

AN ISO 9001:2015
CE CERTICATION




TECHIN GAUGES & INSTRUMENT PVT. LIMITED

PRESSURE GAUGES
TEMPERATURE GAUGES
LEVEL GAUGES & SWITCHES
PRESSURE & TEMPERATURE SWITCHES
RTD, THERMOCOUPLE & THERMOWELLS
ACCESSORIES



We Monitor, Control and Safe the Process & Environment...



 is a leading manufacturer & supplier of complete range of Instrumentation and Control Instruments such as Pressure & Temperature Gauges and Switches, RTD, Thermocouples, Thermowells & Level Switches. These products are manufactured and design under a high precision in accordance with International Quality norms using supreme quality raw material and latest technology under the guidance of more than 25 years technical experts.

This products are widely demanded all across the nation due to their robust construction, sturdiness, flawless finish, hassle-free functionality and reliability. Furthermore, the entire range of products is available on various specifications & can also be customised as per the different requirements of clients.

Our products find applications in Engineering Industries, Boilers, Reactors, Process Industries, Gas Mixing Systems, Gas Separators, various R & D Departments, Laboratories, Medical & Hospital Equipments, Defense Areas, Pharmaceutical Industries, Chemical, Petrochemical & Fertilizer Industries, Refineries and Power Plants, Food & Beverage Industries, Paper & Pulp Industries, Oil & Soap Industries, Water Treatment & Reverse Osmosis Plants, Filtration Systems, Hydraulic & Pneumatic Systems, Automobile Industries & Foundries etc..

We provide best and reliable technology to our customer, desired for their industrial process requirements by providing Ingenious Process Control Instruments. We believe in team work and strictly adhere to high standard of Quality. We trust in maintaining long lasting business relationship.

CORE VALUES

Our main feature is its great flexibility that allows us to follow customers requests with short time response and trust able deliver time. For us Quality has always been one of the most essential part of our working philosophy.

QUALITY POLICY

All products that we manufacture, distribute and supply are backed by Quality control testing procedures and endorsed by various Industrial Certifications. From Procurement to delivery, at every stage of production, Quality assurance procedure are implemented to ensure that, our user receives product of the highest Quality.

OUR PRINCIPLES

Highest possible Quality of the product.
Increase the proficiency of the employees
Success through excellent management and policies.

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Prime Certification



Certificate of Registration

This is to Certify that the Quality Management System of

TECHING AUGES AND INSTRUMENT PVT. LTD.

NO. 08, BLDG. A, DAMANI GANGA IND. PARK, VILLAGE - DUNGRA, VAPI - 396193, VALSAD, GUJARAT, INDIA

has been audited and confirmed to be in accordance with the requirements of

ISO 9001:2015

For the following scope

MANUFACTURE & SUPPLY OF PRESSURE & TEMPERATURE INSTRUMENTS, LEVEL GAUGES & SWITCHES, PRESSURE & TEMPERATURE SWITCHES, RTD & THERMOCOUPLES, DIAPHRAGM SEALS AND ITS ACCESSORIES

Certificate No.: 22062M73
Initial Registration Date: 22/03/2017 2nd Surveillance Date: 21/03/2019
1st Surveillance Date: 21/03/2018 Date of Expiry: 21/03/2020






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Only the Certificate holder is permitted to use the logo and to display the logo on their products and to reference to website for the certificate holder's accreditation.



SS PRECISION PG
MODEL- TGI01-01

Dial Size	: DN100 / DN150 / DN250
Range	: -1 to 0 , 0-1 to 0-1600 Bar
Accuracy	: $\pm 1\%$ / CL 1
Mounting	: Bottom / Lower Back / Center Back
Process Connection	: 1/2"-BSP / NPT Standard
Ingress Protection	: IP68
Execution	: Fillable / Dry / Filled
Bourdon Tube & Socket	: SS316L / MONEL -TIG WELDED
Case & Bezel	: SS304 / SS316
Optional	: External Zero Adjustment



ALL SS PG - GENERAL
MODEL- TGI02-01

Dial Size	: DN50 / DN63 / DN80 / DN100
Range	: -1 to 0 , 0-1 to 0-1000 Bar
Accuracy	: $\pm 1.6\%$ / CL 1.6
Mounting	: Bottom / Center Back
Process Connection	: 1/4" BSP / NPT Standard
Ingress Protection	: IP65
Execution	: Fillable / Dry / Filled
Bourdon Tube & Socket	: SS316- TIG WELDED / 2 PC TYPE
Case & Bezel	: SS304



SS SOLID FRONT SAFETY PG
MODEL- TGI03-01

Dial Size	: DN100 / DN150
Range	: -1 to 0 , 0-1 to 0-1600 Bar
Accuracy	: $\pm 1\%$ / CL 1
Mounting	: Bottom / Lower Back
Process Connection	: 1/2"-BSP / NPT Standard
Ingress Protection	: IP68
Execution	: Fillable / Dry / Filled
Bourdon Tube & Socket	: SS316L / MONEL -TIG WELDING
Welded Case & Bezel	: SS304 / SS316
Optional	: External Zero Adjustment



PHENOL CASE SOLID FRONT PG
MODEL- TGI04

Dial Size	: DN115
Range	: -1 to 0 , 0-1 to 0-1600 Bar
Accur. & Repeatability	: $\pm 0.5\%$ / CL 0.5
Mounting	: Bottom / Lower Back
Process Connection	: 1/2"-BSP / NPT
Ingress Protection	: IP68
Execution	: Dry
Bourdon Tube & Socket	: SS316L / MONEL -TIG
Welded Case & Bezel	: PHENOLIC / PBPT



ALL SS PG- GENERAL PURPOSE
MODEL- TGI05-01

Dial Size	: DN50 / DN63 / DN80 / DN100
Range	: -1 to 0 , 0-1 to 0-40 Bar
Accuracy	: $\pm 2.5\%$ / CL 2.5
Mounting	: Bottom / Center Back
Process Connection	: 1/8" , 1/4" BSP / NPT
Ingress Protection	: IP65
Execution	: Fillable / Dry / Filled
Bourdon Tube & Socket	: Copper Alloy
Case & Bezel	: SS304



ALL STEEL CASE PG - GEN. PURPOSE
MODEL- TGI05-02

Dial Size	: N40 / DN50 / DN63 / DN100 / DN150 / DN250
Range	: -1 to 0 , 0-1 to 0-400 Bar
Accuracy	: $\pm 2.5\%$ / CL 2.5
Mounting	: Bottom / Center Back
Process Connection	: 1/8" / 1/4" / 3/8" / 1/2" BSP / NPT (M)
Ingress Protection	: IP54
Execution	: Dry
Bourdon Tube & Socket	: Copper Alloy
Case & Bezel	: Steel black powder coated



ALL SS PG ELECTRIC CONTACT TYPE
DOME STYLE - MODEL- TGI06-01

Dial Size	: DN100 / DN150
Range	: -1 to 0 , 0-1 to 0-1600 Bar
Accuracy	: $\pm 1\%$ / CL 1 , Reference Standard : EN837-1
Mounting	: Bottom / Lower Back with Doom type window
Process Connection	: 1/4" / 3/8" / 1/2"-BSP / NPT and special Threads
Ingress Protection	: IP68
Execution	: Dry / Fillable / Filled
Electric Contact	: Magnetic / Inductive Contacts, NO, NC, NO NC, NC NO, NO NO, NC NC
Bourdon Tube & Socket	: SS316L / Monel -TIG WELDING
Case & Bezel	: SS304 / 316



ALL SS PG,
ELECTRIC CONTACT TYPE
HI-VERSION CASE - MODEL-TGI07-01

Dial Size	: DN100 / DN150
Range	: -1 to 0 , 0-1 to 0-1600 Bar
Accuracy	: $\pm 1\%$ / CL 1.0 - Reference Standard : EN837-1
Mounting	: Bottom / Lower Back with standard safety glass window
Process Connection	: 1/4" / 3/8" / 1/2"-BSP / NPT and special Threads
Ingress Protection	: IP65
Execution	: Dry / Fillable
Electric Contact :	: Magnetic / Inductive Contacts, NO / NC, NO NO, NC NC
Bourdon Tube & Socket	: SS316L -TIG WELDING
Welded Case & Bezel	: SS304 / 316



SS CASE TEST GAUGE (ACC. $\pm 0.25\%$)
MODEL- TGI08-01

Dial Size	: DN150 / DN250 / DN300
Range	: -1 to 0 , 0-1 to 0-1600 Bar, Reference Standard : EN837-1
Accuracy	: $\pm 0.25\%$ / CL 0.25
Movement	: Jewel Bearing
Mounting	: Bottom / Lower Back
Process Connection	: 1/2"-BSP / NPT
Ingress Protection	: IP68
Execution	: Dry,
Bourdon Tube & Socket	: Berrlium Copper & SS316L / Copper alloy
Case & Bezel	: SS304 / Steel Case Powder coated
Note	: Dial with anti parallax mirror band, Knife Edge Micro Adju. Pointer



ALL SS PG, SS CAPSULE TYPE
MODEL-TGI09-01

Dial Size	: DN63 / DN100 / DN150 / DN250 , Ref. Standard : EN837-3
Range	: 6 mbar 600mbar & Compound pressure ranges
Accuracy	: $\pm 1.6\%$ / CL1.6 for SS Internal
Mounting	: Bottom / Lower Back / Center Back
Process Connection	: 1/4" / 3/8" / 1/2"-BSP / NPT and special Threads
Ingress Protection	: IP65
Execution	: Dry / Fillable for Ranges above 100mbar
Bourdon Tube & Socket	: SS316L
Case & Bezel	: SS304 / SS316 / STEEL



SS CASE BRASS PG BRASS CAPSULES
MODEL-TGI09-02

Dial Size	: DN63 / DN100 / DN150 / DN250 , Ref .Standard : EN837-3
Range	: 6 mbar 600mbar & Compound pressure ranges
Accuracy	: $\pm 1.6\%$ / CL1.6 for Copper Alloy Internal
Mounting	: Bottom / Lower Back / Center Back
Process Connection	: 1/4" / 3/8" / 1/2"-BSP / NPT and special Threads
Ingress Protection	: IP65
Execution	: Dry / Fillable for Ranges above 100mbar
Bourdon Tube & Socket	: Copper Alloy
Case & Bezel	: SS304 / SS316 / STEEL



PRESSURE GAUGE WITH SS SANITARY
MODEL- TGI10-01

Dial Size	: DN50 / DN63 / DN100 / DN150, Ref. Standard : EN837-1
Range	: -1 to 0, 0-1 to 0-40 Bar
Accuracy	: $\pm 1.6\%$ / CL 1.6
Mounting	: Bottom / Center Back
Process Connection	: 1/2"..... 2.5" Triclamp Type
Ingress Protection	: IP65
Execution	: Fillable / Dry / Filled
Bourdon Tube & Socket	: SS316 with SS Case and Bezel
Seal Filling Liquid	: Food Grade Oil /Glycerin



