



K1 & K3 Series Stainless steel case bass internal

K1 Series- One piece connection with crimped case design

K



Features

- Accuracy class 1.6 , class1.0
- Wide range vibration application
- Stainless steel case design
- Knock-down system back and front flange
- Bayonet lock case design
- Over pressure up to 30% of Full Scale
- Restrictor screw standard
- Excellent vibration resist with liquid filling
- Design scale ranges up to 1000 bar

Application

K1 Series is a special design with stainless steel case and copper alloy wetted part and fillable option for extreme vibration application and non-corrosive ambient field condition, with crimped lock case design. Applicable for pneumatic and hydraulic systems, compressors, engines, pumps, sprinkles system, building automation system and processing unit where vibration is concern.

K3 Series- One piece connection with bayonet case design



Features

- Accuracy class 1.6 , class1.0
- Wide range vibration application
- Stainless steel case design
- Knock-down system back and front flange
- Crimped lock case design
- Over pressure up to 30% of Full Scale
- Restrictor screw standard
- Excellent vibration resist with liquid filling
- Design scale ranges up to 1000 bar

Application

K3 Series is a special design with stainless steel case and copper alloy wetted part and fillable option for extreme vibration application and non-corrosive ambient field condition, with bayonet lock case design. Applicable for pneumatic and hydraulic systems, compressors, engines, pumps, sprinkles system, building automation system and processing unit where vibration is concern.

Technical Specification

- Nominal Size
63,100 and 150mm
- Accuracy Class
Class 1.6, Class 1.0 ($\phi > 100\text{mm}$)
- Ingress Protection
IP65 (Weather tight)
- Connection Size
G1/4, G1/2 or NPT
- Scale Range
Pressure 0..1000 bar
Vacuum -1 bar..0
Compound -1..24 bar
- Tube Element Shape
P \leq 100 bar in C tube
P > 100 bar in helicoid
- Filling
Dry or liquid filled
- Operating Temperature
Ambient temperature -10° ..+70° C
Medium temperature 90° C Max.
- Temperature Error
Additional error when pressure element temperature deviates from reference temperature +20° C (+68° F) be $\pm 0.4\%$ / 10° C (50° F) rising or falling
- Over Pressure Limit
130% of F.S.P \leq 100 bar
115% of F.S.P > 100 bar
- Dial Graduation
Black graduation on white for single range
Black and red graduation on white for dual ranges

Design Material

- Casing and Bezel Ring
Stainless steel 304
- Sensing Element
Copper alloy
- Connection
Brass
- Window
Tempered glass (C1SB Series),
Plastic (C2SB Series)
- Window gasket
Industrial rubber seal
- Pointer
Black painted aluminium
- Dial Plate
Aluminium alloy

Ordering code

K1 - 63 _ _ _ _ _

Connection	1/4" npt
Range	010 bar/psi
Type	A,B,D,E
Size	63 mm (2.1/2")
Series	K1 Stainless steel case , Brass internal

A= Lower connection, B= Back connection "U"-Clamp,
D=Back connection, E= Front flange back connection

H2, H3 Series Laser Welding All Stainless steel, H3 (Adjustable pointer)



H2 Series - Crimped case



H3 Series - Bayonet case



Features

- Accuracy Class 1.0
- Wide range application
- All stainless steel construction
- Knock-down system back and front flange
- Bayonet lock case design
- Over pressure up to 30% of full Scale
- Restrictor screw standard
- Excellent vibration resist with liquid filling
- Design scale ranges up to 4000 bar

Application

H2&H3 Series is a premium design pressure gauge with fully stainless steel construction, liquid fillable and with various option used in extreme corrosive & severe environment. CSS series can be incorporate with most accessories such as Diaphragm Chemical seal, Siphon, Dampener, etc..to further extend it usages. Commonly, uses in Process industries, Mining, Power plants, Steel mills, Pulp & Paper, Water & Sewage, Petrochemical plants, etc..

Technical Specification

- | | |
|--|---|
| • Nominal Size
63, 100, 150, 200 and 250mm | • Filling
Dry or liquid filled |
| • Accuracy Class
Class 1.0 | • Operating Temperature
Ambient temperature -30o..+70°C
Medium temperature 180°C Max. |
| • Ingress Protection
IP 65(Weather tight) | • Temperature Error
Additional error when pressure element temperature deviates from reference temperature +20°C(+68oF) be $\pm 0.4\%/10^\circ\text{C}(50o\text{F})$ rising or falling |
| • Connection Size
G1/4, G1/2 or NPT or others | • Over Pressure Limit
130% of F.S.P ≤ 100 bar
115% of F.S.P > 100 bar |
| • Pressure 0..1000bar(CSS Series),
0..4000bar(CSSH Series)
Vacuum -1 bar..0
Compound -1..24 bar | • Dial Graduation
Black graduation on white for single range
Black and red graduation on white for dual ranges |
| • Tube Element Shape
P ≤ 100 bar in C tube
P > 100 bar in helicoil | |

Design Material

- Casing and Bezel Ring
Stainless steel 304
- Sensing Element
Stainless steel 316
- Connection
Stainless steel 316
- Window
Plain instrement glass or laminated glass
- Window gasker
Industrial rubber seal
- Pointer
Black painted aluminium
- Dial Plate
Aluminium alloy

Ordering code

H2 - 100 _ _ - _ _ - _ _

Connection	1/2" npt
Range	010 bar/psi
Type	A,B,D,E
Size	63mm (2.1/2") 100 mm (4") 150 mm (6")
Series	H2 All stainless steel H3 Adjustable pointer

A= Lower connection, B= Back connection "U"-Clamp,
D=Back connection, E= Front flange back connection



L Series Capsule low pressure

K



L Series- Stainless Steel Case & Brass Connection

Features

- Accuracy Class 1.6
- Internal Calibration Device (ICD)
- Stainless steel case, Blow-Out-Back(BOB)
- Knock-down system back and front flange
- DIN case, bayonet lock design
- Over pressure up to 30% of Full Scale
- Restrictor screw standard
- Standard dial dual unit ranges
- Scale ranges -600..0,0..10 to 1000 Mbar

Application

L series is a premium capsule gauge designed for use in low pressure measurement on non-corrosive and clean gasses. Application for dry and gaseous that not effect the cupreous metal sensing element. Blow out back case for dial 100 and 160 mm. With expanded overpressure resistance, application allowed transient overpressure up to +30% of FullScale.



