4	5/8" UNC	82.6	R13
	#900/#1500	130.0	34.0	66.5	6.4		3/4" UNC	88.9	R14
	#2500	140.0	34.0	73.0	6.4		3/4" UNC	95.25	R16
1"	#150	110.0	31.0	63.5	6.4	4	1/2" UNC	79.4	R15
	#300/#600	124.0	34.0	70.0	6.4		5/8" UNC	88.9	R16
	#900/#1500	149.5	42.0	71.5	6.4		7/8" UNC	101.6	R16
	#2500	159.0	42.0	82.5	6.4		7/8" UNC	108.0	R18
1-1/2"	#150	125.0	31.0	82.5	6.4	4	1/2" UNC	98.4	R19
	#300/#600	155.0	34.0	90.5	6.4		3/4" UNC	114.3	R20
	#900/#1500	180.0	46.5	92.0	6.4		1" UNC	123.8	R20
	#2500	205.0	46.5	114.3	8.0		1-1/8" UNC	146.0	R23

Model SFJI  
 Small Flange Connections to  
 JIS B 2220:2004  
 Type: - Raised Face



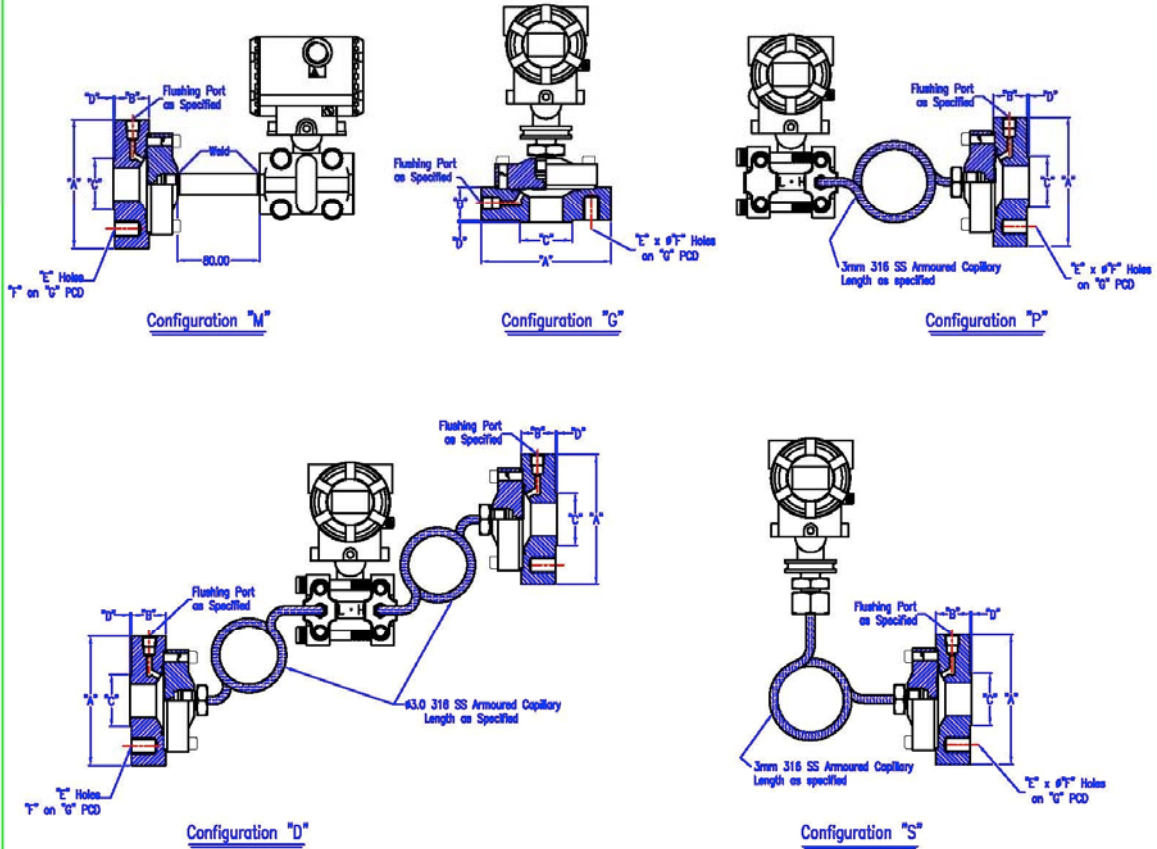
Size	Rating	"A"	"B"	"C"	"D"	"E"	"F"	"G"
DN15	5K	100.0	32.0	44.0	1.0	4	M10	60.0
	10K-20K	100.0		46.0			M12	70.0
	30K	115.0		52.0			M16	80.0
DN20	5K	100.0	32.0	49.0	1.0	4	M10	65.0
	10K-20K	100.0		51.0			M12	75.0
	30K	120.0		55.0			M16	85.0
DN25	5K	100.0	32.0	59.0	1.0	4	M10	75.0
	10K-20K	125.0		67.0			M16	90.0
	30K	130.0		70.0			M16	95.0
DN40	5K	120.0	32.0	75.0	2.0	4	M12	95.0
	10K-20K	140.0		81.0			M16	105.0
	30K	160.0		90.0			M20	120.0