DOUBLE DIAPHRAGM
DIFFERENTIAL PG - MODEL- TGI11

Dial Size	: DN100 / DN150
Range	: 0-25mbar to 0-10 Bar
Accuracy	: $\pm 1\%$ / CL 1 - Ascending, Reference Standard : EN837-3, IS 3634
Mounting	: Bottom / Back, Optional with External Zero Adjustment
Process Connection	: 1/4" / 3/8" / 1/2"-BSP / NPT
Ingress Protection	: IP68
Execution	: Filled / Fillable / Dry
Body & Diaphragm	: SS316L / Monel / special alloys
Case & Bezel	: SS304/316
Gasket	: Viton



DIFFERENTIAL PG
SINGLE DIAPHRAGM TYPE
MODEL- TGI12

Dial Size	: DN100 / DN150
Range	: 0-250 mbar to 10 bar
Accuracy	: $\pm 1.0\%$ in Ascending, Reference Standard : EN837-3
Mounting	: Bottom / Back
Process Connection	: 1/4" NPT (F)
Ingress Protection	: IP65
Execution	: Fillable / Dry / Dry but fillable
Body & Diaphragm	: SS316L / Monel / special alloys
Case & Bezel	: SS304 / 316
Gasket	: Viton



DIFFERENTIAL PG - BELLOWS TYPE
MODEL- TGI13

Dial Size	: DN150
Range	: 0-100mbar to 0-16 Bar,
Accuracy	: $\pm 1\%$ / CL 1 Ascending
Mounting	: Bottom / Lower Back
Process Connection	: 1/2"-BSP / NPT
Ingress Protection	: IP65
Execution	: Fillable / Dry / Dry but fillable
Body & Bellows	: SS316L, Body & Bellows TIG Welded
Case & Bezel	: SS304 / 316,



DIFFERENTIAL PG PISTON OPERATED
MODEL- TGI14-01

Dial Size	: DN63 / DN100 / DN150
Range	: 0-250mbar to 0-10 Bar
Accuracy	: $\pm 2\%$ / CL 2 - Ascending
Mounting	: Inline / Bottom / Back Ports , Direct / Case 3 Hole Panel
Process Connection	: 1/4" NPT (F)
Ingress Protection	: IP65
Execution	: Fillable / Dry Wetted
Wetted Parts	: Body-SS316, Spring- SS302,Magnet-Ceramic, Seal - Teflon, Case -SS304, Diaphragm - Viton, Piton-SS316L



DIFFERENTIAL PG DIAPHRAGM
ACTUATED PISTON MODEL- TGI14-02

Dial Size	: DN63 / DN100 / DN150
Range	: 0-250mbar to 0-10 Bar
Accuracy	: $\pm 2\%$ / CL 2 - Ascending
Mounting	: Inline / Bottom / Back Ports
Process Connection	: 1/4" NPT (F)
Ingress Protection	: IP65
Execution	: Fillable / Dry
Wetted Parts	: Body-SS316, Spring- SS302,Magnet-Ceramic, Seal - Teflon, Diaphragm - Viton, Piton-SS316L



DIFFERENTIAL PG, DIAPHRAGM /
PISTON ACTUATED WITH SWITCH
MODEL- TGI14-03

Dial Size	: DN63 / DN100 / DN150
Range	: 0-250mbar to 0-10 Bar
Accuracy	: $\pm 2\%$ / CL 2 - Ascending
Mounting	: Inline / Bottom / Back Ports , Case with integrated 3 Hole Panel
Process Connection	: 1/4" NPT (F)
Ingress Protection	: IP65
Execution	: Fillable / Dry
Wetted Parts	: Body-SS316, Spring- SS302,Magnet-Ceramic, Seal - Teflon, Diaphragm -Viton, Piton-SS316L
Switching /Head Head	: 1SPDT /2DPDT, 230VAC/0.5A
Head	: ATEX & FM approved Ex class I, II & III NEMA 4X, IP66, IP67



MAGNELIC DIFFERENTIAL PG,
LOW PRESSURE MODEL- TGI15

Dial Size	: DN100
Range	: 0-5mmwc to 600 mmwc
Accuracy	: $\pm 2\%$ / CL 2 - Ascending
Mounting	: Side / Back
Process Connection	: 1/8" (F) BSP
Ingress Protection	: IP54
Execution	: Dry
Case & Bezel	: Die Cast Aluminum
Sensing Element	: Silicon Rubber Diaphragm



ALL SS PG, DIAPHRAGM TYPE,
LOW PRESSURE MODEL- TGI16-01
(MACHINED FLANGE)

Dial Size	: DN100 / DN150
Range	: 0-250mmwc to 0-16 bar
Accu. & Repeatability	: $\pm 1\%$ / CL 1, Refer. Standard : EN837-3,
Mounting	: Bottom / Center Back, also with External Zero Adjustment
Process Connection	: 1/2"-BSP / NPT
Execution	: Dry
Body	: SS316 ,
Diaphragm	: SS316 /Monel /Teflon /Inconel
Case & Bezel	: SS304/316, - Shank & Case TIG welded
Note	: This Model is suitable for PTFE Lining



ALL SS PG, DIAPHRAGM TYPE,
LOW PRESSURE MODEL- TGI16-02
(ECO VERSION-SHEET METAL DESIGN)

Dial Size	: DN100 / DN150
Range	: 0-250mmwc to 0-10 bar
Accu. & Repeatability	: $\pm 1\%$ / CL 1 , Ref. Standard : EN837-3
Mounting	: Bottom
Process Connection	: 1/2"-BSP / NPT
Ingress Protection	: IP65
Execution	: Dry
Body	: SS316
Diaphragm	: SS316 /Teflon
Case & Bezel	: SS304/316, - Shank & Case TIG welded



EDGE WISE DRAFT GAUGE
MODEL- TGI17

Dial Size	: DN150 X 78mm / DN 200X104 mm
Range	: -6000 to +6000 mmwc
Accuracy	: $\pm 2.5\%$ / CL 2.5
Mounting	: Center Back with Bracket
Process Connection	: 1/4" BSP (M)
Ingress Protection	: IP54
Execution	: Dry
Bellow	: SS316
Case & Bezel	: Steel -Black Painted



HOMOGENIZER PG
MODEL- TGI18-01

Dial Size	: DN100 / DN150
Range	: 0-100 to 0-1000 Bar
Accu. & Repeatability	: $\pm 1.6\%$ / CL 1.6 , Ref. Standard : EN837-1
Mounting	: Bottom with standard seal / customised seal
Process Connection	: Mounting Flange, Threaded Conn, Direct Connection
Ingress Protection	: IP65
Execution	: Fillable / Dry Diaphragm
Bourdon Tube & Socket	: SS316L - Tig Welded
Case & Bezel	: SS304/316 - Socket welded with Case



PG WITH ALL WELDED DIAPHRAGM
SEAL GAUGE, THREADED
MODEL- TGI18-02

Dial Size	: DN100
Range	: 0-5mmwc to 600 mmwc
Accuracy	: $\pm 2\%$ / CL 2 - Ascending
Mounting	: Side / Back
Process Connection	: 1/4" / 1/2" / 3/8" BSP (M) / (F)
Ingress Protection	: IP68
Execution	: Dry / Fillable / Dry but Fillable
Case & Bezel	: SS304 / SS316
Sensing Element	: Diaphragm, SS316 / Monel / Has-C



PG ALL WELDED DIAPHRAGM
SEAL GAUGE, FLANGED
MODEL- TGI18-03

Dial Size	: DN100 / DN150, Reference Standard : EN837-1,
Range	: -1 to 0 , 0-1 to 0-250 Bar
Accuracy	: $\pm 1.6\%$ / CL 1.6
Mounting	: Bottom / Center Back
Instrument Connection	: 1/2" BSP / NPT & SPECIAL THREADS
Process Connection	: Flange size & class, MOC : SS316/SS304/Monel
Ingress Protection	: IP65
Execution	: Fillable / Dry
Bourdon Tube & Socket	: SS316
Seal filling liquid	: Silicon Oil
Note	: Fully Welded



FLANGED DIAPHRAGM SEAL - FLANGE "I" SECTION TYPE MODEL-TGI19-

Range	:	-1 - 0 to 0-21 bar / -1 - 0 to 0- 70 Bar / 0-100 to 0-400 bar
Top Chamber	:	SS316 / SS304
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Process Connection	:	I Section with Flange, size & class as per standard
Bottom Chamber	:	(pipe+flange+bottom ring) : SS316L/MONEL/PVC
Diaphragm	:	SS316L / Monel / Inconel / Hastelloy -C / PTFE / Tantalum
Sealing Gasket	:	PTFE / METAL GASKET
Special Requirements	:	1) PTFE Lining / PTFE Coating 2) Capillary, Capillary with armour tube 3) Sealing Liquid - Silicon Oil/ Glycerin /Food Grade Oil / Syltherm

TGI20-1

TGI20-2



FLANGED DIAPHRAGM SEAL EXTENDED NECK TYPE MODEL-TGI20

Pressure Ranges	:	-1 - 0 to 0-250 bar
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Process Connection	:	Extension Bar with Mounting Flange, Flange Size and Class as per Standard Requirement
Flange & Ext. Material	:	SS316/SS304/MONEL/INCONEL
Diaphragm	:	SS316L / Monel / Inconel / Hastelloy - C / PTFE / Tantalum
Extension Neck Length	:	As per requirement
Special Requirements	:	1) PTFE Coating 2) Capillary, capillary with armour tube 3) Sealing Liquid - Silicon Oil/ Glycerin /Food Grade Oil / Syltherm



DIAPHRAGM SEAL FULL WELDED HEAVY DUTY MINI SEAL MODEL-TGI21

Pressure Ranges	:	-1 - 0, 0-1 to 0- 70 Bar (OD62.2 & OD 55) / 100 < 250 Bar (OD46.5) / 250 <600 bar (OD34.5) / 600<1000 bar (OD 28)
Top Chamber	:	SS316 / SS304
Bottom Chamber	:	SS316L / Monel / Inconel / Hastelloy- C
Diaphragm	:	SS316L / Monel / Inconel / Hastelloy - C / Tantalum
Instrument Connection	:	1/4" / 3/8" / 1/2" -BSP /NPT (F)
Process Connection	:	1/4", 3/8", 1/2" - BSP /NPT- (M /F) / Special Connections
Sealing Liquid	:	Silicon Oil / Glycerin / Food Grade Oil / Syltherm
Top & Bottom Chamber	:	Welded Construction



