



Measures, Monitors and Controls  
For The Process Industries



## Product Overview

Pressure Gauges



Chemical Seals

Temperature Gauges

Rotameters



# Pressure Gauges



	<b>724 AA</b> Economical Version Pressure Gauge	<b>723 AT</b> Stainless Steel Case Pressure Gauge	<b>722 AD</b> All Stainless Steel Version Pressure Gauge	<b>721 AL</b> All Stainless Steel Version Pressure Gauge
General Data	<ul style="list-style-type: none"> <li>For general purpose non-aggressive media, air, water and oil</li> <li>Dual Scale dial face</li> </ul>	<ul style="list-style-type: none"> <li>For general purpose non-aggressive media, air, water and oil</li> <li>Rugged construction for harsh environment</li> <li>Dual Scale dial face</li> </ul>	<ul style="list-style-type: none"> <li>For aggressive media</li> <li>Socket directly welded to case</li> <li>Rugged construction for harsh environment</li> <li>Dual Scale dial face</li> </ul>	<ul style="list-style-type: none"> <li>For aggressive media</li> <li>Socket directly welded to case</li> <li>Rugged construction for harsh environment</li> <li>High Accuracy</li> </ul>
Industries	HVAC, Irrigation equipment, FRL unit, Valve positioner and other general industrial application	General utilities process lines, Compressor, Diesel Engines, Pumps, Hydraulics and other general industrial application	Chemical & Petrochemical, Hydro-cleaning equipments, Power plants, Food & Beverage, Water/Waste Treatment, Pharmaceutical, Turbines, Pumps, Presses, Cryogenics and other harsh industrial application	Chemical & Petrochemical, Hydro-cleaning equipments, Power plants, Food & Beverage, Water/Waste Treatment, Pharmaceutical, Turbines, Pumps, Presses, Cryogenics and other harsh industrial application
Nominal Size	Ø 40, 50, 63, 80, 100, 150 & 250 mm	Ø 50, 63, 80, 100 & 150 mm	Ø 50, 63 & 80 mm	Ø 100, 125, 150, 200 & 250 mm
Measuring Ranges	Scale range available from -1 ... 1 kg/cm <sup>2</sup> to 0 ... 400 kg/cm <sup>2</sup> (-30 inHg to 0 ... 6000 psi)	Scale range available from -1 ... 1 kg/cm <sup>2</sup> to 0 ... 400 kg/cm <sup>2</sup> (-30 inHg to 0 ... 6000 psi)	Scale range available from -1 ... 1 kg/cm <sup>2</sup> to 0 ... 1000 kg/cm <sup>2</sup> (-30 inHg to 0 ... 15000 psi)	Scale range available from -1 ... 1 kg/cm <sup>2</sup> to 0 ... 1600 kg/cm <sup>2</sup> (-30 inHg to 0 ... 22000 psi) Vacuum & Compound, Linear and Square Root
Accuracy	±1.6% of F. S. (For NS 63 mm, 80 mm, 100 mm, 150 mm & 250 mm) ±2.5% of F. S. (For NS 40 mm & 50 mm)	±1.6% of F. S. (For NS 63 mm, 80 mm, 100 mm & 150 mm) ±2.5% of F. S. (For NS 50 mm)	±1.6% of F. S. (For NS 63 mm & 80 mm) ±2.5% of F. S. (For NS 50 mm) (According to EN 837-1)	±1.0% of F. S. (According to EN 837-1)
Ambient Temperature	-20°C to +65°C	-20°C to +65°C	-20°C to +65°C	-20°C to +65°C
Process Temperature	Max. 150°C	Max. 150°C	Max. 180°C	Max. 300°C
Operating Pressure Range	75% of Scale Value	75% of Scale Value	75% of Scale Value	75% of Scale Value
Over Pressure Limit	<100 bar : 125% of Max. Scale Value > 100 to < 600 bar : 115% of Max. Scale Value > 600 to < 1600 bar : 110% of Max. Scale Value	<100 bar : 125% of Max. Scale Value > 100 to < 600 bar : 115% of Max. Scale Value > 600 to < 1600 bar : 110% of Max. Scale Value	<100 bar : 125% of Max. Scale Value > 100 to < 600 bar : 115% of Max. Scale Value > 600 to < 1600 bar : 110% of Max. Scale Value	<100 bar : 125% of Max. Scale Value > 100 to < 600 bar : 115% of Max. Scale Value > 600 to < 1600 bar : 110% of Max. Scale Value
Measuring Element	Copper Alloy Bourdon tube	Copper Alloy Bourdon tube	AISI 316LSS Bourdon tube	AISI 316LSS Bourdon tube
Wetted parts material	Copper Alloy	Copper Alloy	AISI 316LSS	AISI 316LSS (Option Monel)
Case material	Steel, Powder Coated / Painted	AISI 304SS	AISI 304SS	AISI 304SS
Dial material	Aluminium, black graduation on white background	Aluminium, black graduation on white background	Aluminium, black graduation on white background	Aluminium, black graduation on white background
Window material	Sheet Glass	Plexi Glass	Plexi Glass	Sheet Glass
Process Connection	NPT 1/4 BSP1/4	NPT 1/4 BSP1/4	NPT 1/4 BSP1/4	NPT 1/4 BSP1/4
Mounting	Center Back, Lower Back, Bottom or Push Fit Type	Center Back, Lower Back, Bottom or Push Fit Type	Center Back, Lower Back, Bottom or Push Fit Type	Center Back, Lower Back, Bottom or Push Fit Type
Options	<ul style="list-style-type: none"> <li>Shatterproof Glass / Safety Glass</li> <li>Liquid Filled</li> <li>Chemical Seal</li> <li>Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>Shatterproof Glass / Safety Glass</li> <li>Glycerine Filled Version (max process temperature 65°C)</li> <li>Chemical Seal</li> <li>Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>Shatterproof Glass / Safety Glass</li> <li>Glycerine Filled Version (max process temperature 65°C)</li> <li>Chemical Seal</li> <li>Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>Shatterproof Glass / Safety Glass</li> <li>Glycerine Filled Version (max process temperature 65°C)</li> <li>Dual Scale Dial Face</li> <li>External Zero Adjustment</li> <li>Chemical Seal</li> <li>Custom designed dial</li> <li>Monel Material Wetted Parts</li> </ul>