LS Series- All Stainless Steel Capsule Gauge

Features

- Accuracy Class 1.6
- Internal Calibration Device (ICD)
- All stainless steel material, Blow-out-back
- Knock-down system back and front flange
- DIN case, bayonet lock design
- Over pressure up to 30% of Full Scale
- Restrictor screw standard
- Standard dial dual unit ranges
- Scale ranges -600..0,0..10 to 1000 Mbar

Application

LS Series is a premium capsule gauge designed for use in low pressure measurement on extreme corrosive and severe environment. It is non fillable design and by removing the bezel ring could access to zero adjustment zeroing screw on the front dial in replace of adjustable pointer. Most popular in use in all industries such as process, mining, machine tools, power plant, steel mills, pulp & paper, water & sewage and petrochemical plants.

Technical Specification

- Nominal Size
63,75,100 and 160 mm
- Accuracy Class
Class 1.6, Class 2.5(φ 63,75mm)
- Ingress Protection
IP 44
- Connection Size
G3/8, G1/4, G1/2 or NPT or others
- Scale Range
Pressure 0..10 to 0..1000 mbar
* φ 63,75mm min range 16 mbar
Vacuum -600 mbar..0
Compound -200..+400 mbar
- Tube Element Shape
Capsule type diaphragm tube
- Filling
Dry type
- Operating Temperature
Ambient temperature -10° ..+70°C
Medium temperature 90°C Max.
- Temperature Error
Additional error when pressure element temperature deviates from reference temperature +20°C(+68° F) be ± 0.4% / 10°C(50° F) rising or falling
- Over Pressure Limit
130% of Full Scale
- Dial Graduation
Black graduation on white for single range
Black and red graduation on white for dual ranges

Design Material

- Casing and Bezel Ring
Stainless steel 304
- Capsule type, Copper alloy(MSB Series); Capsule type, Stainless Steel 316(MSS Series).
- Connection
Brass (MSB Series)
Stainless Steel 316(MSS Series)
- Window
Plain instrument glass
- Window gasket
Industrial rubber seal
- Pointer
Black painted aluminum
- Dial Plate
Aluminum alloy



Features

- Accuracy Class 1.6 or Class 2.5
- High reliability and long life services
- Electric, magnetic and inductive contacts*
- All stainless steel construction and wetted part
- Pressure range -1..0, 0..1 up to 1000 bar
- Over pressure up to 30% of Full Scale
- Excellent vibration resist with liquid filling

Application

Z Series is a superior design pressure gauge with contact, fillable with electrical oil to deal with severe pulsation and vibration. It can combine with Diaphragm chemical seal for further extend its usage in corrosive process line. Suitable for use in Water treatment, Pumping station, Chemical plant, Oil & Gas, etc.

Technical Specification

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> • Nominal Size
100 and 150 mm • Accuracy Class
Class 1.6, Optional Class 2.5(2½")
Set accuracy Class 4.0 • Case Ingress Protection
Dry gauge IP54
Liquid filled IP65 • Connection Size G or NPT | <ul style="list-style-type: none"> • Scale Range
-1..0, 0..1 bar up to 1000 Bar
Compound -1..+24 Bar • Application range
Constant load : Up to 100% F.S.
Alternative load : Up to 90% F.S.
Overpressure resist 130% • Filling Dry or Liquid filled • Environment Temperature
Ambient -30° ..+60°C
Media -20° ..+80°C | <ul style="list-style-type: none"> • Casing and Bezel Ring
Stainless steel 304 • Wetted part
Stainless steel 316 • Window Plain instrument glass,
with adjuster base • Pointer
Black painted aluminium • Filling plug
Standard industrial rubber |
|---|--|---|

Contact

- Contact type
Magnetic, electric and inductive
- Contact design
1 or 2 contacts standard
- Maximum working voltage
380 VAc or 220 Vac
- Maximum current 1A
- Contact power 30 VA



SF10 Series Phenolic case

Safety Pattern Case Process Pressure Gauge



Features

- Accuracy Class 1.0, Class 0.5 optional
- Chemical & petroleum processing industries
- Polypropylene or Phenolic material
- Fully safely Blow Out Back design
- Stainless steel wetted parts structure
- Over pressure up to 30% of Full Scale
- Meet Class ANSI B40.1 or EN837-1
- Excellent vibration resist with liquid filling
- Design scale ranges up to 1600 bar

Application

SF10 is an ANSI standard 4.5" safety pressure gauge for extreme corrosive and severe environment with Safety pattern design (Solid front/Baffle front) and stainless steel wetted part. Fillable case and built in Restrictor screw (Throttle screw) on connection are design to be used in vibration and pulsation area. Commonly use in many industries such as Oil&Gas, petrochemical, mining, pulp&paper, X tree, etc.