THREADED DIAPHRAGM SEAL DIRECT COUPLED TYPE MODEL-TGI22-01

Pressure Ranges	:	-1 - 0, 0-1 to 0- 70 Bar (OD98) / 0-100 to 0-250 bar (OD80) / 0-250<0-400 bar(OD110)
Top Chamber	:	SS316 / SS304
Bottom Chamber	:	SS316L / Monel / Inconel / PVC
Diaphragm	:	SS316L / Monel400 / Inconel600 / Hastelloy - C 276 / Tantalum / PTFE
Instrument Connection	:	1/4", 3/8", 1/2" -BSP / NPT (F)
Process Connection	:	1/4", 3/8", 1/2" - BSP /NPT- (M/F)
Sealing Liquid	:	Silicon Oil / Glycerin / Food Grade Oil / Syltherm
Option	:	Capillary, Capillary with Armour tube
Top & Bottom Chamber	:	Made from solid Bar / Forged Bar



THREADED DIAPHRAGM SEAL SLIP RING COUPLED TYPE MODEL-TGI22-02

Pressure Ranges	:	-1 - 0, 0-1 to 0- 25 Bar
Top Chamber	:	SS316 / SS304
Bottom Chamber	:	SS316L / Monel / Inconel / PVC
Diaphragm	:	SS316L / Monel400 / Inconel600 / Hastelloy -C 276 / Tantalum / PTFE
Instrument Connection	:	1/4", 3/8", 1/2" -BSP / NPT (F)
Process Connection	:	1/4", 3/8", 1/2" - BSP /NPT- (M /F)
Sealing Liquid	:	Silicon Oil / Glycerin / Food Grade Oil / Syltherm
Option	:	Capillary with Armour tube
Top & Bottom Chamber	:	Made from solid Bar with Steel Ring / SS / Metal Ring



DIAPHRAGM SEAL FULL WELDED
DIRECT COUPLED TYPE
COMPACT DESIGN - MODEL - TGI23

Pressure Ranges	:	-1 - 0, 0-1 to 0- 25 Bar
Top Chamber	:	SS316 / SS304
Bottom Chamber	:	SS316L
Diaphragm	:	SS316L
Instrument Connection	:	1/4" BSP / NPT (F)
Process Connection	:	1/4"- BSP / NPT- (M /F)
Sealing Liquid	:	Silicon Oil / Glycerin / Food Grade Oil / Syltherm
Top & Bottom Chamber	:	Welded Construction



THREADED DIAPHRAGM SEAL
SCREWED FLUSH TYPE
MODEL- TGI24

Pressure Ranges	:	0-4 to 0- 600 Bar
Body	:	SS316 / SS316L
Diaphragm	:	SS316L
Instrument Connection	:	1/4"/ 3/8"/ 1/2"- BSP / NPT (F)
Process Connection	:	1/4"/ 3/8"/1/2" - BSP /NPT , (M /F)
Sealing Liquid	:	Silicon Oil / Glycerin / Food Grade Oil / Syltherm
Seal	:	Diaphragm Seal body made from one solid bar,



SANITARY DIAPHRAGM SEAL
CLAMP TYPE
MODEL-TGI25-01

Pressure Ranges	:	1 - 0 to 0- 40 Bar
Top Chamber	:	SS316L -1" (DN25) ,1.5" (DN40), 2" (DN50) - Triclamp Type
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Diaphragm	:	SS316L
Sealing Gasket	:	SILICON
Sealing Liquid	:	Food Grade Oil
Option	:	Suitable Size Triclamp, Bottom Matting Part & Gasket



SANITARY DIAPHRAGM SEAL
FLUSH DIAPHRAGM (FEMALE)
MODEL- TGI26-01

Pressure Ranges	:	1 - 0 to 0- 40 Bar
Top Chamber	:	SS316L -1" (DN25) ,1.5" (DN40), 2" (DN50)- Female Type
Union Nut	:	SMS / DIN -1" (DN25) ,1.5" (DN40), 2" (DN50)
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Diaphragm	:	SS316L
Sealing Gasket	:	SILICON
Seal Filling Liquid	:	Food Grade Oil



SANITARY DIAPHRAGM SEAL
FLUSH DIAPHRAGM (MALE)
MODEL- TGI26-02

Pressure Ranges	:	1 - 0 to 0- 40 Bar
Top Chamber	:	SS316L -1" (DN25) ,1.5" (DN40), 2" (DN50)- Male Type
Union Nut	:	SMS / DIN -1" (DN25) ,1.5" (DN40), 2" (DN50)
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Diaphragm	:	SS316L
Sealing Gasket	:	SILICON
Seal Filling Liquid	:	Food Grade Oil



PULP SEAL, FLOATING RING TYPE
MODEL- TGI27

Pressure Ranges	:	0-4 to 0-40 bar Diaphragm
Chamber	:	SS316
Floating Ring	:	SS304
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Diaphragm	:	SS316L
Seal Filling Liquid	:	Silicon Oil
Options	:	Antivibration spring- Striaight / 90° Angle Type



WAFER SEAL - PAN CAKE TYPE
MODEL- TGI28-01

Pressure Ranges	:	0-1 to 0-250 bar
Diaphragm Chamber	:	Suit to standard size flanges
MOC	:	SS316L
Diaphragm	:	SS316L / Monel400 / Inconel600 / Hastelloy -c 276
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Special Requirements	:	1) Diaphragm with PTFE Coating 2) Seal with Capillary / armour tube /PVC armour Tube 3) Sealing Liquied - Silicon Oil / Glycerin / Syltherm



WELD-IN DIAPHRAGM SEAL
(SADDLE MOUNTING, ON PROCESS LINE)
MODEL- TGI28-02

Pressure Ranges	:	0-6 to 0-250 bar
Top Chamber	:	SS316/SS304
Bottom Chamber :	:	As per Standard pipe size (Weld on Pipe)
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Diaphragm	:	SS316L / Monel400 / Inconel600 / Hastelloy -C
Sealing Gasket	:	PTFE / METAL GASKET
Special Requirements	:	1) PTFE Coating on diaphragm 2) Capillary with armour tube 3) Sealing Liquied - Silicon Oil/ Glycerin / Syltherm



FLANGED DIAPHRAGM SEAL
DIRECT FLANGED FLUSHED TYPE
MODEL-TGI29-01

Pressure Ranges	:	-1 - 0 to 0-250 bar
Flange Size Class	:	As per standard
Flange Material	:	SS316/SS304/Monel / other
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Diaphragm	:	SS316L / Monel / Inconel / Hastelloy -C / PTFE / Tantalum
Special Requirements	:	1) PTFE Coating on diaphragm 2) Capillary with armour tube 3) Sealing Liquied - Silicon Oil/ Glycerin / Syltherm



FLANGED DIAPHRAGM SEAL
DIRECT FLANGED WELDED TYPE
MODEL-TGI29-02

Pressure Ranges	:	-1 - 0 to 0-250 bar
Flange Size Class	:	As per standard
Flange Material	:	SS316/SS304 / Monel / other
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Diaphragm	:	SS316L / Monel / Inconel / Hastelloy -C / PTFE / Tantalum
Special Requirements	:	1) PTFE Coating on diaphragm 2) Capillary with armour tube 3) Sealing Liquied - Silicon Oil/ Glycerin / Syltherm



FLANGED DIAPHRAGM SEAL
DIRECT FLUSHED TYPE, ROTATABLE
FLANGE MODEL- TGI29-03

Pressure Ranges	:	-1 - 0 to 0-250 bar
Flange Size Class	:	As per standard
Flange Material	:	SS316/SS304/Monel / other
Instrument Connection	:	1/4" / 1/2" - BSP / NPT (F)
Diaphragm	:	SS316L / Monel / Inconel / Hastelloy -C / PTFE / Tantalum
Special Requirements	:	1) PTFE Coating on diaphragm 2) Capillary with armour tube 3) Sealing Liquied - Silicon Oil/ Glycerin / Syltherm



GAUGE COCK, ALL STAINLESS STEEL
MODEL- TGI30-01

Type	: 2 Way / 3 Way
Material	: AISI316SS /AISI304SS
Instrument connection	: 1/2" NPT (F)[1/2" NPT (F) x 2 Nos for 3 Way]
Process connection	: 1/2" NPT (M)
Handle	: AISI 304 SS with Bachelite cover
Gaskets / Seals	: PTFE
Maximum working pressure	: 100 bar
Maximum working temperature	: 180°C



SIPHON, ALL STAINLESS STEEL
MODEL- TGI30-02

Type	: Pig Tail & U Type syphons
Material	: SS316,SS316L SS304, CS, BRASS
Instrument connection	: 1/4" / 3/8" /1/2" , BSP / NPT (F)
Pipe Size & Schedule	: 1/4" /3/8" /1/2" , 40/ 80 / 160
Connection Type	: Threaded / Weld In / Flange end / Sanitary Connection
Process connection	: 1/4" /3/8" /1/2" , 40/ 80 / 160
Maximum working pressure	: As per PT chart
Maximum working temperature	: As per PT chart
Options	: Epoxy Coating / IBR Certification /Tag Plate / special connections



PULSATION DAMPENER/SNUBBER
ADJUSTABLE NEEDLE TYPE
MODEL- TGI30-03

Type	: Flow Adjustable Screw
Material	: SS304 / SS316 /SS316L / BRASS
Instrument connection	: 1/4"/3/8"/ 1/2", BSP /NPT (F)
Process connection	: 1/4"/3/8"/ 1/2", BSP /NPT (M)
Gaskets / Seals	: Viton
Maximum working pressure	: 400 bar
Maximum working temperature	: 180°C



OVERLOAD PROTECTOR
GAUGE SAVER
MODEL- TGI30-04

Type	: Bellow / Piston
Material	: SS316 /SS316L / Monel
Instrument connection	: 1/4"/3/8"/ 1/2", BSP /NPT / M20 (F)
Process connection	: 1/4"/3/8"/ 1/2", BSP /NPT / M20 (M)
Gaskets / Seals	: Viton
Maximum working pressure	: 600 bar
Maximum working temperature	: 180°C



COOLING TOWER
MODEL- TGI30-05

Type	: Fin Type/ Perforated Type / Capillary Type
Material	: SS316 /SS316L / Monel
Instrument connection	: 1/4"/3/8"/ 1/2", BSP /NPT / M20 (F)
Process connection	: 1/4"/3/8"/ 1/2", BSP /NPT / M20 (M)
Maximum working pressure	: 1000 bar
Maximum working temperature	: 300°C



COOLING TOWER
MODEL- TGI30-05

Type	: To suit all standard flange RF OD
Material Flange facing	: Raised Face /RTJ
Flushing Port	: 1/8" / 1/4" / 1/2"- Plugged
Maximum working pressure	: As per Standard Flange Rating
Maximum working temperature	: 300°C
Options	: Nipple / Needle / Gasket



RTD - NIPPLE EXTENSION TYPE
MODEL- TGI31-01

Element	: PT-100 /500 / 1000, Class A / B
Range	: -200 400 / 600°C
Wire Combination	: Simplex / Duplex , 2 Wire/3 Wire/4Wire
Accuracy	: IEC-751 I DIN 43760
Sheath Material	: SS316 /SS316L
Sheath Diameter	: 3 / 5 / 6 / 8 /10 mm
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof /Atex.
Terminal Head Material	: Die cast Aluminium / SS304 /SS316
Cable Entry	: 3/4" ET/NPT, 1/2" NPT , M20
Head Extension	: Nipple Extension assembly in ASTM A105 (plated) /SS304 /SS316
Head Extension Length	: 50 mm upto 250 mm
Immersion Length	: 50 mm upto 10000 mm
Process Connection	: 1/2" / 3/4" - BSP / NPT, M20 (M)
Others	: With Transmitter 4...20 Ma output, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland, CE Certification