# Pressure Gauges



## 721 AJ

Test Pressure Gauge

## 721 AR

Test Pressure Gauge  
(Larger Nominal Size)

## 725 AC

Plastic Case Pressure  
Gauge

## 725 AE

Plastic Case Pressure  
Gauge

General Data	<ul style="list-style-type: none"> <li>• High Precision Measuring System</li> <li>• High Resolution Dial</li> <li>• Anti Parallax Mirror Band</li> <li>• Traceability to National/ International Standards</li> </ul>	<ul style="list-style-type: none"> <li>• High Precision Measuring System</li> <li>• High Resolution Dial</li> <li>• Anti Parallax Mirror Band</li> <li>• Traceability to National/ International Standards</li> </ul>	<ul style="list-style-type: none"> <li>• Polypropylene Case</li> <li>• For corrosive environment and aggressive media</li> <li>• Socket directly welded to case</li> </ul>	<ul style="list-style-type: none"> <li>• Solid Front Thermoplastic Case</li> <li>• Excellent Load Cycle Stability &amp; Shock Resistant</li> <li>• For corrosive environment and aggressive media</li> </ul>
Industries	Calibration and testing in Laboratory, test benches and other demanding industrial applications that need a highly precise pressure reading	Calibration and testing in Laboratory, test benches and other demanding industrial applications that need a highly precise pressure reading	Chemical and Petrochemical, power stations, mining, on & offshore, mechanical engineering, plant engineering and other corrosive environment and aggressive media application	Chemical and Petrochemical, power stations, mining, on & offshore, mechanical engineering, plant engineering and other corrosive environment and aggressive media application
Nominal Size	Ø 150 mm	Ø 150, 200 & 250 mm	Ø 100 & 150 mm	Ø 41/2" (standard)
Measuring Ranges	Scale range available from -1 ... 0 kg/cm <sup>2</sup> to 0 ... 1000 kg/cm <sup>2</sup> (-30 inHg to 0 ... 15000 psi)	Scale range available from -1 ... 0 kg/cm <sup>2</sup> to 0 ... 1000 kg/cm <sup>2</sup> (-30 inHg to 0 ... 15000 psi)	Scale range available from -1 ... 0 kg/cm <sup>2</sup> to 0 ... 1600 kg/cm <sup>2</sup> (-30 inHg to 0 ... 22000 psi) Vacuum & Compound	Scale range available from -1 ... 0 kg/cm <sup>2</sup> to 0 ... 1600 kg/cm <sup>2</sup> (-30 inHg to 0 ... 22000 psi) Vacuum & Compound
Accuracy	±0.25% of F. S. (At +20°C) (According to EN 837-1)	±0.25% of F. S. (At +20°C) (According to EN 837-1)	±1.0% of F. S. (According to EN 837-1)	±0.5% of F. S. (According to ASME B40.100)
Ambient Temperature	Max +65°C	Max +65°C	-20°C to +65°C	-20°C to +65°C
Process Temperature	Max. +65°C	Max. +65°C	Max. +100°C	Max. +200°C
Operating Pressure Range Over Pressure Limit	75% of Scale Value <100 bar : 125% of Max. Scale Value > 100 to < 600 bar : 115% of Max. Scale Value > 600 to < 1600 bar : 110% of Max. Scale Value	75% of Scale Value <100 bar : 125% of Max. Scale Value > 100 to < 600 bar : 115% of Max. Scale Value > 600 to < 1600 bar : 110% of Max. Scale Value	75% of Scale Value <100 bar : 125% of Max. Scale Value > 100 to < 600 bar : 115% of Max. Scale Value > 600 to < 1600 bar : 110% of Max. Scale Value	75% of Scale Value <100 bar : 125% of Max. Scale Value > 100 to < 600 bar : 115% of Max. Scale Value > 600 to < 1600 bar : 110% of Max. Scale Value
Measuring Element	Beryllium Copper Bourdon	Beryllium Copper Bourdon	AISI 316LSS Bourdon tube	AISI 316LSS Bourdon tube
Wetted parts material	Beryllium Cu/AISI 316LSS	Beryllium Cu/AISI 316LSS	AISI 316LSS	AISI 316LSS
Case material	AISI 304SS	AISI 304SS	Polypropylene (PP)	Black Glass Reinforced Thermoplastic
Dial material	Aluminium, black graduation on green background	Aluminium, black graduation on green background	Aluminium, black graduation on white background	Aluminium, black graduation on white background
Window material	Shatter proof / Safety Glass	Shatter proof / Safety Glass	Sheet Glass	Shatter proof / Safety Glass
Process Connection	NPT 1/4 BSP1/4	NPT 1/4 BSP1/4	NPT 1/4 BSP1/4	NPT 1/4 BSP1/4
Mounting	Bottom or Push Fit Type	Lower Back, Bottom or Push Fit Type	Lower Back, Bottom or Panel Type	Lower Back, Bottom or Panel Type
Options	<ul style="list-style-type: none"> <li>• Dual Scale Dial Face</li> <li>• Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>• Dual Scale Dial Face</li> <li>• Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>• Glycerine Filled Version (max process temperature 65°C)</li> <li>• Plexi Glass</li> <li>• Chemical Seal</li> <li>• Dual Scale Dial Face</li> <li>• Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>• Glycerine Filled Version (max process temperature 65°C)</li> <li>• Chemical Seal</li> <li>• Dual Scale Dial Face</li> <li>• Custom designed dial</li> </ul>