Technical Specification

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> • Nominal Size
130 mm / 4½" • Accuracy Class
Class 1.0,
Class 0.5 optional • Ingress Protection
IP 65 (Weather tight) • Connection Size
G½ or ½ NPT or others | <ul style="list-style-type: none"> • Scale Range
Pressure 0..1600 bar
Vacuum -1 bar..0
Compound -1..24 bar • Tube Element Shape
P ≤ 100 bar in C tube
P > 100 bar in helicoil • Filling
Dry or liquid filled • Operating Temperature
Ambient temperature -30° ..+70°C
Medium temperature 100°C Max. | <ul style="list-style-type: none"> • Temperature
Additional error when pressure element temperature deviates from reference temperature +20°C (+68°F)
be ±0.4% / 10°C (50°F) rising or falling • Over Pressure Limit
130% of F.S. P ≤ 100 bar
115% of F.S. P > 100 bar • Dial Graduation
Black graduation on white for single range
Black and red graduation on white for dual ranges |
|--|--|---|

Design Material

- Casing and Bezel Ring
Polypropylene or Phenolic optional
- Sensing Element
Stainless steel 316
- Window
Safety laminated glass
- Window gasket
Industrial rubber seal or PTFE
- Pointer
Black aluminum, adjustable
- Dial Plate Aluminum alloy



A Series Black steel case



K

Features

- Accuracy Class 1.6, Class 2.5
- Internal Calibration Device (ICD)
- Black steel case material, Blow-out-back
- Flanged type back and front flange
- DIN case, bayonet lock design
- Over pressure up to 30% of Full Scale
- Restrictor screw standard
- Standard dial dual unit ranges
- Scale ranges -600..0, 0..10 to 1000 Mbar

Application

A Series is a premium capsule gauge designed for use in low pressure measurement on non-corrosive and gaseous. Structure black steel case or chromed steel case and bezel, applicable for dry and gaseous that not effect the cupreous metal sensing element. With expanded over pressure resistance, allowed transient overpressure up to +30% of Full Scale. Widely used in various industrial applications.

Technical Specification

- | | |
|---|---|
| <ul style="list-style-type: none"> • Nominal Size
63,75,100 and 160 mm • Accuracy Class
Class 1.6, Class 2.5(φ 63,75mm) • Ingress Protection
IP 44 • Connection Size
G3/8,G1/4,G1/2 or NPT or others • Scale Range
Pressure 0..16 to 0..1000 mbar
* φ 63,75mm min range 16 mbar
Vacuum -600 mbar..0
Compound -200..+400 mbar • Tube Element Shape
Capsule type diaphragm tube | <ul style="list-style-type: none"> • Filling
Dry type • Operating Temperature
Ambient temperature -10° ..+70°C
Medium temperature 90°C Max. • Temperature Error
Additional error when pressure element temperature deviates from reference temperature ± 20°C(+68° F) be ± 0.4%/ 10°C(50° F) rising or falling • Over Pressure Limit
130% of Full Scale • Dial Graduation
Black graduation on white for single range
Black and red graduation on white for dual ranges |
|---|---|

Design Material

- Casing and Bezel Ring
Black painted steel
- Sensing Element
Cupreous alloy capsule
- Connection
Brass
- Window
Plain instrument glass
- Window gasket
Industrial rubber seal
- Pointer
Black painted aluminium
- Dial Plate
Aluminium alloy

A= Lower connection, B= Back connection "U"-Clamp, D=Back connection, E= Front flange back connection

Industrial Diaphragm seal



Threaded Type

Features

- Direct threaded processing type
- Applicable with most measuring instruments
- Double laser welding diaphragm design
- Wide range corrosive applications
- Stainless steel wetted parts with options
- Various diaphragm materials selection
- Diaphragm or wetted parts coating or lining
- Pressure range -1..0, -1..+24 to 0..400 bar
- Various liquid filling supported

Technical Specification

- Model and pressure configuration
Pressure : 0..1 bar to 400 bar
Vacuum : -1..0 bar
Compound : -1..24 bar
- Instrument / Process Connection Size
G ½ or NPT, other connection size available
- Working temperature range
Working temperature -40° ..+150°C
Please refer to filling selection table

- Optional Accessories
Stainless steel armoured capillary, max. 15m
Cooling tower C1..C3(T> 100°C)

Material

- Upper and lower body
SS 316(Standard) or *SS316L
- Diaphragm
SS 316L(Standard),*Optional Titanium, Monel, Hastelloy, Tantalum, or others
- Sealing ring / gasket
PTFE / Viton seal *Optional Nitrile, Rubber, Fluoroplastic
- Fastening screw SS 304
- Diaphragm filling
Standard silicone oil

Flange end available on DIN Standard DN20 to 100
ANSI Standard 3/4" to 4"



DSC101



DSC102



DSC103



DSC104

Flanged Type



DSC201



DSC202



DSC203



DSC204





Standard Working Fluid is Silicon (Low Viscidity)

Working fluid	Diaphragm seal temp. range(°C)	service	Instrument Oper. Temp(°C)
Silicon(low viscosity)	-40°C..130°C	General	-30°C..50°C
Silicon(high viscosity)	-30°C..240°C	High temp	-20°C..60°C
Fluorocarbon oil	-30°C..160°C	Salt & Acid	-20°C..50°C
Glycerine	-5°C..100°C	Food	-5°C..40°C
Propylene Glycol	-30°C..100°C	Food	-20°C..40°C

Plastic Body Type



DSC120



DSC123

Pulp & Paper Type



DSC210



DSC211



DSC104

Sanitary Type



DSC301



DSC311

Homogenizing Type



DSC104

Syphon- Used to protect gauge from the temperature
Pipe size:1/4", 3/8", 1/2"

Type: Ring Syphon, U- Tube Syphon

Material:

Carbon steel A106 gr.B Sch # 40,Sch #80

Pressure rating 150 bar @ 300 °C

AISI 316 SS Sch #40

Pressure rating 135 bar @ 300 °C

Connection: NPT,BSP

K



Capillary P.Max 400 bar

Material:AISI 316 S

Armor: Stainless steel

Connection: NPT,BSP

Cooling tower - Used to reduce temperature,
 and shock pressure

Pipe size: 1/2" x 1/2" 1/2"(m)x1/2"(f)

P.Max 400 bar

Temp reducing upto 200 °C

Material: AISI 316 SS

Pressure Snubber - For use with any
 gauge subjected to rapidly fluctuating pressure
 and sudden shock pressures

Pipe size:1/4" X 1/4", 1/2" X 1/2"

Type:

Porous Dampener P.Max 1,000 bar

Material: Brass, AISI 316 SS

Porous disc AISI 316 SS

Needle dampener P.Max 400 bar

Material:AISI 316 SS

Connection: NPT,BSP



Cocks and Needle valve - Used to
 stop pressure

Pipe size:1/4" X 1/4", 3/8" X 3/8" 1/2" X 1/2"

Type:

Needle P.Max 1,000 bar

Material: Brass, AISI 316 SS

Cocks P.Max 400 bar

Material:Brass

Connection: NPT,BSP



Pressure gauge
 with cooling tower



Pressure Transmitter
 with cooling tower

Overload Protection





Bi-Metal thermometer

Industrial Bimetal Thermometer

Application

- All type of industrial application
- Where vibration exists, liquid fill is available to dampen the pointer movement
- As acrylic lens is available for food applications

Case and bezel: 304 stainless steel roll ring sealed

Window: polycarbonate or glass

Pointer and face: aluminum

Probe and connection: 304 stainless steel

Connection way: lower mount, center back mount and every angle mount

Probe size: 6.3mm diameter

Range: -40 to +650 °C/°F



K

BACK CONNECT TYPE

Type	Dial size X Stem length	Connection npt	Temp range °C	Accuracy
T200C	Dia 2"x2"	1/4"	-50~+50, -20~+80, 0~100, 0~150	+/-1.6%
T300C	Dia 3"x2"	1/2"	0~100, 0~120, 0~150 0~200, 0~300, 0~400	
T400C	Dia 4"x4"	1/2"	0~100, 0~200, 0~300 0~400, 0~500, 0~600	
T400C	Dia 4"x6"	1/2"	0~100, 0~200, 0~300 0~400, 0~500, 0~600	
T600C	Dia 6"x12"	1/2"	0~120, 0~150, 0~200 0~300, 0~500, 0~600	

Item TC (Cup Dial)
Back Connect



Item IC (Cup Dial)
Bottom Connect

BOTTOM CONNECT TYPE (Cup Dial)

Type	Dial size X Stem length	Connection npt	Temp range °C	Accuracy
I200C	Dia 2"x3"	1/2"	-50~+50, -20~+80, 0~100, 0~150	+/-1.6%
I300C	Dia 3"x4"	1/2"	0~100, 0~120, 0~150 0~200, 0~300, 0~400	
I400C	Dia 4"x4"	1/2"	0~100, 0~200, 0~300 0~400, 0~500, 0~600	
I400C	Dia 4"x6"	1/2"	0~100, 0~200, 0~300 0~400, 0~500, 0~600	
I600C	Dia 6"x12"	1/2"	0~120, 0~150, 0~200 0~300, 0~500, 0~600	



Item AC (Cup Dial)
Adjustable Angle

ADJUSTABLE ANGLE CONNECT TYPE (Cup Dial)

Type	Dial size X Stem length	Connection npt	Temp range °C	Accuracy
A400C-1	Dia 4"x4"	1/2"	0~100, 0~120, 0~150 0~200, 0~300, 0~400	+/-1.6%
A400C-1	Dia 4"x6"	1/2"	0~100, 0~200, 0~300 0~400, 0~500, 0~600	
A600C-1	Dia 6"x12"	1/2"	0~100, 0~200, 0~300 0~400, 0~500, 0~600	

Capillary thermometer

Dial size: 4"/100mm,

Case and bezel: Stainless steel

Window: Glass

Pointer and face: Aluminum

Capillary: Stainless steel or copper

Probe and connection: Stainless steel

Connection way:

lower mount with back flange

center back mount with front flange or U-clamp

Probe size:

12mm diameter, could make according to customer's request

Range: -40 to +650 °C/°F

Option: Electric contact NO/NC



K

Thermowells

Application

All type of industrial application requiring a "sealed system"

eg.: tanks, pressure line ,etc)

Stem length: 2", 4", 6", 8", 12"

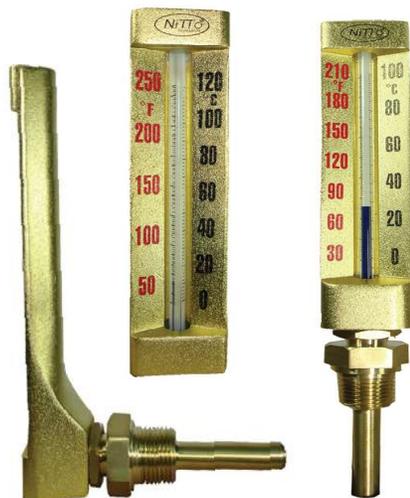
Connection: 1/4", 3/8", 1/2", Flange

Material:

304 stainless steel

316 stainless steel

Option: make to order



V shaped glass thermometer

Material Body: die casting aluminum, gold painted or anodized

Connections: straight angle, 90o angle

Inserts: capillary glass, round or triangle shape

Thermometer fluid: blue or red organic liquid

(-40~+200°C/°F

Bulb: 11 mm

Accuracy: +/- 1 % of FSD

Thread: 1/2" BSP, NPT, BSPT or M20X1.5 etc, or as customer's request

Working pressure: 25 bar max without thermowell

TS*-01/NTC-01/PTC-01

ย่านอุณหภูมิ -40 ถึง +350°C
ติดตั้งแบบเกลียวตัวเกลียวสามารถหมุนได้

TSK-01-0/TSJ-01-0

ย่านอุณหภูมิ -40 ถึง +350°C
ติดตั้งแบบสกรูยึดระหว่างเซนเซอร์กับพื้นผิว

TSK-02SI/NSJ-02SI

ย่านอุณหภูมิ -40 ถึง +350°C
ติดตั้งแบบขั้วล๊อคมีสปริงช่วยให้การยึดมีความมั่นคงขึ้น

TSK-03/TSJ-03/NTC-03/PTC-03

ย่านอุณหภูมิ -40 ถึง +600°C
ติดตั้งแบบหน้าแปลน+ปีกนก มีทั้งแกนตรงและแกนโค้งงอ ใช้ในงานวัดอุณหภูมิของเหลว

TSK-04/TSJ-04/NTC-04/PTC-04

ย่านอุณหภูมิ -40 ถึง +600°C
ติดตั้งแบบเกลียว มีเกลียวให้เลือกหลายขนาด มีทั้งแกนตรงและแกนโค้งงอ

TS*-05/NTC-05/PTC-05

ย่านอุณหภูมิ -40 ถึง +600°C
ติดตั้งแบบขั้วล๊อค มีสปริงช่วยให้การยึดมีความมั่นคงขึ้น

TSK-06/TSJ-06/NTC-06/PTC-06

ย่านอุณหภูมิ -40 ถึง +600°C
ติดตั้งแบบเกลียว มีทั้งแกนตรงและโค้งงอ พร้อมหัวกระโหลกทำให้ง่ายต่อการใช้งาน

TSK-07/TSJ-07/NTC-07/PTC-07

ย่านอุณหภูมิ -40 ถึง +600°C
ติดตั้งแบบหน้าแปลน+ปีกนก มีทั้งแกนตรงและแกนโค้งงอ พร้อมหัวกระโหลก

TSP-08

ย่านอุณหภูมิ -200 ถึง +400°C
ติดตั้งแบบเกลียว มีทั้งแกนตรงและโค้งงอ พร้อมหัวกระโหลกทำให้ง่ายต่อการใช้งาน

TSP-09

ย่านอุณหภูมิ -200 ถึง +400°C
ติดตั้งแบบหน้าแปลน+ปีกนก มีทั้งแกนตรงและแกนโค้งงอ พร้อมหัวกระโหลก

TSP-10

ย่านอุณหภูมิ -200 ถึง +400°C
ติดตั้งแบบเกลียว มีเกลียวให้เลือกหลายขนาด มีทั้งแกนตรงและแกนโค้งงอ

TS_-11/NTC-11/PTC-11

ย่านอุณหภูมิ -200 ถึง +400°C
ติดตั้งแบบหน้าแปลน+ปีกนก มีทั้งแกนตรงและแกนโค้งงอ

TSK-12/TSJ-12

ย่านการวัดอุณหภูมิสูงสุด 900°C สามารถบดงอได้ วัสดุที่ใช้ทำเป็นสแตนเลส 316 และเป็น Sheath สำเร็จรูปทำให้สามารถวัดอุณหภูมิที่มีความร้อนสูง ได้ดี

