

FEATURES

- All SS construction
- Adjustable needle design

APPLICATION

- Reduces dampening effect of process media

Adjustable Needle

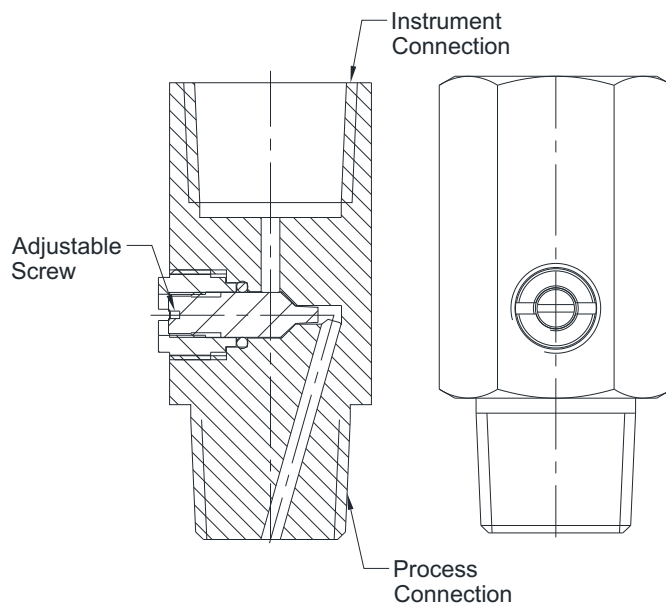


STANDARD SPECIFICATIONS

Type	:	Pattern 1 (Adjustable needle)
Material	:	AISI 316 SS
Instrument connection	:	1/2" NPT (F) / 1/2" BSP (F)
Process connection	:	1/2" NPT (M) / 1/2" BSP (M)
Gaskets / Seals	:	Viton
Maximum working pressure	:	400 bar
Maximum working temperature	:	180°C

DIMENSIONAL DRAWING

Pattern 1



ORDERING CODES

1. TYPE

1	Pattern 1 (Adjustable needle)	1
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2. MATERIAL

MA	Brass	MF
MC	AISI 304 SS	
MF	AISI 316 SS	
MG	AISI 316L SS	
MM	Monel	
MO	Hastelloy C-276	

3. INSTRUMENT CONNECTION

02B	1/4" BSP (F)	04N
03B	3/8" BSP (F)	
04B	1/2" BSP (F)	
02N	1/4" NPT (F)	
03N	3/8" NPT (F)	
04N	1/2" NPT (F)	
04M	M20x1.5 mm (F)	

4. PROCESS CONNECTION

12B	1/4" BSP (M)	14N
13B	3/8" BSP (M)	
14B	1/2" BSP (M)	
12N	1/4" NPT (M)	
13N	3/8" NPT (M)	
14N	1/2" NPT (M)	
14M	M20x1.5 mm (M)	

5. OTHER OPTIONS

TC	Material test certificate 3.1	XM
TM	Material test certificate 2.2	
TN	Tested to NACE standards	
TO	Certification for Oxygen service	
XM	Marking by engraving	
XL	Marking by laser	

Ordering Example : A201-1-MF-04N-14N-XM

NOTES:

- Other process connections are available through adaptors.
- Option TC, TM, TN are not applicable for Material selection of MA.
- The pressure rating for Material selection MA is 250 bar.

FEATURES

- Adjustable ranges
- Bellow & Piston operated
- Over-pressure up to 600 bar

APPLICATION

- Over-pressure protection for gauges, switches & transmitters

Bellow / Piston

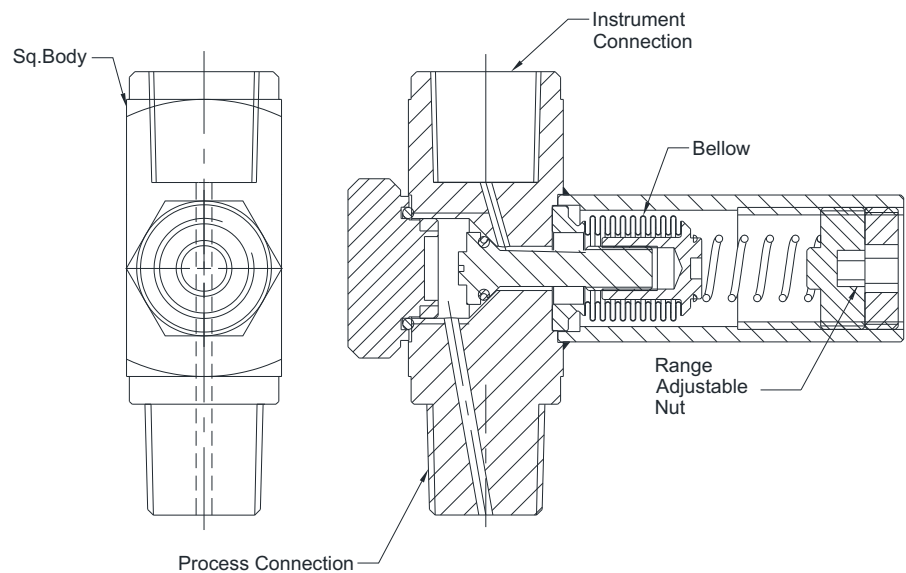


STANDARD SPECIFICATIONS

Type	: Pattern 3 (6... 16 bar)
Material	: AISI 316 SS
Instrument connection	: 1/2" NPT (F) / 1/2" BSP (F)
Process connection	: 1/2" NPT (M) / 1/2" BSP (M)
Gaskets / Seals	: Viton
Maximum working pressure	: 600 bar
Operating temperature	: 180°C