RTD
NIPPLE UNION NIPPLE EXTENSION
MODEL- TGI31-02

Element	: PT-100 /500 / 1000, Class A / B
Range	: -200 400 / 600°C
Wire Combination	: Simplex / Duplex , 2 Wire/3 Wire/4Wire
Accuracy	: IEC-751 I DIN 43760
Sheath Material	: SS316 /SS316L
Sheath Diameter	: 3 / 5 / 6 / 8 /10 mm
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof /Atex.
Terminal Head Material	: Die cast Aluminium / SS304 /SS316
Cable Entry	: 3/4" ET/NPT, 1/2" NPT, M20
Head Extension	: Nipple Union Nipple Extension assembly in ASTM A105 (plated) /SS304 /SS316
Head Extension Length (NUN)	: 100 mm upto 250 mm
Immersion Length	: 50 mm upto 10000 mm
Process Connection	: 1/2" / 3/4" - BSP / NPT, M20 (M)
Others	: With Transmitter 4...20 Ma output, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland, CE Certification



RTD
FIXED THREADED CONNECTION
MODEL TGI31-03

Element	: PT-100 /500 / 1000 , Class A / B
Range	: -200 400 / 600°C
Wire Combination	: Simplex / Duplex , 2 Wire/3 Wire/4Wire
Accuracy	: IEC-751 / DIN 43760
Sheath Material	: SS316 /SS316L
Sheath Diameter	: 3 / 5 / 6 / 8 /10 mm
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof /Atex.
Terminal Head Material	: Die cast Aluminium / SS304 /SS316
Cable Entry	: 3/4" ET/NPT, 1/2" NPT, M20
Process Connection Type	: Fixed Connection
Immersion Length	: 50 mm upto 10000 mm
Process Connection	: 1/2" / 3/4" - BSP / NPT, M20 (M)
Others	: With Transmitter 4...20 Ma output, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland, CE Certification



RTD
ADJUSTABLE THREADED
CONNECTION TYPE
MODEL- TGI31-04

Element	: PT-100 / 500 / 1000 , Class A / B
Range	: -200 400 / 600°C
Wire Combination	: Simplex / Duplex , 2 Wire /3 Wire /4 Wire
Accuracy	: IEC-751 / DIN 43760
Sheath Material	: SS316 /SS316L
Sheath Diameter	: 3 / 5 / 6 / 8 /10 mm
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof
Terminal Head Material	: Die cast Aluminium / SS304 /SS316
Cable Entry	: 3/4" ET/NPT, 1/2" NPT, M20
Head Extension	: Adjustable Connection
Immersion Length	: 50 mm upto 10000 mm
Process Connection	: 1/2" / 3/4" - BSP / NPT, M20
Others	: With Transmitter 4...20 Ma output, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland



RTD -TRANSITION JOINT TYPE
MODEL- TGI31-05

Element	: PT-100 / 500 / 1000 , Class A / B
Range	: -200 400 / 600°C
Wire Combination	: Simplex / Duplex , 2 Wire/3 Wire/4Wire
Accuracy	: IEC-751 / DIN 43760
Sheath Material	: SS316 / SS316L
Sheath Diameter	: 3 / 5 / 6 / 6.35 / 8 mm
Head extension	: Adjustable Connection
Immersion Length	: 50 mm upto 10000 mm
Process Connection	: 1/2" / 3/4" - BSP / NPT, M20
Lead Wire Length	: 1000 to 25000 mm
Lead Wire Type	: PTFE / PTFE / SS Braided , CE Certification



RTD
PLUG AND JACK CONNECTOR TYPE
MODEL- TGI31-06

Element	: PT-100 / 500 / 1000 , Cla ss A / B
Range	: -200 400 / 600°C
Wire Combination	: Simplex, 3 wire
Accuracy	: IEC-751 / DIN 43760
Sheath Material	: SS316 / SS304
Sheath Diameter	: 3 / 5 / 6 / 6.35 / 8 mm
Lead Wire Connector	: Plug and Jack Connection
Immersion Length	: 50 mm upto 10000 mm
Process Connection	: 1/2" / 3/4" - BSP / NPT, M20
Lead Wire Length	: 1000 to 25000 mm
Lead Wire Type	: PTFE / PTFE / SS Braided



RTD - BEARING TYPE
MODEL - TGI31-08

Element	: PT-100 / 500 / 1000 , Class A / B
Range	: -200 400 / 600°C
Wire Combination	: Simplex / Duplex , 2 Wire/3 Wire/4Wire
Accuracy	: IEC-751 / DIN 43760
Sheath Material	: SS316 / SS304
Sheath Diameter	: 3 / 5 / 6 / 6.35 / 8 mm
Element Length	: 10 mm upto 50 mm
Lead Wire Type	: PTFE / PTFE / SS Braided /FG/FG
Lead Wire Length	: 1000 to 25000 mm , CE Certification



RTD
WELD PAD / SURFACE MOUNTING
MODEL- TGI31-09

Element	:	PT-100 / 500 / 1000 , Class A / B
Range	:	-200 400 / 600°C
Wire Combination	:	Simplex / Duplex , 2 Wire/3 Wire/4Wire
Accuracy	:	IEC-751 / DIN 43760
Sheath Material	:	SS316 /SS316L / SS310
Sheath Diameter	:	3 / 5 / 6 / 8 mm
Terminal Head Type	:	Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof
Terminal Head Material	:	Die cast Alumi / SS304 /SS316
Cable Entry	:	3/4" ET/NPT, 1/2" NPT, M20
Head Extension	:	Adjustable Connection
Immersion Length	:	50 mm upto 1000 mm
Process Connection	:	1/2" / 3/4" - BSP / NPT, M20
Mounting	:	Local / No Bracket / with Bracket / 2" pipe mounting Bracket / Surface Mounting
Weld Pad	:	Rectangle / Integral Collar
Others	:	With Transmitter, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland,



RTD ASSEMBLY
WITH TRI CLOVER CONNECTION
MODEL- TGI31-12

Element	:	PT-100 / 500 / 1000 , Class A / B
Range	:	-200 400 / 600°C
Wire Combination	:	Simplex / Duplex , 2 Wire / 3 Wire / 4Wire
Accuracy	:	IEC-751 / DIN 43760
Sheath Material	:	SS316 /SS316L / SS310
Sheath Diameter	:	3 / 5 / 6 / 8 mm
Terminal Head Type	:	Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof
Terminal Head Material	:	Die cast Alumi / SS304 /SS316
Cable Entry	:	3/4" ET/NPT, 1/2" NPT, M20
Head Extension	:	Adjustable Connection
Immersion Length	:	50 mm upto 1000 mm
Process Connection	:	TRI CLAMP -1" /1.5" / 2" /2.5"
Others	:	With Transmitter, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland





THERMOCOUPLE
NIPPLE EXTENSION
MODEL- TGI32-01

Element	: Type - K / J / T / N / E
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded / Grounded
Sheath Material	: SS316 / SS316L / SS310 / INCONEL 600 / SS446
Sheath Diameter	: 3 / 5 / 6 / 8 mm
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather IP65/66/68 / Flame Proof / Explosion Proof / Atex
Terminal Head Material	: Die cast Aluminium / SS304 / SS316
Cable entry	: 3/4" ET/NPT, 1/2" NPT , M20
Head extension Type	: Nipple assembly in ASTM A105 (plated) , SS304 / SS316
Head extension Length	: 50 mm to 250 mm
Immersion	: 50 mm upto 1000 mm
Process connection	: 1/2" / 3/4" - BSP / NPT, M20
Others	: With Transmitter, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland, CE Certification.



THERMOCOUPLE NIPPLE
UNION NIPPLE EXTENSION (NUN)
MODEL- TGI32-02

Element	: Type-K / J / T / N / E
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded / Grounded
Sheath Material	: SS316 / SS316L / SS310 / INCONEL 600 / SS446
Sheath Diameter	: 3 / 5 / 6 / 8 mm
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof / Atex
Terminal Head Material	: Die cast Aluminium / SS304 / SS316
Cable entry	: 3/4" ET/NPT, 1/2" NPT , M20
Head extension Type	: Nipple Union Nipple Assembly in ASTM A105 (plated), SS304 / SS316
Head extension Length	: 100 mm to 250 mm
Immersion	: 50 mm upto 1000 mm
Process connection	: 1/2" / 3/4" - BSP / NPT, M20
Others	: With Transmitter, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland, CE Certification.



THERMOCOUPLE
FIXED THREADED TYPE
MODEL- TGI32-03

Element	: Type-K / J / T / N / E
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded / Grounded
Sheath Material	: SS316 / SS316L / SS310 / INCONEL 600/SS446
Sheath Diameter	: 3 / 5 / 6 / 8 mm
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof / Atex
Terminal Head Material	: Die cast ALUMINIUM / SS304 / SS316
Cable entry	: 3/4" ET/NPT, 1/2" NPT , M20
Head extension	: Fixed Connection
Immersion	: 50 mm upto 1000 mm
Process connection	: 1/2" / 3/4" - BSP / NPT, M20
Others	: With Transmitter, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland, CE Certification.



THERMOCOUPLE
ADJUSTABLE THREADED TYPE
MODEL- TGI32-04

Element	: Type-K / J / T / N / E
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded / Grounded
Sheath Material	: SS316 / SS316L / SS310 / INCONEL 600/SS446
Sheath Diameter	: 3 / 5 / 6 / 8 mm
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof / Atex
Terminal Head Material	: Die cast Aluminium / SS304 / SS316
Cable entry	: 3/4" ET/NPT, 1/2" NPT , M20
Head extension	: Adjustable Connection
Immersion	: 50 mm upto 1000 mm
Process connection	: 1/2" / 3/4" - BSP / NPT, M20
Others	: With Transmitter, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland, CE Certification.