TSK-13/TSJ-13

ย่านอุณหภูมิ -40 ถึง +350°C ติดตั้งแบบรัดท่อ

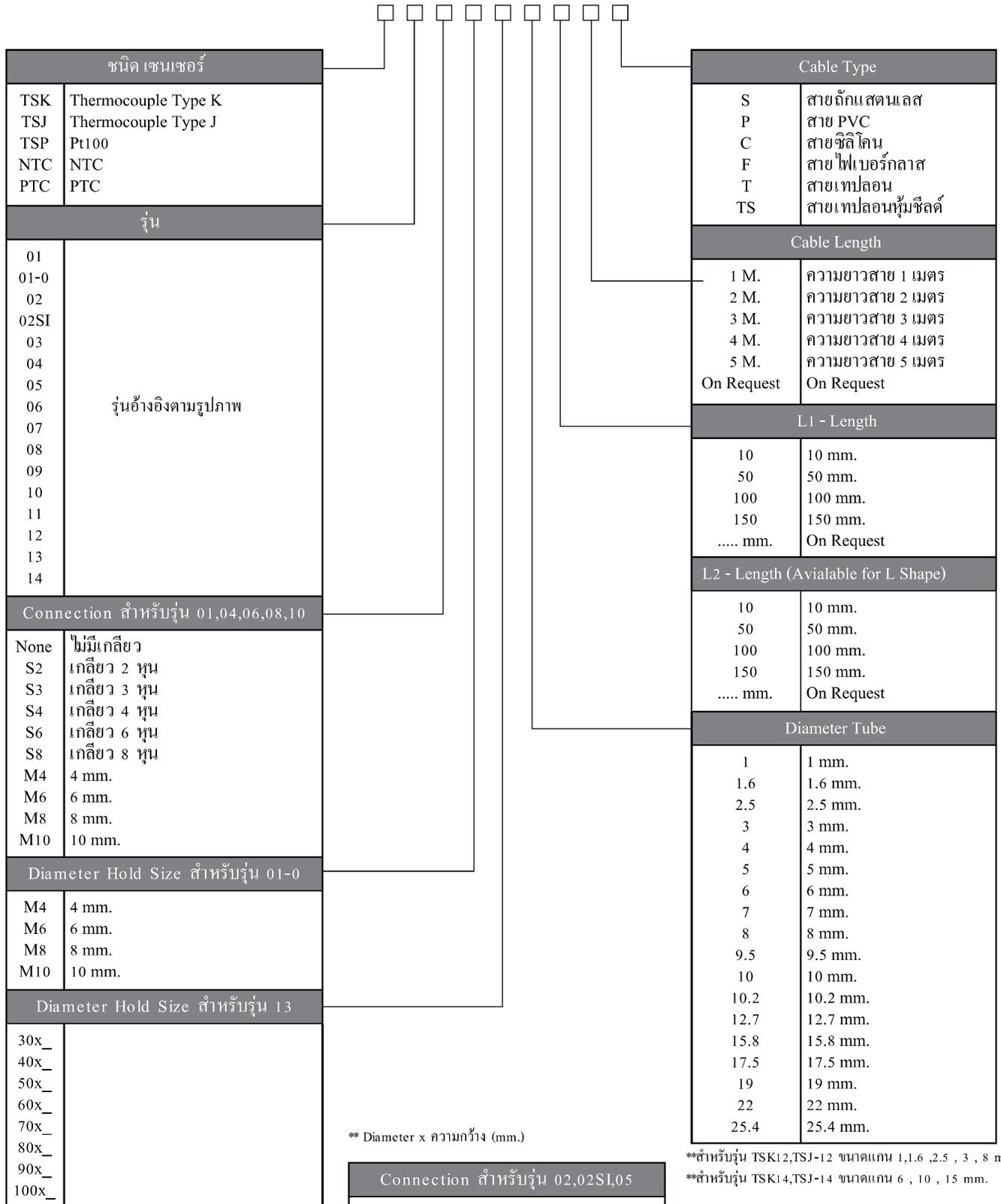
TSK-14/TSJ-14

ย่านการวัดอุณหภูมิสูงสุด 1200°C แกนผลิตจาก เซรามิก วัดอุณหภูมิที่มีความร้อนสูงได้ดี เช่น งานเตาเผา เตาหลอม

RTD (Resistant Temperature Detector) เป็นเซนเซอร์วัดอุณหภูมิ เมื่ออุณหภูมิสูงขึ้น ค่าความต้านทานลดลง (49.98 KOhm = -39 C / 98.9ohm = 130 C)
 PTC (Positive Temperature Coefficient) เป็นเซนเซอร์วัดอุณหภูมิ เมื่ออุณหภูมิสูงขึ้น ค่าความต้านทานเพิ่ม (1.242 KOhm = -39 C / 3.605 Kohm = 130 C)
 NTC (Negative Temperature Coefficient) เป็นเซนเซอร์วัดอุณหภูมิ แบบความต้านทาน เมื่ออุณหภูมิสูงขึ้น ค่าความต้านทานเพิ่ม (100 Ohm = 0 C)
 ให้ความแม่นยำสูง อุณหภูมิใช้งาน Class A -30 ถึง 300 C , Class B - 200 ถึง 400 C
 Thermocouple เป็นเซนเซอร์ ทำจาก โลหะ 2 ชนิด เชื่อมปลายเข้าหากัน เหมาะสำหรับการใช้งาน อุณหภูมิ สูงเช่น เตา หลอม เป็นต้น

K

K



ชนิด เซนเซอร์	
TSK	Thermocouple Type K
TSJ	Thermocouple Type J
TSP	Pt100
NTC	NTC
PTC	PTC

รุ่น	
01	รุ่นอ้างอิงตามรูปภาพ
01-0	
02	
02SI	
03	
04	
05	
06	
07	
08	
09	
10	
11	
12	
13	
14	

Connection สำหรับรุ่น 01,04,06,08,10	
None	ไม่มีเกลียว
S2	เกลียว 2 หุน
S3	เกลียว 3 หุน
S4	เกลียว 4 หุน
S6	เกลียว 6 หุน
S8	เกลียว 8 หุน
M4	4 mm.
M6	6 mm.
M8	8 mm.
M10	10 mm.

Diameter Hold Size สำหรับรุ่น 01-0	
M4	4 mm.
M6	6 mm.
M8	8 mm.
M10	10 mm.

Diameter Hold Size สำหรับรุ่น 13	
30x_	
40x_	
50x_	
60x_	
70x_	
80x_	
90x_	
100x_	

Cable Type	
S	สายถักแกนลอส
P	สาย PVC
C	สายซิลิโคน
F	สายไฟเบอร์กลาส
T	สายเทปลอน
TS	สายเทปลอนหุ้มซิลด์

Cable Length	
1 M.	ความยาวสาย 1 เมตร
2 M.	ความยาวสาย 2 เมตร
3 M.	ความยาวสาย 3 เมตร
4 M.	ความยาวสาย 4 เมตร
5 M.	ความยาวสาย 5 เมตร
On Request	On Request

L1 - Length	
10	10 mm.
50	50 mm.
100	100 mm.
150	150 mm.
..... mm.	On Request

L2 - Length (Avialable for L Shape)	
10	10 mm.
50	50 mm.
100	100 mm.
150	150 mm.
..... mm.	On Request

Diameter Tube	
1	1 mm.
1.6	1.6 mm.
2.5	2.5 mm.
3	3 mm.
4	4 mm.
5	5 mm.
6	6 mm.
7	7 mm.
8	8 mm.
9.5	9.5 mm.
10	10 mm.
10.2	10.2 mm.
12.7	12.7 mm.
15.8	15.8 mm.
17.5	17.5 mm.
19	19 mm.
22	22 mm.
25.4	25.4 mm.