Model SFDN  
 Small Flange Connections to  
 BS EN 1092-1:2007  
 Type: - "b" Raised Face



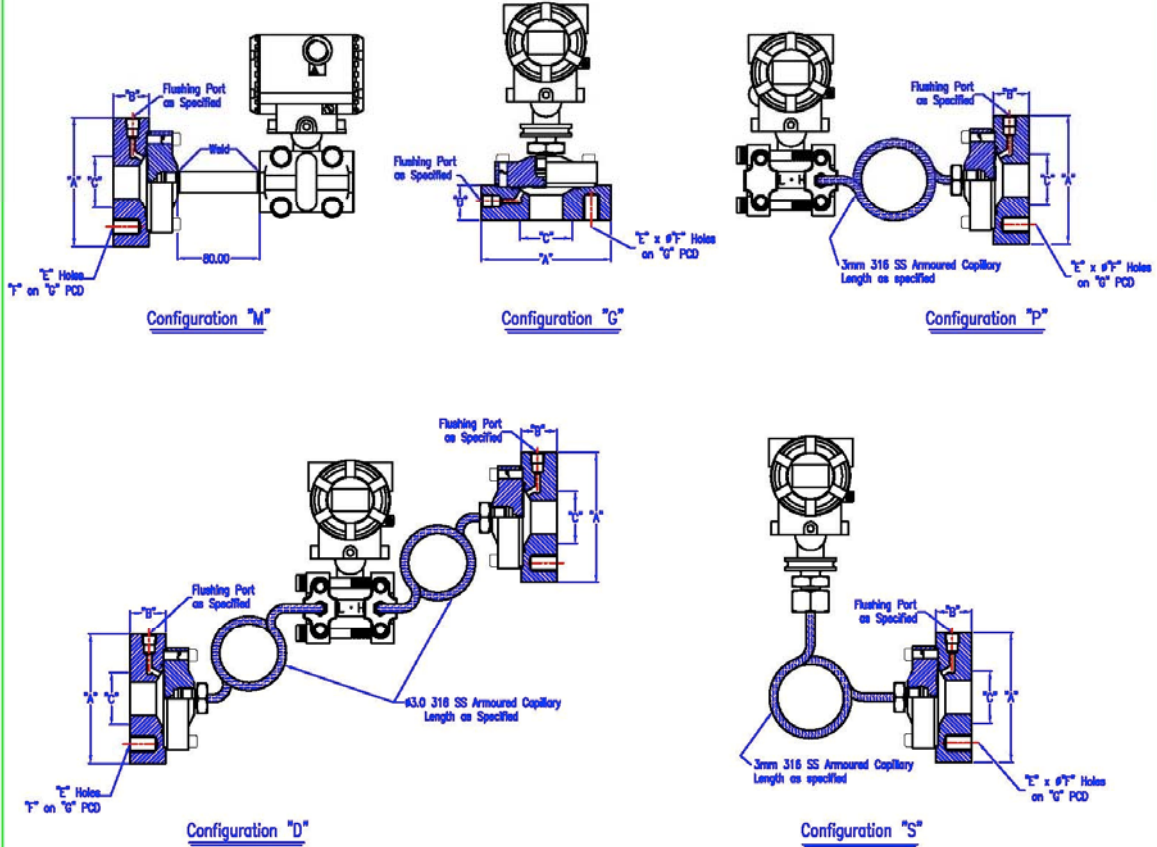
Size	Rating	"a"	"b"	"c"	"d"	"e"	"f"	"g"
DN15	PN10-40	100.0	32.0				M12	65.0
	PN63-160	105.0	32.0	45.0	2.0	4	M12	75.0
DN20	PN10-40	105.0	32.0				M12	75.0
	PN63-160	130.0	32.0	58.0	2.0	4	M16	90.0
DN25	PN10-40	115.0	32.0				M12	85.0
	PN63-160	140.0	32.0	68.0	2.0	4	M16	100.0
DN40	PN10-40	150.0	32.0				M16	110.0
	PN63-160	170.0	35.0	88.0	3.0	4	M20	125.0