THERMOCOUPLE - PLUG JACK TYPE
MODEL- TGI32-06

Element	: Type-K / J / T / N / E
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex
Hot Junction	: Ungrounded / Grounded
Sheath Material	: SS316 / SS316L / SS310 / INCONEL 600
Sheath Diameter	: 3 / 5 / 6 / 8 mm
Cold End Terminal	: Standard Plug & Jack Connector
Lead Wire Type	: PTFE / PTFE / SS Braided
Immersion Length	: 50 mm upto 10000 mm



THERMOCOUPLE
TRANSITION JOINT TYPE
MODEL- TGI32-07

Element	: Type-K / J / T / N / E
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded / Grounded
Sheath Material	: SS316 / SS316L / SS310 / INCONEL 600
Sheath Diameter	: 3 / 5 / 6 / 8 mm Lead
Wire Length	: 1000 to 25000 mm Lead
Wire Type	: PTFE / PTFE / SS Braided
Immersion Length	: 50 mm upto 10000 mm



THERMOCOUPLE
BEARING TEMPERATURE
TYPE MODEL- TGI32-08

Element	: Type-K / J / T / N / E
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded
Sheath Material	: SS316 / SS304
Sheath Diameter	: 3 / 5 / 6 / 8 mm
Lead Wire Length	: 1000 to 25000 mm
Lead Wire Type	: PTFE / PTFE / SS Braided / FG/FG
Element Length	: 10 mm upto 50 mm



THERMOCOUPLE
SPRING LOADED BAYONET FITTINGS
MODEL- TGI32-10

Element	: Type-K / J / T / N / E
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded
Sheath Material	: SS316 / SS304
Sheath Diameter	: 3 / 4.5 / 6.35 / 8 mm
Lead Wire Length	: 1000 to 25000 mm
Lead Wire Type	: PTFE / PTFE / SS Braided / FG/FG
Immersion Length	: 10 mm upto 200 mm
Process Connection	: Bayonet ID 12 / 14 mm
Mounting Type	: Straight / 90 Angular / Button Type



THERMOCOUPLE
CERAMIC PROTECTION TUBE WITH
FLANGE CONNECTION
MODEL- TGI32-13

Element	: Type-K / J / K / N / R / S / B Mineral insulated / Element with ceramic insulator
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded / Grounded
Sheath Material	: INCONEL 600 / CERAMIC
Insulator Diameter	: 3 / 5 / 6 / 8 / 10 / 12 mm
Wire Diameter	: 24 / 25 / 26 / 27 swg,
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof
Terminal Head Material	: Die cast Aluminium / SS304 / SS316
Cable Entry	: 3/4" ET/NPT, 1/2" NPT , M20
Process Connection Type	: Adjustable / Fixed Flange
Immersion	: 100 mm upto 1000 mm
Process Connection	: Standard Flanges
Head Extension Type	: Head with female threading
Support Tube Material	: SS316/ SS316L / SS310 / INCONEL / SS446
Inner Protection Tube Material	: KER - 610, Pythagoras / KER - 710, Recrystallised Alumina
Inner Protection Tube Size	: 6X1, 8X1.5 / 10X2, 12X2 mm
Outer Protection Tube Material	: KER - 610, Pythagoras / KER - 710, Recrystallised Alumina, Kanthai AF , Kanthai APM, Inconel600
Outer Protection Tube Size	: 6X1, 8X1.5/ 10X2, 12X2, 15X2.5, 20X2.5, 24X3,
Others	: With Transmitter, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland,



THERMOCOUPLE
CERAMIC PROTECTION TUBE WITH
THREADED CONNECTION
MODEL- TGI32-14

Element	: Type-K / J / K / N / R / S / B Mineral insulated / Element with ceramic insulator
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded / Grounded
Sheath Material	: INCONEL 600 / CERAMIC
Insulator Diameter	: 3 / 5 / 6 / 8 / 10 / 12 mm
Wire Diameter	: 24 / 25 / 26 / 27 swg
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof
Terminal Head Material	: Die cast Aluminium / SS304 / SS316
Cable Entry	: 3/4" ET/NPT, 1/2" NPT , M20
Process Connection Type	: Adjustable / Fixed Connection
Immersion	: 100 mm upto 1000 mm
Process Connection	: 1/2" / 3/4" / 1" / 1.5" / 2" - BSP / NPT, M20
Head Extension Type	: Head with female threading
Support Tube Material	: SS316/ SS316L / SS310 / INCONEL / SS446
Inner Protection Tube Material	: KER - 610, Pythagoras / KER - 710, Recrystallised Alumina
Inner Protection Tube Size	: 6X1, 8X1.5 / 10X2, 12X2 mm
Outer Protection Tube Material	: KER - 610, Pythagoras / KER - 710, Recrystallised Alumina, Kanthai AF , Kanthai APM, Inconel600
Outer Protection Tube Size	: 6X1, 8X1.5/ 10X2, 12X2, 15X2.5, 20X2.5, 24X3,
Others	: With Transmitter, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland,



THERMOCOUPLE - WELD
PAD MOUNTING TYPE (SKIN TYPE)
MODEL- TGI32-15

Element	: Type-K / N
Accuracy	: Standard to IEC 584 & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded / Grounded
Sheath Material	: SS316 / SS316L / SS310 / INCONEL 600
Sheath Diameter	: 3 / 5 / 6 / 8 mm
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof
Terminal Head Material	: Die cast Aluminium / SS304 / SS316
Cable entry	: 3/4" ET/NPT, 1/2" NPT , M20
Head extension	: Adjustable Connection
Immersion	: 50 mm upto 1000 mm
Process connection	: 1/2" / 3/4" - BSP / NPT, M20
Mounting	: Local / No Bracket / with Bracket / 2" pipe mounting Bracket / Surface Mounting
Weld Pad	: Rectangle / Integral Collar
Others	: With Transmitter, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland,



THERMOCOUPLE
THREADED / FLANGE TYPE
MODEL- TGI32-18

Element	: Type-K / J / N / R / S / B Mineral insulated / Element with ceramic insulator
Accuracy	: Standard to ISA & ANSI MC96.1
No. of Sensors	: Simplex / Duplex
Hot Junction	: Ungrounded / Grounded
Sheath Material	: INCONEL 600 / SS316
Insulator Diameter	: 3 / 5 / 6 / 8 / 10 / 12 mm
Terminal Head Type	: Threaded Cover / Hinged / 2 screwed / Weather -IP65/66/68 / Flame Proof / Explosion Proof
Terminal Head Material	: Die cast Aluminium / SS304 / SS316
Cable Entry	: 3/4" ET/NPT, 1/2" NPT , M20,
Immersion	: 50 mm upto 1500 mm
Process Connection	: Standard Flanges - Adjustable / Fixed Type
Head Extension Type	: Head with female threading
Protection Tube	: SS316/ SS346 / SS310 / SS316L / Inconel600
Protection Tube Size	: 10X1.5 / 12X1.5 / PIPE 3/8" / PIPE 1/2" / PIPE 3/4"-SCH. 40 / SCH 80
Others	: With Transmitter, Terminal Block PCD -33 /46 mm, Single / Double Compression Gland



AGENCY PRODUCTS

MODEL- TGI36-1
MODEL- TGI36-2
MODEL- TGI36-3

Pressure Transmitters	: -1 1000 Bar, 4 ...20mA 0.....10 V, 8 ... 32VDC, 1/4" BSP(M), Operational Temperature : -40 ... 100°C, Brand : Keller Series : 21Y / 23(S)Y / 25Y / 36XW / 36XW Ei / 33X / 35X / 33XEi / 35X Ei.
Digital Pressure Gauges	: -1 ... 700 Bar, Acc: ±0.1%, SS316L, Read Out , Operational Temperature : -20 ... 70°C Battery : 3V / 3.6V / 1000 Hrs to 2000 Hrs, Brand : Keller Series : LED02 / LED02 Ei / LEX1 / LEX1 Ei / LP / MP / HP / K / P / LPB / HTP / P12.
Flow Instruments / Switches	: DP Type / Glass Tube Type / Dial with Pointer Type Calibration Tester / Pointer Puller / Bezel Opener / Spar Parts - Electric Contact , Gauge Window, Movement Assembly, Dial, Pointers, Sealing Washer & O Ring ,



THREADED CONNECTION
FABRICATED / WELDED
MODEL- TGI33-01

Material Construction	: SS304 / SS310 / SS316 / SS446 / INCONEL / MONEL/HASTELLOY-C
Instrument Connection	: 3/8" / 1/2" / 3/4" / 1" -BSP /NPT (F)
Process Connection	: 1/2"/3/4"/1" / 1.5" / 2" -BSP / NPT (M)
Bore Size	: 7 / 9 / 10 / 12 / 16 mm in Seamless Pipe / Tube , 7x10, 7x12, 9x14, 10x12,12x14, 12x16 mm , Pipe 1/8" , 1/4" 1/2" , 1" Sch.-40,80,160 in Fabricated Thermowell
Head Type	: Hexagonal, Round
Extension Length	: 45mm / 50mm / special requirement
Insertion Length	: 100 to 2000 mm



THREADED CONNECTION
BARSTOCK
MODEL- TGI33-02

Material Construction	: SS304 / SS310/ SS316 /SS446/INCONEL /MONEL/HASTELLOY-C
Instrument Connection	: 3/8" / 1/2" / 3/4" / 1" -BSP /NPT (F)
Process Connection	: 1/2" / 3/4" / 1" / 1.5" / 2" -BSP / NPT (M)
Bore Size	: 6.6 / 7 / 8.5 / 9.6 / 11 / 13 mm in Bar stock Thermowell
Head Type	: Hexagonal, Round
Extension Length	: 45mm / 50mm / special requirement
Insertion Length	: Round Type Upto 1000 mm / Hex Type: Upto 300 mm
Other Options	: Wake Frequency Calculation, Shank surface coating / Lining / Sleeve



THERMOWELL WITH FLANGE
FABRICATE TYPE
MODEL- TGI33-02

Material Construction	: SS304 / SS310 / SS316 / SS446 / INCONEL / MONEL/HASTELLOY-C
Instrument Connection	: 3/8" / 1/2" / 3/4" / 1" -BSP /NPT (F)
Process Connection	: Standard Flanges
Bore Size	: 7 / 9 / 10 / 12 / 16 mm in Seamless Pipe / Tube , 7x10, 7x12, 9x14, 10x12,12x14, 12x16 mm , Pipe 1/8" , 1/4" 1/2" , 1" Sch.- 40, 80, 160 in Fabricated Thermowell
Head Type	: Round
Extension Length	: 45mm / 50mm / special requirement
Insertion Length	: Round Type Upto 2000 mm
Other Options	: Shank surface coating / Lining / Sleeve



THERMOWELL WITH FLANGE
BAR STOCK TYPE
MODEL- TGI33-04

Material Construction	: SS304 / SS310 / SS316 / SS446 / INCONEL / MONEL/HASTELLOY-C
Instrument Connection	: 3/8" / 1/2" / 3/4" / 1" -BSP /NPT (F)
Process Connection	: Standard Flanges
Bore Size	: 6.6 / 7 / 8.5 / 9.6 / 11 / 13 mm in Bar stock Thermowell
Head Type	: Round
Extension Length	: 45mm / 50mm / special requirement
Insertion Length	: Round Type Upto 1000 mm
Other Options	: Wake Frequency Calculation, Shank surface coating / Lining / Sleeve