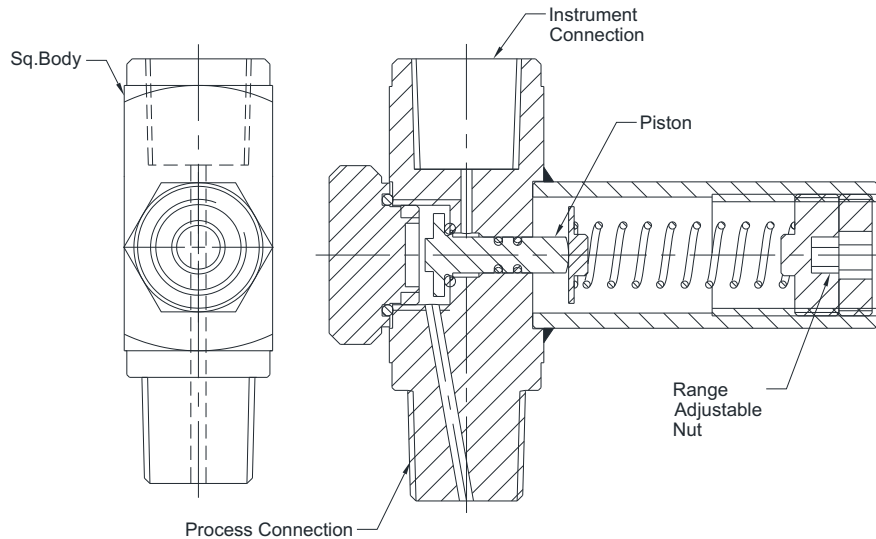
DIMENSIONAL DRAWING

Pattern 1, 2 (Bellow type)



DIMENSIONAL DRAWING

Pattern 3, 4, 5, 6, 7 (Piston type)



ORDERING CODES

1. TYPE

- 1** Pattern 1 (200 mbar...1.6 bar)
- 2** Pattern 2 (2.5...4 bar)²
- 3** Pattern 3 (6...16 bar)
- 4** Pattern 4 (10...40 bar)
- 5** Pattern 5 (30...80 bar)
- 6** Pattern 6 (60...160 bar)
- 7** Pattern 7 (100...400 bar)

3

2. MATERIAL

- MF** AISI 316 SS
- MG** AISI 316L SS
- MM** Monel 400⁵
- MO** Hastelloy C-276⁵

MF

3. INSTRUMENT CONNECTION

- 02B** 1/4" BSP (F)
- 03B** 3/8" BSP (F)
- 04B** 1/2" BSP (F)
- 02N** 1/4" NPT (F)
- 03N** 3/8" NPT (F)
- 04N** 1/2" NPT (F)
- 04M** M20x1.5 mm (F)

04N

4. PROCESS CONNECTION

- 12B** 1/4" BSP (M)
- 13B** 3/8" BSP (M)
- 14B** 1/2" BSP (M)
- 12N** 1/4" NPT (M)
- 13N** 3/8" NPT (M)
- 14N** 1/2" NPT (M)
- 14M** M20x1.5 mm (M)

14N

5. OTHER OPTIONS

- TC** Material test certificate 3.1
- TM** Material test certificate 2.2
- TN** Tested to NACE standards
- TO** Certification for Oxygen service (Max 60 bar)
- XM** Marking by engraving
- XL** Marking by laser

XM

Ordering Example : A202-3-MF-04N-14N-XM

NOTES:

1. Other process connections are available through adaptors.
2. Available in piston type, contact factory for further details.
3. As standard set point shall be mentioned while ordering or the factory set point shall be 110% of order range.
4. Set point error shall be ±10% of set point value in general.
5. Applicable for wetted parts only. Non-wetted parts shall be Stainless Steel.