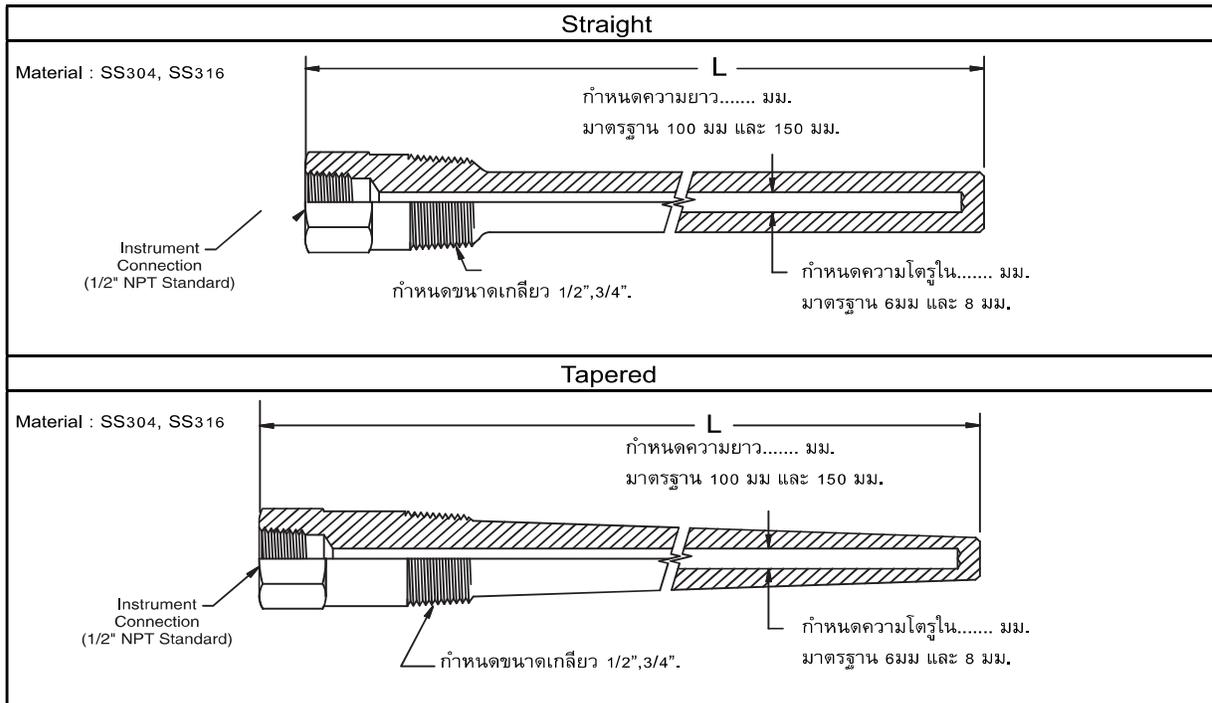
** Diameter x ความกว้าง (mm.)

Connection สำหรับรุ่น 02,02SI,05	
เขี้ยวล็อค	ID 11.4 mm.
	ID 12.7 mm.
	ID 14.5 mm.
	ID 15.2 mm.

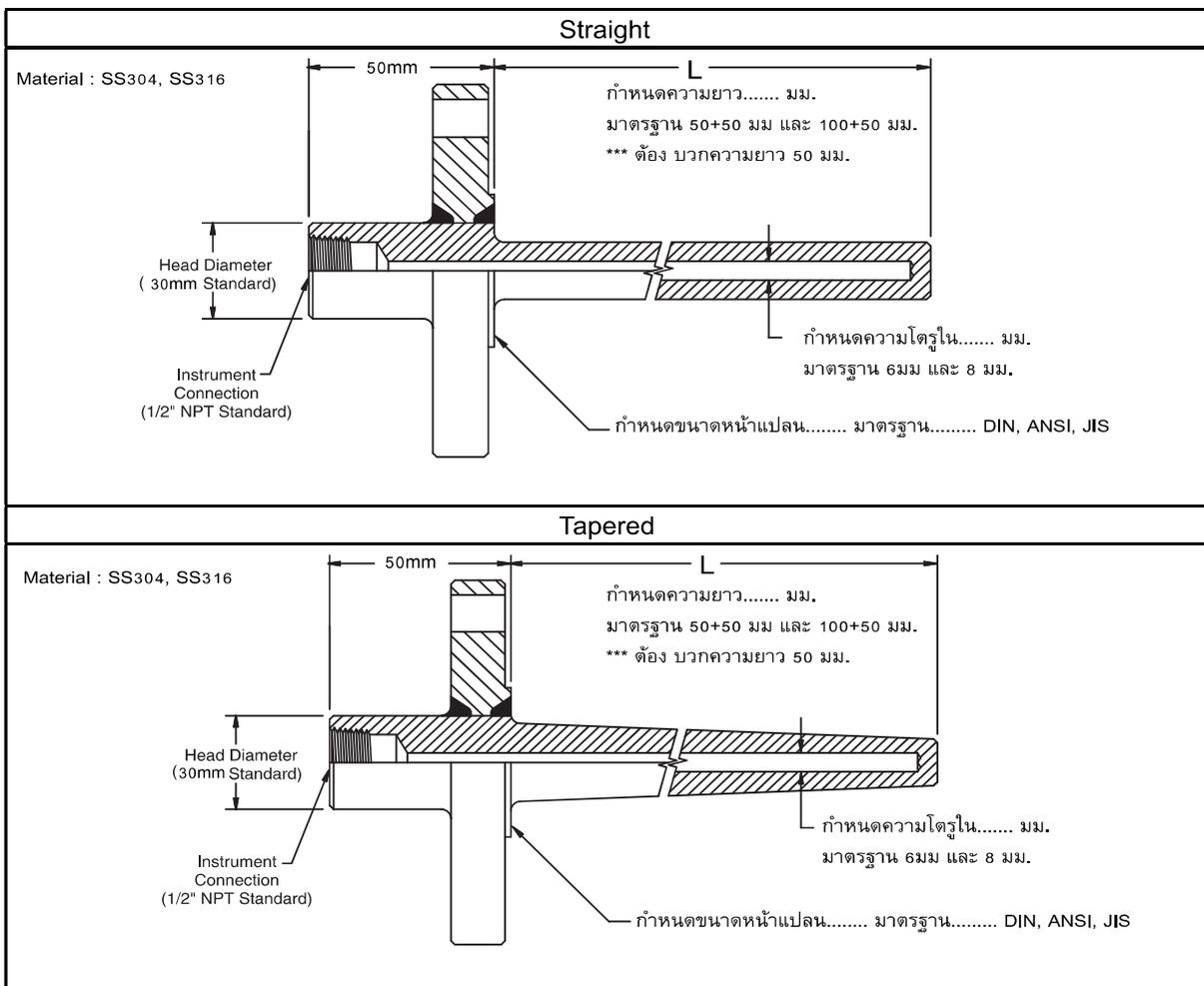
**สำหรับรุ่น TSK12,TSJ-12 ขนาดแกน 1,1.6 ,2.5 , 3 , 8 mm.