# Pressure Gauges



	<b>726 AQ</b> Static Pressure Gauge/ Switch	<b>726 BA</b> Differential Pressure Gauge/Switch	<b>721 AL BJ</b> All Stainless Steel Pressure Gauge/Switch	<b>721 AL BI</b> All Stainless Steel Pressure Gauge/Switch
General Data	<ul style="list-style-type: none"> <li>• Remote mounting</li> <li>• Rugged construction for harsh environment</li> <li>• CE &amp; ATEX approved electrical contacts</li> <li>• Double Diaphragm</li> </ul>	<ul style="list-style-type: none"> <li>• Remote mounting</li> <li>• Rugged construction for harsh environment</li> <li>• CE &amp; ATEX approved electrical contacts</li> <li>• Single/Double Diaphragm</li> </ul>	<ul style="list-style-type: none"> <li>• DIN Electrical Connector</li> <li>• CE &amp; ATEX approved electrical contacts</li> <li>• Single or Double Contact</li> </ul>	<ul style="list-style-type: none"> <li>• DIN Electrical Connector</li> <li>• CE &amp; ATEX approved electrical contacts</li> <li>• Single or Double Contact</li> <li>• Rugged construction for harsh environment</li> </ul>
Industries	Chemical & Petrochemical, Aerospace, Fertilizer, Pharmaceutical, Food & Beverage, Power plant, Cement, Sugar, Pulp & Paper Industries	Chemical & Petrochemical, Aerospace, Fertilizer, Pharmaceutical, Food & Beverage, Power plant, Cement, Sugar, Pulp & Paper Industries	Chemical & Petrochemical, Hydro-cleaning equipments, Power plants, Food & Beverage, Water/Waste Treatment, Pharmaceutical, Turbines, Pumps, Presses, Cryogenics and other harsh industrial application	Chemical & Petrochemical, Hydro-cleaning equipments, Power plants, Food & Beverage, Water/Waste Treatment, Pharmaceutical, Turbines, Pumps, Presses, Cryogenics and other harsh industrial application
Nominal Size	Ø 100 & 150 mm	Ø 100 & 150 mm	Ø 100 & 150 mm	Ø 100 mm
Measuring Ranges	Scale range available from 0 ... 1 kg/cm <sup>2</sup> to 0 ... 6 kg/cm <sup>2</sup> (0 to 600 mmWC to 0 ... 6000 mmWC)	Scale range available from 0 ... 1 kg/cm <sup>2</sup> to 0 ... 6 kg/cm <sup>2</sup> (0 to 250 mmWC to 0 ... 6000 mmWC)	Please refer to 721 AL for measuring range Contact Setting: Arc of 270° over scale range	Please refer to 721 AL for measuring range Contact Setting: Arc of 270° over scale range
Accuracy	±1.6% of F. S. (According to EN 837-3)	±2.5% of F. S. (According to EN 837-3)	±1.0% of F. S. (According to EN 837-1)	±1.0% of F. S. (According to EN 837-1)
Ambient Temperature	-25°C to +65°C	-25°C to +65°C	-20°C to +65°C	-20°C to +65°C
Process Temperature	Max. 100°C	Max. 100°C	Max. 100°C	Max. 100°C
Operating Pressure Range	75% of Scale Value	75% of Scale Value	75% of Scale Value	75% of Scale Value
Over Pressure Limit	130% of Max. Scale Value	130% of Max. Scale Value	NA	NA
Measuring Element	AISI 316L SS Diaphragm	PTFE Coated St. Diaphragm	AISI 316LSS Bourdon tube	AISI 316LSS Bourdon tube
Wetted parts material	AISI 316LSS	AISI 304SS, PTFE Coating	AISI 316LSS	AISI 316LSS
Case material	AISI 304SS	AISI 304SS	AISI 304SS	AISI 304SS
Dial material	Aluminium, black graduation on white background	Aluminium, black graduation on white background	Aluminium, black graduation on white background	Aluminium, black graduation on white background