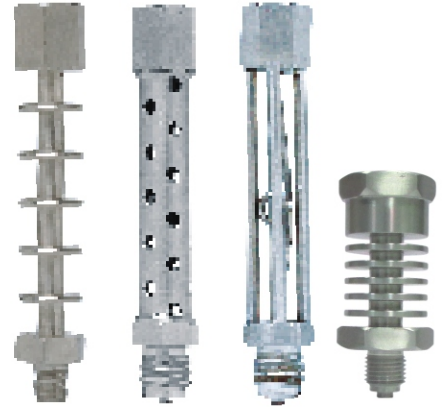
FEATURES

- All SS construction
- 4 variable designs

APPLICATION

- Heat dispenser for gauges, switches & transmitters

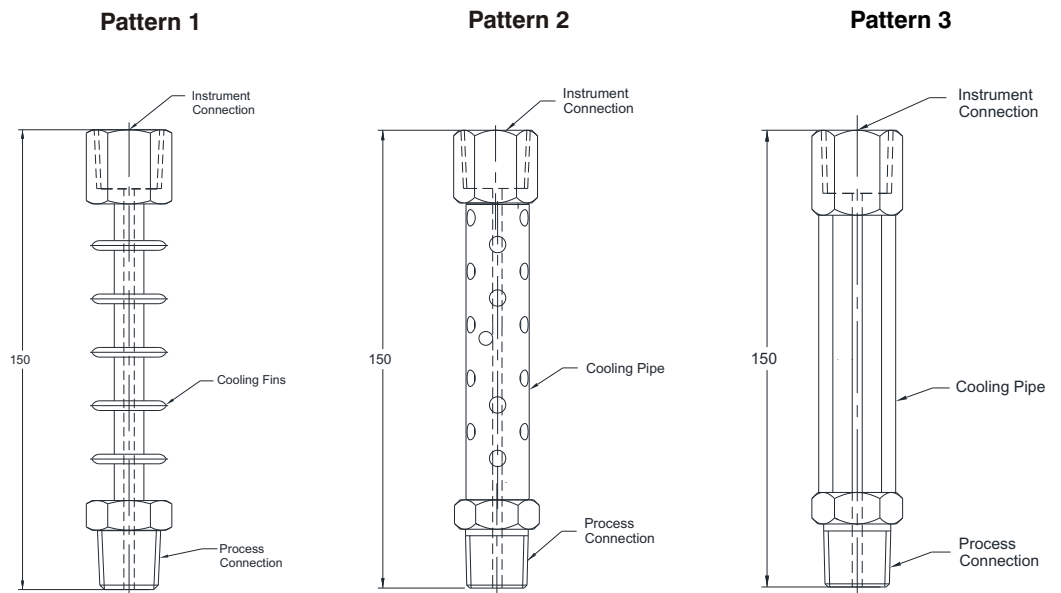
All Stainless Steel Design



STANDARD SPECIFICATIONS

Type	: Pattern 1 / 2 / 3 / 4
Material	: AISI 316 SS
Instrument connection	: 1/2" NPT (F) / 1/2" BSP (F)
Process connection	: 1/2" NPT (M) / 1/2" BSP (M)
Maximum working pressure	: 1000 bar
Maximum working temperature	: 250°C

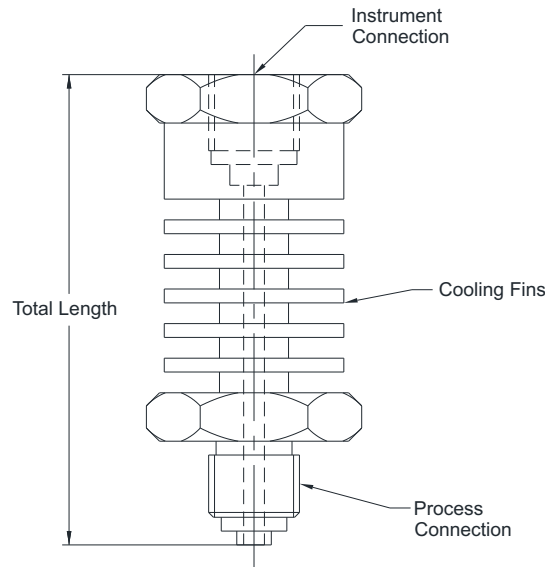
DIMENSIONAL DRAWING



All dimensions are in mm

DIMENSIONAL DRAWING

Pattern 4



All dimensions are in mm

ORDERING CODES

1. TYPE

- 1 Pattern 1 (Fin type)
- 2 Pattern 2 (Perforated type)
- 3 Pattern 3 (Capillary + pillar outer)
- 4 Pattern 4 (Miniature Fin type)

1

2. MATERIAL

- MF AISI 316 SS
- MG AISI 316L SS

MF

3. INSTRUMENT CONNECTION

- 02B 1/4" BSP (F)
- 03B 3/8" BSP (F)
- 04B 1/2" BSP (F)
- 02N 1/4" NPT (F)
- 03N 3/8" NPT (F)
- 04N 1/2" NPT (F)
- 04M M20x1.5 mm (F)

02N

4. PROCESS CONNECTION

- 12B 1/4" BSP (M)
- 13B 3/8" BSP (M)
- 14B 1/2" BSP (M)
- 12N 1/4" NPT (M)
- 13N 3/8" NPT (M)
- 14N 1/2" NPT (M)
- 14M M20x1.5 mm (M)

12N

5. OTHER OPTIONS

- TC Material test certificate 3.1
- TM Material test certificate 2.2
- TN Tested to NACE standards
- TO Certification for Oxygen service
- XM Marking by engraving
- XL Marking by laser

XM

Ordering Example : A203-1-MF-02N-12N-XM

NOTES:

- 1. Other process connections are available through adaptors.