**สำหรับรุ่น TSK14,TSJ-14 ขนาดแกน 6 , 10 , 15 mm.

Threaded Thermowells



Flanged Thermowells

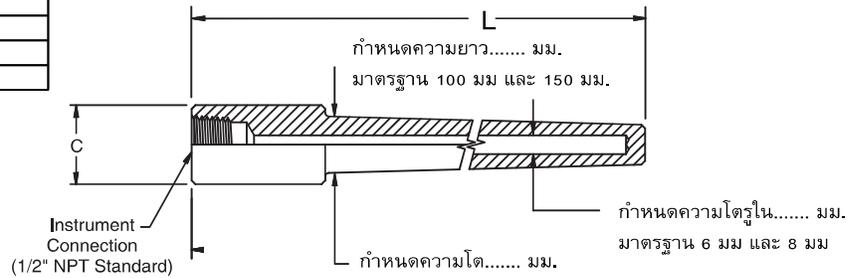


Welded Thermowells

Straight

Size (in inches)	Head Diameter "C" (in inches)
3/4	1.050
1	1.315
1-1/4	1.660
1-1/2	1.900
1-1/2 Actual	1.500

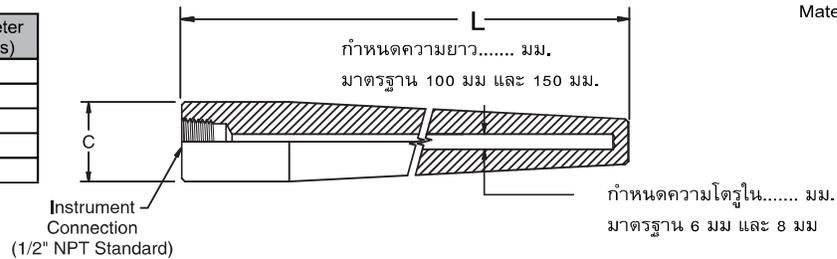
Material : SS304, SS316



Tapered

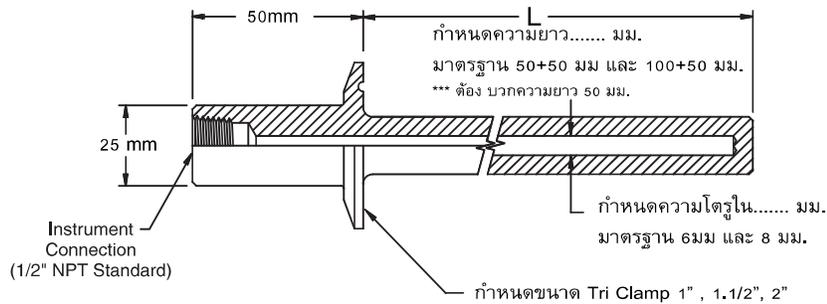
Size (in inches)	Head Diameter "C" (in inches)
3/4	1.050
1	1.315
1-1/4	1.660
1-1/2	1.900
1-1/2 Actual	1.500

Material : SS304, SS316



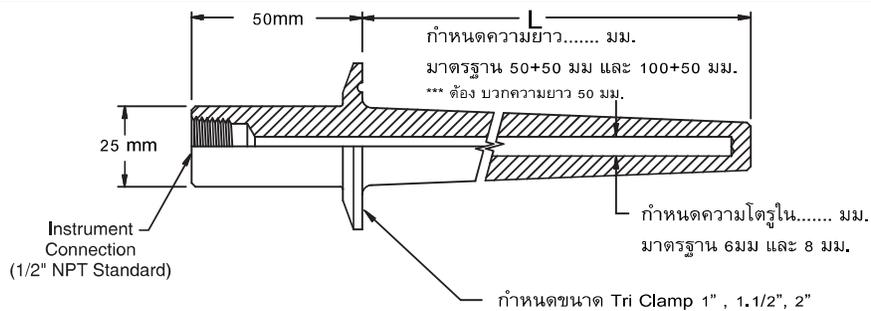
Sanitary Thermowells

Straight



Material : SS304, SS316L

Tapered



Material : SS304, SS316L