THERMOWELL -VAN STONE
BAR STOCK TYPE
MODEL- TGI33-05

Material Construction	: SS304 / SS310 / SS316 / SS446 / INCONEL / MONEL/HASTELLOY-C
Instrument Connection	: 3/8" / 1/2" / 3/4" / 1" -BSP /NPT (F)
Process Connection	: Suitable to Standard Flanges
Bore Size	: 6.6 / 7 / 8.5 / 9.6 / 11 / 13 mm in Bar stock Thermowell
Head Type	: Round
Extension Length	: 45mm / 50mm / special requirement
Insertion Length	: Round Type Upto 1000 mm
Other Options	: Wake Frequency Calculation, Shank surface coating / Lining / Sleeve



NEEDLE VALVE (ISOLATION)
MODEL- TGI34-01

Models	: Needle Valves -Isolation
Needle Types	: Hard Seated / Soft Seated / Ball seated
Mounting	: Pipe to Pipe - Remote Type
Process & Instr. Connection Size	: 1/4, 3/8, 1/2", 3/4", 1", 1.5" -BSP / NPT
Process x Instr. Connection Form	: M x M / M X F, F X F
Pressure Rating	: 6000 psi / 10000 psi / 20000 psi
Stem Packing	: PTFE / Grafoil
Material Construction	: SS304 / SS316 / INCONEL / MONEL / HASTELLOY-C



BLOCK AND BLEED VALVE
MODEL- TGI34-02

Models	: Needle Valves -Isolation , Block & Bleed Valve
Needle Types	: Hard Seated / Soft Seated / Ball seated
Mounting	: Pipe to Pipe - Remote Type
Process & Instr. Connection Size	: 1/4, 3/8, 1/2", 3/4", 1", 1.5" -BSP / NPT
Process x Instr. Connection Form	: MxM / MXF / FXF
Pressure Rating	: 6000 psi / 10000 psi / 20000 psi
Stem Packing	: PTFE / Grafoil
Material Construction	: SS304 / SS316 / INCONEL / MONEL / HASTELLOY-C



MULTI PORT VALVE
MODEL- TGI34-03

Models	: Needle Valves -Isolation , Block & Bleed Valve
Needle Types	: Hard Seated / Soft Seated / Ball seated
Mounting	: Pipe to Pipe - Remote Type
Process & Instr. Connection Size	: 1/4, 3/8, 1/2", 3/4", 1", 1.5" -BSP / NPT
Process x Instr. Connection Form	: MxM / MXF / FXF
Pressure Rating	: 6000 psi / 10000 psi / 20000 psi
Stem Packing	: PTFE / Grafoil
Material Construction	: SS304 / SS316 / INCONEL / MONEL / HASTELLOY-C



TWO WAY MANIFOLD VALVE
MODEL- TGI35-02

Models	: Manifold : 2 valves : 1 isolation valve , 1 vent valve
Needle Types	: Hard Seated / Soft Seated
Mounting	: Pipe to pipe , Remote Type
Process & Instr. Connection Size	: 1/4", 1/2" -BSP / NPT
Process x Instr. Connection Form	: Female x Female
Pressure Rating	: 6000 psi to 10000 psi
Stem Packing	: PTFE / Grafoil
Material Construction	: SS304 / SS310 / SS316 / INCONEL / MONEL / HASTELLOY-C
Options	: Nace MR0175/MR0103 / Oxygen Service ,



THREE WAY MANIFOLD VALVE
MODEL- TGI35-04

Models	: Manifold : 3 valves : 2 isolation, 1 Equalizer
Needle Types	: Hard Seated / Soft Seated
Mounting	: Pipe to pipe, Remote Type
Process & Instr. Connection Size	: 1/4", 1/2" -BSP / NPT
Process x Instr. Connection Form	: F x F , M x F, M x M
Pressure Rating	: 6000 psi
Stem Packing	: PTFE / Grafoil
Material Construction	: SS304 / SS310 / SS316 / INCONEL / MONEL / HASTELLOY - C
Options	: Nace MR0175/MR0103 / Oxygen Service



FOUR WAY MANIFOLD VALVE
MODEL- TGI35-04

Models	: Manifold : Isolation, 4 valves
Needle Types	: Hard Seated / Soft Seated
Mounting	: Pipe to pipe, Remote Type
Process & Instr. Connection Size	: Threaded -1/2" -BSP / NPT
Process x Instr. Connection Form	: Flange - Co-planner (DIN 19213)
Pressure Rating	: 6000 psi
Stem Packing	: PTFE / Grafoil
Material Construction	: SS304 / SS310 / SS316 / INCONEL / MONEL / HASTELLOY - C
Options	: Nace MR0175/MR0103 / Oxygen Service



FIVE WAY MANIFOLD VALVE
MODEL- TGI35-05

Models	: Manifold : 3 valves : 2 isolation, 1 Equalizer
Needle Types	: Hard Seated / Soft Seated
Mounting	: Pipe to pipe, Remote Type
Process & Instr. Connection Size	: 1/4", 1/2" -BSP / NPT
Process x Instr. Connection Form	: F x F , M x F, M x M
Pressure Rating	: 6000 psi
Stem Packing	: PTFE / Grafoil
Material Construction	: SS304 / SS310 / SS316 / INCONEL / MONEL / HASTELLOY - C
Options	: Nace MR0175/MR0103 / Oxygen Service



SS FLOAT, SIDE MOUNTED
MODEL- TGI37-01

Mounting	: SIDE / TOP
Type	: General Purpose / Sanitary
Specific Gravity	: 0.75
Operating Temp	: -10°C 100°C
Operating Pressure	: 12 Bar
Switch Points	: 1No / 2 Nos / 3Nos / 4 Nos
Process Connection	: 1" BSP / NPT / Standard Flanges
Wetted Parts	: SS316
Ingress Protection	: Weather Proof / Flame Proof / Ex-Proof
Switch Type	: 1SPST & 1SPDT
Switch Rating	: 5A / 230 VAC -Reed Switch
Insertion Length	: 150 mm 3000 mm
Enclosure Protection	: Die Cast Aluminium / SS304, also with surface coating - Epoxy Painting
Wetted Parts Protection	: Non Magnetic SS316 , Surface coating - PVDF / PTFE



SS FLOAT, TOP MOUNTED
MODEL- TGI38-01

Mounting	: TOP
Type	: General Purpose / Sanitary
Specific Gravity	: 0.75 ,
Operating Temp	: -10°C 100°C
Operating Pressure	: 12 Bar
Switch Points	: 1No / 2 Nos / 3Nos / 4 Nos
Process Connection	: 1" BSP / NPT / Standard Flanges
Wetted Parts	: SS316
Ingress Protection	: Weather Proof / Flame Proof / Ex-Proof
Switch Type	: 1SPST & 1SPDT
Switch Rating	: 0.5A / 230 VAC -Reed Switch
Insertion Length	: 150 mm 3000 mm
Enclosure Protection	: Die Cast Aluminium / SS304, also with surface coating Epoxy Painting
Wetted Parts Protection	: Non Magnetic SS316, Surface coating - PVDF / PTFE



MAGNETIC LEVEL GAUGE
BI COLOUR
MODEL- TGI39-01

Mounting	: REAR / SIDE / TOP SIDE
Specific Gravity	: 0.75
Operating Temp	: -20 ... 120°C / -20 ... 300°C
Operating Pressure	: 10bar / 25 bar / 50 Bar / 80 Bar / 100 Bar
Process Connection	: 1/2" 1" NPT / Standard Flanges / Weld in
Indicator	: Rolling Flappers - Blue & White / Red & White
Wetted Parts Protection	: SS304 / SS316 / SS316L / with NACE
Distance Center to Center	: 200 mm 6000 mm
Scale	: Aluminium / SS304 / SS316
Least Count	: As per requirement
Options	: Switches -1SPDT , Switch Points -1 / 2 / 3 / 4 Nos / Transmitter / Valve



GLASS LEVEL GAUGE - REFLEX
MODEL- TGI40-01

Mounting	: LEFT SIDE / RIGHT SIDE / REAR SIDE / TOP SIDE
Operating Temp	: -20 ... 120°C / UPTO 240°C / UPTO 400°C
Operating Pressure	: 20bar / 35 bar / 65 Bar / 80 Bar / 100Bar / 200 bar
Process Connection	: 1/2" 1" NPT / Standard Flanges / Weld in
Indicator	: Gauge Glass -Klinger / Borosilicate
Wetted Parts	: SS304 / SS316 / CS105
Distance Center to Center	: 250 mm 6000 mm
Scale	: Aluminium / SS304 / SS316
Least Count	: As per requirement
Options	: Needle / ball Valves / FLANGES with Vent or Drain Port, Auto shut of valve



GLASS LEVEL GAUGE - TRANSPARENT
MODEL- TGI40-02

Mounting	: LEFT SIDE / RIGHT SIDE / REAR SIDE / TOP SIDE
Operating Temp	: -20 ... 120°C / 240°C / 300°C
Operating Pressure	: 20bar / 35 bar / 65 Bar / 80 Bar / 100 Bar / 200 Bar
Process Connection	: 1/2" 1" NPT / Standard Flanges / Weld in
Indicator	: Gauge Glass - Klinger / Borosilicate
Wetted Parts	: SS304 / SS316 / CS105
Distance Center to Center	: 250 mm 6000 mm
Scale	: Aluminium / SS304 / SS316
Least Count	: As per requirement
Options	: Anti frost protection, Illuminator with diffuser, Needle / ball Valves / FLANGES with Vent or Drain Port /Auto shut of valve



GLASS LEVEL GAUGE - TUBULAR
MODEL- TGI41-01

Mounting	: REAR SIDE / LEFT SIDE / RIGHT SIDE / TOP SIDE
Operating Temp	: -10 ... 100°C
Operating Pressure	: Upto 10 Bar
Process Connection	: 1/2" 1" BSP/ NPT / Standard Flanges
Indicator	: Borosilicate Glass Tube / Plexi Glass
Wetted Parts	: SS304 / SS316 / CS105
Distance Center to Center	: 150 mm 2000 mm
Scale	: Aluminium / SS304 / SS316
Least Count	: As per requirement
Options	: Drain / Vent with ball Valves



FLOAT AND SCALE LEVEL GAUGE
MODEL- TGI41-02

Mounting assemblies (2 x pulley systems)	: Cadmium plated steel pulley with PTFE bush and SS shaft housed In weatherproof enclosure
Operating Temp	: -10 ... 80°C
Operating Pressure	: Upto 5 Bar
Process Connection	: Standard Flanges
Least Count	: 5 mm
Float Material & Size	: AISI316 SS / ?200 mm for up to 7.5 Meters / AISI316 SS /? 350 mm for up to 20 Meters
Measuring Ranges	: 3 meter 20 meter
Scale	: Aluminium / SS with coating,
Least Count	: As per requirement
Float / Guide Wire Ropes	: AISI 316 SS / AISI 304 SS (0 1.6 mm • multistard)
Options	: Ancer Plate for float guide



LEVEL SWITCH, MINIATURE,
SS, SIDE/TOP MOUNTED
MINIATURE LEVEL SWITCH
MODEL- TGI42-01

Mounting Type	: SIDE / TOP Side Mounted / Top Mounted
Specific Gravity	: 0.8
Operating Temp	: -10 180°C
Operating Pressure	: 4 bar ... 10 Ba
Process Connection	: 1/4" 1" BSP / NPT
Switch Type & Rating	: 1SPDT / 2 SPDT, 0.5A /230VAC-Reed switch