Model SFAR  
 Small Flange Connections to  
 ASME B16.5:2003  
 Type: - Raised Face



Size	Rating	"A"	"B"	"C"	"D"	"E"	"F"	"G"
1/2"	#150	100.0	31.0	35.0	1.6	4	1/2" UNC	60.3
	#300	100.0	31.0		1.6		1/2" UNC	66.7
	#600	100.0	31.0		6.4		1/2" UNC	66.7
	#900/1500	120.0	34.0		6.4		3/4" UNC	82.6
	#2500	135.0	34.0		6.4		3/4" UNC	88.9
3/4"	#150	100.0	31.0	43.0	1.6	4	1/2" UNC	69.9
	#300	115.0	34.0		1.6		5/8" UNC	82.6
	#600	115.0	34.0		6.4		5/8" UNC	82.6
	#900/1500	130.0	34.0		6.4		3/4" UNC	88.9
	#2500	140.0	34.0		6.4		3/4" UNC	95.25
1"	#150	110.0	31.0	51.0	1.6	4	1/2" UNC	78.4
	#300	125.0	34.0		1.6		5/8" UNC	88.9
	#600	125.0	34.0		6.4		5/8" UNC	88.9
	#900/1500	149.5	42.0		6.4		7/8" UNC	101.6
	#2500	180.0	42.0		6.4		7/8" UNC	108.0
1-1/2"	#150	125.0	31.0	73.0	1.6	4	1/2" UNC	98.4
	#300	155.0	34.0		1.6		3/4" UNC	114.3
	#600	155.0	34.0		6.4		3/4" UNC	114.3
	#900/1500	180.0	46.5		6.4		1" UNC	123.8
	#2500	205.0	46.5		6.4		1-1/8" UNC	146.0

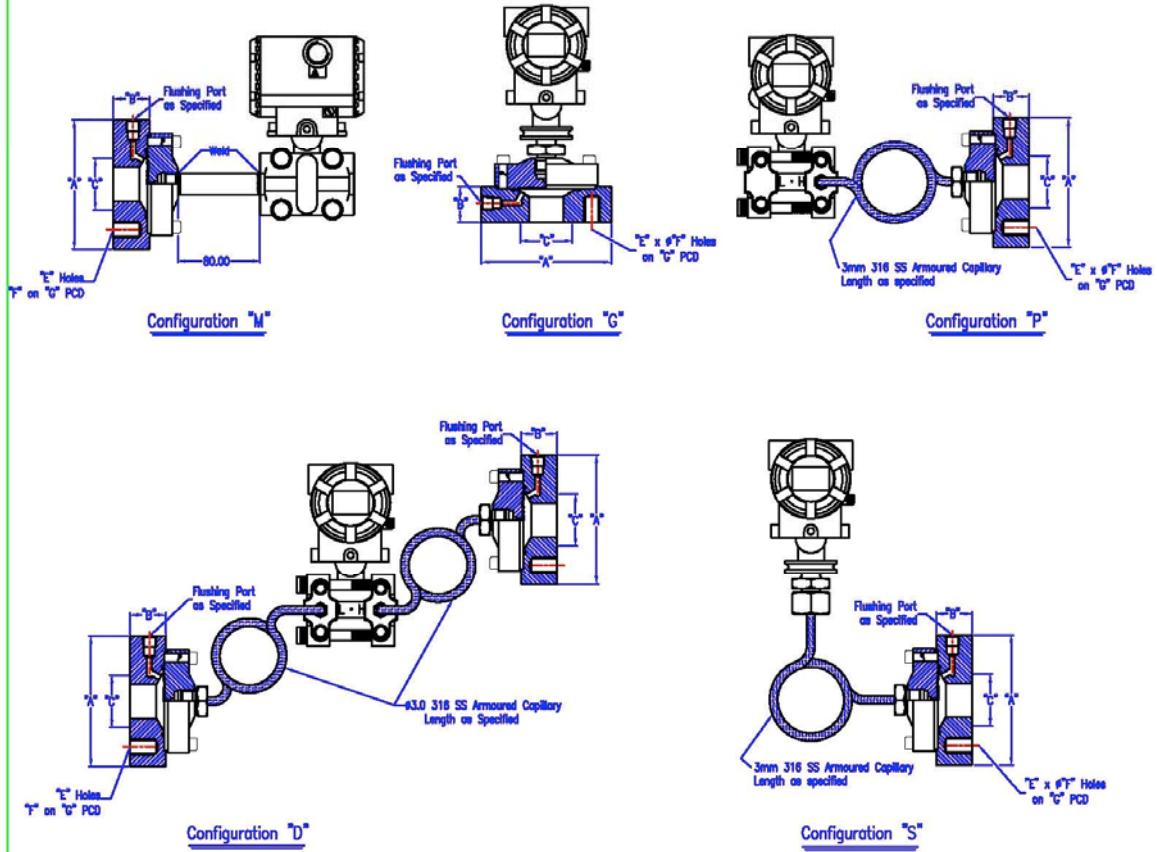
Model SFAF  
 Small Flange Connections to  
 ASME B16.5:2003  
 Type: - Flat Face