CABLE FLOAT LEVEL SWITCH
MODEL- TGI42-02

Mounting	: TOP
Material of Float	: POLYPROPYLENE
Process Conn. Material	: SS316 / PP / CS105 / PVC
Specific Gravity	: 0.8
Operating Temp	: -10 60°C
Operating Pressure	: Max 4 Bar
Enclosure	: Die Cast Aluminium - Weather proof / Flame Proof
Process Connection	: Standard Flanges
Ingress Protection	: IP68
Switch Type & Rating	: 1SPDT, 5A / 250 VAC -Micro Switch
Cable Material & Set Points	: PVC / 5 Points
Cable Length	: 300 mmupto 25 meter



COMMERCIAL PRESSURE SWITCH
GENERAL PURPOSE
MODEL- TGI43-01

Features	:	Field Adjustable /Auto Reset / CE Complied / Differential Adjust.
Accuracy	:	± 1% / CL 1
Repeatability	:	±1%
Mounting	:	Bottom / Back Panel
Enclosure	:	Steel Body(Plated with Plastic Cover)
Sensing Element	:	PB Bellow
Process Connection	:	1/4" BSP (F),
Options	:	3/8",1/2"-BSP / NPT
Max. Process Temp.	:	100°C
Ambient Temp.	:	-10 .. 60°C
Switch Type & Rating	:	1SPDT , 5A / 220 VAC/10A 24VDC - Micro Switch
Ranges	:	3 30 bar
Differential	:	1.5 12 Bar
Accessories	:	Mounting Bracket with bolt - Steel Plated



WEATHERPROOF PRESSURE SWITCH
LOW PRESSURE SWITCH
MODEL-TGI44-01

Features	:	Fixed/Field Adjustable(External) / Differential Adjus.- External / Internal
Accuracy	:	± 1% / CL 1
Repeatability	:	±0.5% /CL 0.5, On Raising /On Falling
Mounting	:	Bottom / Back Panel / 2"pipe Mounting Bracket
Enclosure	:	Die Cast Aluminium -Wheather Proof - IP68
Wetted Parts	:	Bottom Body , Diaphragm
MOC	:	SS316/ Monel / Inconel / PTFE
Process Connection	:	1/4" BSP(F)
Options	:	3/8" , 1/2"-BSP / NPT
Max. Process Temp.	:	150°C
Ambient Temp.	:	-20 .. 65°C
Switch Type & Rating	:	1SPDT,2SPDT,DPDT, 5A / 250 VAC / 0.2A 24VDC Standard -Micro Switch with silver Contact.
Micro Switch	:	Low/High Dead Band, Hermetically/Environment Sealed/Gold Contact
Ranges	:	10mbar25 bar , -1..... 400mbar
Differential	:	2mbar 6 Bar
Accessories	:	Mounting Bracket with bolt - Steel Plated /2" Pipe mounting bracket
Cable Entry	:	PG13.5 (std)
Options	:	3/4 ET / 1/2" NPT / DIN Conn/ 4pin / 7pin connectors Single / Double Compression Gland- Weather proof - Brass / SS



HIGH PRESSURE SWITCH
MODEL- TGI44-02

Features	:	Fixed/Field Adjustable(External)/Differential Adjustment-External/Internal
Accuracy	:	± 1% / CL 1
Repeatability	:	±0.5% /CL 0.5, On Raising /On Falling
Mounting	:	Bottom / Back Panel / 2"pipe Mounting Bracket
Enclosure	:	Die Cast Aluminium -Wheather Proof -IP68
Wetted Parts	:	Bottom Body ,Piston
MOC	:	SS316/ Monel / Inconel / PTFE
Process Connection	:	1/4" BSP(F)-Standard
Options	:	3/8",1/2"-BSP / NPT
Max. Process Temp.	:	150°C
Ambient Temp.	:	-20 .. 65°C
Switch Type & Rating	:	1SPDT,2SPDT,DPDT, 5A / 250 VAC / 0.2A 24VDC - Standard : Micro Switch with silver contact
Micro Switch	:	Low/High Dead Band, Hermetically/Environment Sealed /Gold Contact
Ranges	:	Ranges : Above 25 bar 250 bar
Differential	:	0.125 Bar
Accessories	:	Mounting Bracket with bolt - Steel Plated /2" Pipe mounting bracket
Cable Entry	:	PG13.5 (std)
Options	:	3/4 ET / 1/2" NPT / DIN Conn/ 4pin / 7pin connectors Single / Double Compression Gland- Weather proof - Brass / SS



DIFFERENTIAL PRESSURE SWITCH
HP/ LP PORT TYPE
MODEL-TGI45-01

Features	: Fixed/Field Adjustable (External)/Differential Adjustment-External/Internal
Accuracy	: $\pm 1\%$ / CL 1
Repeatability	: $\pm 0.5\%$ /CL 0.5, On Raising / On Falling
Mounting	: Bottom / Back Panel / 2"pipe Mounting Bracket
Enclosure	: Die Cast Aluminium - Wheather Proof Design -IP68
Wetted Parts	: Body, Diaphragm
MOC	: SS316/ Monel / Inconel
Process Connection	: 1/4" BSP(F) - Standard
Options	: 3/8",1/2"-BSP / NPT
Max. Process Temp.	: 150°C
Ambient Temp.	: -20 .. 65°C
Switch Type & Rating	: 1SPDT,2SPDT,DPDT, 5A / 250 VAC / 0.2A 24VDC Standard : Micro Switch with silver contact
Micro Switch	: Low/High Dead Band, Hermetically/Environment Sealed / Gold Contact
Ranges	: 10 mbar 25 bar
Differential	: Fixed / Adjustable
Accessories	: Mounting Bracket with bolt - Steel Plated /2" Pipe mounting bracket
Cable Entry	: PG13.5 (std)
Options	: 3/4 ET / 1/2" NPT / DIN Conn/ 4pin / 7pin connectors Single / Double Compression Gland- Weather proof - Brass / SS



FLAME PROOF PRESSURE SWITCH
LOW PRESSURE
MODEL- TGI46-01

Features	: Fixed/Field Adjustable (External)/Differential Adjustment-External/Internal
Accuracy	: $\pm 1\%$ / CL 1
Repeatability	: $\pm 0.5\%$ /CL 0.5, On Raising / On Falling
Mounting	: Bottom / Back Panel / 2"pipe Mounting Bracket
Enclosure	: Die Cast Aluminium - Flame Proof- IIA IIB IIC T6 ZONE 1 & 2
Wetted Parts	: Bottom Body, Diaphragm
MOC	: SS316/ Monel / Inconel / PTFE
Process Connection	: 1/4" BSP(F) - Standard
Options	: 3/8",1/2"-BSP / NPT
Max. Process Temp.	: 150°C
Ambient Temp.	: -20 .. 65°C
Switch Type & Rating	: 1SPDT,2SPDT,DPDT, 5A / 250 VAC / 0.2A 24VDC Standard : Micro Switch with silver contact
Micro Switch	: Low/High Dead Band, Hermetically/Environment Sealed /Gold Contact
Ranges	: 10 mbar 25 bar
Differential	: Fixed / Adjustable
Accessories	: Mounting Bracket with bolt - Steel Plated /2" Pipe mounting bracket, Diaphragm Seal, Syphon, Snubber, Cooling Tower
Cable Entry	: 3/4 ET / 1/2" NPT Double Compression Gland- Flame Proof - Brass / SS



FLAME PROOF PRESSURE SWITCH
HIGH PRESSURE
MODEL- TGI46-02

Features	: Fixed/Field Adjustable (External)/Differential Adjustment-External/Internal
Accuracy	: $\pm 1\%$ / CL 1,
Repeatability	: $\pm 0.5\%$ /CL 0.5, On Raising /On Falling
Mounting	: Bottom / Back Panel / 2"pipe Mounting Bracket
Enclosure	: Die Cast Aluminium - Flame Proof- IIA IIB IIC T6 ZONE 1 & 2
Wetted Parts	: Bottom Body, Piston
MOC	: SS316/ Monel / Inconel / PTFE
Process Connection	: 1/4" BSP(F) - Standard
Options	: 3/8",1/2"-BSP / NPT
Max. Process Temp.	: 150°C
Ambient Temp.	: -20 .. 65°C
Switch Type & Rating	: 1SPDT,2SPDT,DPDT, 5A / 250 VAC / 0.2A 24VDC - Standard : Micro Switch with silver contact
Micro Switch	: Low / High Dead Band, Hermetically /Environment Sealed /Gold Contact
Ranges	: Above 25bar 250 bar
Differential	: Fixed / Adjustable
Accessories	: Mounting Bracket with bolt - Steel Plated /2" Pipe mounting bracket, Diaphragm Seal, Syphon, Snubber, Cooling Tower
Cable Entry	: 3/4 ET / 1/2" NPT Double Compression Gland- Flame Proof - Brass/SS



MINIATURE PRESSURE SWITCH
MODEL- TGI49-01

Features	: Fixed / Field Adjustable
Accuracy	: ± 2% / CL 2%
Repeatability	: ± 2% / CL 2
Range	: 1.....160 bar
Mounting	: Bottom
Wetted Parts	: Bottom Body , Diaphragm / Piston
MOC	: SS304/SS316
Process Connection	: 1/4"BSP(M)
Options	: Option: 1/8" / 3/8" / 1/2"- BSP / NPT / MM
Max. Process Temp.	: 100°C
Ambient Temp.	: -20 .. 150°C
Switch Type & Rating	: 1SPST, 5A / 220 VAC - Contact Type
Switching Type	: NO / NC



BIMETAL TEMPERATURE GAUGES
MODEL- TGI50

Dial Size	: DN40 / DN50 / DN63 / DN80 / DN100 / DN125 / DN150 / DN250
Temp. Range	: -100 to 600°C
Accuracy	: ± CL 1
Standard	: EN13190
Mounting	: Bottom / Center Back / Every angle Clamp with External Zero Adjustment
Process Connection	: 1/4" / 3/8" / 1/2"-BSP / NPT, Special Connections
Ingress Protection	: IP65, Hermetically Sealed Encloser
Execution	: Dry / Fillable
Sensing Element	: Bimetal Helix
Case & Bezel	: SS304/316, - Stem / Probe TIG welded with Case



GAS FILLED TEMPERATURE GAUGES
MODEL- TGI51

Dial Size	: DN100 / DN125 / DN150 / DN250
Temp. Range	: -100 to 650°C
Accuracy	: ± CL 1
Standard	: EN13190
Mounting	: Bottom/Center Back/Every angle Clamp with External Zero Adjustment
Process Connection	: 1/4",/3/8",/1/2"-BSP / NPT, Option with Anti Vibration spring
Ingress Protection	: IP65 , Options Hermetically Sealed Encloser
Execution	: Dry / Fillable
Sensing Element	: Bourdon Tube with Temperature Compensation
Case & Bezel	: SS304/316, - Stem / Probe TIG welded with Case



ELECTRIC CONTACT TEMPERATURE
GAUGES -STD. GLASS
MODEL- TGI52

Dial Size	: DN100 / DN150, Window- standard Glass
Temp. Range	: -100 to 650°C
Accuracy	: ± CL 1
Standard	: EN13190
Mounting	: Bottom/Center Back/Every angle Clamp with External Zero Adjustment
Process Connection	: 1/4",/3/8",/1/2"-BSP / NPT, Option with Anti Vibration spring
Ingress Protection	: IP65 , Hermetically Sealed Encloser
Execution	: Dry / Fillable
Electric Contact	: Magnetic / Inductive Contacts, NO,NC,SPST,DPDT,NONC
Sensing Element	: Bourdon Tube with Temperature Compensation, H.V
Case & Bezel	: SS304/316, - Stem / Probe TIG welded with Case

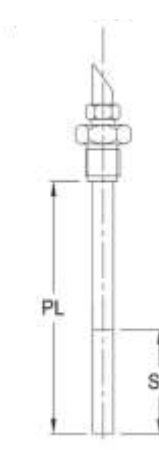
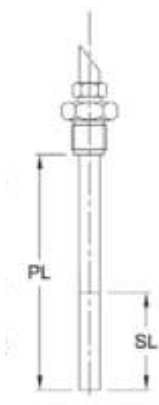


ELECTRIC CONTACT TEMPERATURE
GAUGES - DOOM GLASS
MODEL- TGI53

Dial Size	: DN100 / DN150, Window- Doom Glass
Temp. Range	: -100 to 650°C
Accuracy	: ± CL 1
Standard	: EN13190
Mounting	: Bottom/Center Back/Every angle Clamp with External Zero Adjustment
Process Connection	: 1/4",/3/8",/1/2"-BSP / NPT, Option with Anti Vibration spring
Ingress Protection	: IP65 , Hermetically Sealed Encloser
Execution	: Dry / Fillable
Electric Contact	: Magnetic / Inductive Contacts, NO,NC,SPST,DPDT,NONC,
Sensing Element	: Bourdon Tube with Temperature Compensation
Case & Bezel	: SS304/316, - Stem / Probe TIG welded with Case

SELECTION CRITERIA FOR THERMOMETER PROBE & SENSING SIZES

Temperature Ranges
-20...+40
-20...+60
-20...+80
-20...+100
-20...+120
-20...+180
-30...+50
-30...+70
-40...+40
-40...+60
-50...+100
-100...+60
0...50
0...60
0...80
0...100
0...120
0...150
0...160
0...200
0...250
0...300
0...400
0...500
0...600
0...650
50...650
100...600
100...700



Sensing Length "SL" Chart for Inert Gas Filled Thermometer		
Stem / Sensor Size (mm)	(SL) Sensing Length (mm)	(PL) Probe Length (mm)
Inert Gas Thermometer (PL 10 Mtr.)		
6 / 1/4"	180	230
8 / 9.5	100	150
10	85	135
12 / 14	60	110
Inert Gas Thermometer (PL >10 Mtr. up to 25 Mtr.)		
6 / 1/4"	200	250
8 / 9.5	160	210
10	130	180
12 / 14	80	130

Capillary compensation is preferred for all capillary inert gas thermometers, if capillary length is above 6 meter.

Sensing Length "SL" Chart for Bi-metal Thermometer				
Stem Diameter Range (°C)	6 mm & 1/4"	8 mm & 9.5 mm	10 mm	12 mm
0...50	120	100	100	100
0...60	100	85	85	85
0...80	85	60	60	60
0...100	65	60	60	60
0...120	60	50	50	50
0...150	50	40	40	40
0...200	40	35	35	35
0...250	30	25	25	25
0...300	50	40	40	40
0...400	40	35	35	35
0...500	35	30	30	30
0...600	30	25	25	25

All length mentioned above are to be considered below thread only.

PL = Probe Length, SL = Sensing Length. "SL" shall be always less than or equal to "PL".

ELECTRIC CONTACT DETAILS (FOR PRESSURE / TEMPERATURE GAUGE SWITCHES)

Switch type	Contacts	Action	Rating
MAGNETIC CONTACTS			
Normally closed (1NC)	Single	Break contact	230VAC/1A; 48VDC/0.5A
Normally open (1NO)	Single	Make contact	230VAC/1A; 48VDC/0.5A
Normally closed (2NC)	Double	Break contact	230VAC/1A; 48VDC/0.5A
Normally open (2NO)	Double	Make contact	230VAC/1A; 48VDC/0.5A
Normally closed + Normally open (1NC+1NO)	Double	Break contact + Make contact	230VAC/1A; 48VDC/0.5A
Normally open + Normally closed (1NO+1NC)	Double	Make contact + Brake contact	230VAC/1A; 48VDC/0.5A
SPDT	Single		230VAC/1A; 48VDC/0.5A
DPDT	Double		230VAC/1A; 48VDC/0.5A
INDUCTIVE CONTACTS			
Normally closed (1NC)	Single	Break contact	220VAC/0.4A
Normally open (1NO)	Single	Make contact	220VAC/0.4A
Normally closed (2NC)	Double	Break contact	220VAC/0.4A
Normally open (2NO)	Double	Make contact	220VAC/0.4A
Normally closed + Normally open (1NC+1NO)	Double	Break contact + Make contact	220VAC/0.4A
Normally open + Normally closed (1NO+1NC)	Double	Make contact + Brake contact	220VAC/0.4A

MICROSWITCH DETAILS (FOR PRESSURE / TEMPERATURE SWITCHES)

Microswitch protection	Type	Switch rating
General; low deadband	1 SPDT	250VAC/15A; 24VDC/2A or 110VDC/0.4A or 220VDC/0.2A
General; high deadband	1 SPDT	250VAC/15A; 24VDC/6A or 110VDC/0.5A or 220VDC/0.25A
Adjustable differential	1 SPDT	250VAC/15A
Gold plated contact	1 SPDT	125VAC/1A; 28VDC/0.5A
Environmentally sealed silver contact	1 SPDT	250VAC/15A; 125VDC/0.4A
Environmentally sealed gold contact	1 SPDT	28VDC/1A
Hermetically sealed silver contact	1 SPDT	230VAC/4A; 28VDC/3A resistive; 24VDC/2A inductive
Hermetically sealed gold contact	1 SPDT	125VAC/1A
High DC rating	1 SPDT	125VAC/10A; 125VDC/10A resistive; 125VDC/6A inductive
DPDT	1 DPDT	125VAC/10A; 250VDC/0.2A resistive

REED / MICRO SWITCH DETAILS (FOR LEVEL SWITCHES)

Reed switch	1 SPST	250VAC/0.5A
Reed switch	1 SPDT	250VAC/0.5A
Micro switch	1 SPDT	250VAC/5A

THERMOWELL LITERATURE

Thermowell is a protecting accessory for the sensor part of the temperature measuring, indicating & controlling instruments in corrosive & high pressure areas. They are applicable in all kind of fluid areas. A critical advantage of the thermowell is that, it provides the media isolation for the purpose of maintenance / replacement of the instruments.

TGI manufacture types of thermowells such as,

1. Threaded/Flanged
2. Van-stone
3. Socket-weld/weld-in
4. Sanitary
5. Multi-piece

With reference to the shank design thermowell, further classified into,

1. Straight
2. Reduced-tip
3. Partial taper
4. Full taper

TGI thermowells are machined in CNC and Deep Gun-drilling machines and available in a variety of stainless steel types. All welds between the flange & well are full penetration welded.

TGI manufactures thermowells also in exotic materials like Monel, Hastelloy C, Titanium, etc and variety of exotic materials and special grades alloys.

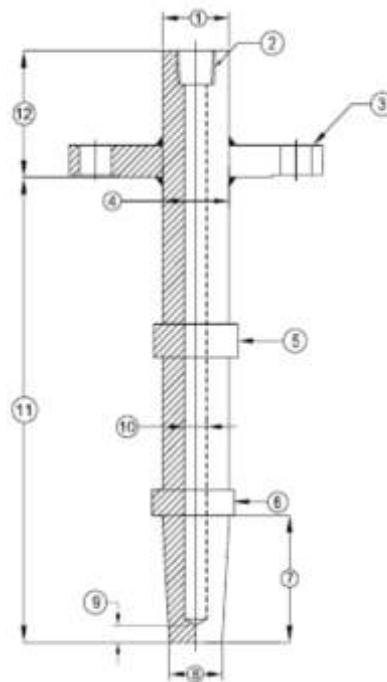
TGI also provide lining or coating on the well/wetted parts, exotic material overlay on flange RF and sleeves for the wells for its thermowells.

Some of the in-house tests are,

1. Wake frequency calculation
2. Hydrostatic test
3. Dye Penetration test
4. Dimensional check

All other tests are conducted at a third party labs, TGI provide conformity certificate.

Nomenclature of Thermowell



1. Finished head diameter
2. Instrument connection
3. Process connection
4. Major diameter
5. Velocity collar 2 (Optional)
6. Velocity collar 1
7. Reduced tip/taper length
8. Minor diameter
9. Tip thickness
10. Bore diameter
11. Unsupported (U) length
12. Extension length

ASME PTC 19.3TW-2010

The wake frequency calculation for thermowells gives a calculated proof of the strength with respect to static and dynamic stress in relation to the operating temperature and pressure. The standard is divided into dynamic and static calculation results. For gaseous media, a frequency ratio $[r]$ of 0.8 is still valid however there are some cases where this does not apply. For liquid media, for most of the applications, frequency ratio $[r]$ considers a 0.4.

In TGI, experienced engineers calculate, optimize and issue the Wake Frequency Calculation as per the project requirements.

Method to avoid WFC failure

There are mainly 4 ways to tackle the WFC failure. The resolutions are,

1. Shortening the insertion length
2. Increasing the root diameter
3. Increasing the tip diameter
4. Velocity collars

Although the use of Velocity collars has been out of scope of the new standard, many of the existing plants, experienced customers are preferred to use the Velocity collars to have a better sensing. The ideal Velocity collar location is considered as Stub length – 1". If the result is higher than

5" an additional Velocity collar can be added to lessen the stress effect on the

thermowell. A circular or triangular or 4- point collar designs are used as a regular practice.

97/23/EC PED

The applicability of the 97/23/EC Pressure equipment directive in reference to thermowells is explained below in thermowells there is neither a fluid under pressure, nor is there any fluid transported within. Thermowells therefore are not "pressure-containing equipment" within the meaning of the Pressure equipment directive (see guideline 1/40).

Thermowells are components within pressure equipment in accordance with the PED. As such a component, it does not comply with the definition for pressure equipment in article 1, paragraph 2.1 of the PED and does not have to be marked with CE (see guideline 1/22).



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Process & Environment...



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