Size	Rating	"A"	"B"	"C" <sup>a</sup>	"E"	"F"	"G"
1/2"	#150	100.0	32.0	35.0	4	1/2" UNC	60.3
	#300	100.0	32.0			1/2" UNC	66.7
	#600	100.0	38.0			1/2" UNC	66.7
	#900/1500	120.0	40.0			3/4" UNC	82.6
	#2500	135.0	40.0			3/4" UNC	88.9
3/4"	#150	100.0	32.0	43.0	4	1/2" UNC	69.9
	#300	115.0	35.0			5/8" UNC	82.6
	#600	115.0	40.0			5/8" UNC	82.6
	#900/1500	130.0	40.0			3/4" UNC	88.9
	#2500	140.0	40.0			3/4" UNC	95.25
1"	#150	110.0	32.0	51.0	4	1/2" UNC	79.4
	#300	125.0	35.0			5/8" UNC	88.9
	#600	125.0	40.0			5/8" UNC	88.9
	#900/1500	148.5	48.0			7/8" UNC	101.6
	#2500	160.0	48.0			7/8" UNC	108.0
1-1/2"	#150	125.0	32.0	73.0	4	1/2" UNC	98.4
	#300	155.0	35.0			3/4" UNC	114.3
	#600	155.0	40.0			3/4" UNC	114.3
	#900/1500	180.0	53.0			1" UNC	123.8
	#2500	205.0	53.0			1-1/8" UNC	146.0

<sup>a</sup> Dimension "C" indicates Outlet Grip Major Diameter

Model SFTB  
 Small Flange Connections to  
 AS 2129:2000  
 Type: - Raised Face



Size	Rating	"A"	"B"	"C"	"E"	"F"	"G"
1/2"	Table E-F	100.0		47.0		M12	67.0
	Table H-J	115.0	32.0	57.0	4	M16	83.0
	Table K	115.0		64.0		M16	83.0
3/4"	Table E-F	100.0		53.0		M12	73.0
	Table H-J	115.0	32.0	57.0	4	M16	83.0
	Table K	115.0		64.0		M16	83.0
1"	Table E	115.0		63.0		M12	83.0
	Table F	120.0	32.0	63.0	4	M16	87.0
	Table H-J	120.0		64.0		M16	87.0
	Table K	125.0		76.0		M16	95.0
1-1/2"	Table E	135.0		78.0		M12	98.0
	Table F	140.0	32.0	81.0	4	M16	105.0
	Table H-J	140.0		83.0		M16	105.0
	Table K	150.0	35.0	89.0		M20	114.0