Window material	Shatterproof / Safety Glass	Shatterproof / Safety Glass	Polycarbonate Dome	Plexi Glass
Process Connection	1/4" NPT(F) x 2 Nos	1/4" NPT(F) x 2 Nos	NPT 1/4 BSP1/4	NPT 1/4 BSP1/4
Mounting	Remote Panel/Wall mount, Bottom, Center Back	Remote Panel/Wall mount, Bottom, Center Back	Lower Back, Bottom or Panel mount	Lower Back, Bottom or Panel mount
Options	<ul style="list-style-type: none"> <li>• Glycerine Filled Version (max process temperature 65°C) Filled</li> <li>• Dual Scale Dial Face</li> <li>• Electrical Contacts</li> <li>• Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>• Glycerine Filled Version (max process temperature 65°C)</li> <li>• Dual Scale Dial Face</li> <li>• AISI 316L SS Diaphragm</li> <li>• Electrical Contacts</li> <li>• Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>• Glycerine Filled Version (max process temperature 65°C)</li> <li>• Dual Scale Dial Face</li> <li>• Single or Double Contact</li> <li>• Chemical Seal</li> <li>• Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>• Glycerine Filled Version (max process temperature 65°C)</li> <li>• Dual Scale Dial Face</li> <li>• Single or Double Contact</li> <li>• Chemical Seal</li> <li>• Custom designed dial</li> </ul>

## Chemical Seals



	<b>AE 9.1 DA</b> Slip Ring Coupled Chemical Seal	<b>AE 9.3 DC</b> Heavy Duty Welded Chemical Seal	<b>AE 9.4 DD</b> Direct Coupled Chemical Seal	<b>AE 9.5 DE</b> SMS Floating Chemical Seal
General Data	<ul style="list-style-type: none"> <li>• Diaphragm directly welded to top chamber</li> <li>• Easy to clean</li> <li>• Easy to change process connection / bottom chamber</li> </ul>	<ul style="list-style-type: none"> <li>• All 316 Stainless steel</li> <li>• Light weight</li> <li>• Economical</li> <li>• Ideal Choice for high pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Compact Design</li> <li>• Single piece construction</li> <li>• Ideal for general purpose application</li> <li>• Low cost solution</li> </ul>	<ul style="list-style-type: none"> <li>• All 316 Stainless steel</li> <li>• Quick connection and disconnect</li> <li>• Matching DIN, SMS, RJT standards</li> </ul>
Application	Diaphragm seals are for isolating corrosive, visuous and sedimented media to the sensing element of pressure gauges, switches and transmitters to avoid clogging and solidification of the sensing element	Diaphragm seals are for isolating corrosive, visuous and sedimented media to the sensing element of pressure gauges, switches and transmitters to avoid clogging and solidification of the sensing element	Diaphragm seals are for isolating corrosive, visuous and sedimented media to the sensing element of pressure gauges, switches and transmitters to avoid clogging and solidification of the sensing element	Specially designed for applications where high purity in the process is essential - Food & beverage, dairy and pharmaceutical industries
Range	-1 kg/cm <sup>2</sup> to 70 kg/cm <sup>2</sup> (Diaphragm size 63 mm) 100 kg/cm <sup>2</sup> to 250 kg/cm <sup>2</sup> (Diaphragm size 53 mm)	Type A 25 kg/cm <sup>2</sup> to 70 kg/cm <sup>2</sup> Type B 100 kg/cm <sup>2</sup> to 600 kg/cm <sup>2</sup>	-1 kg/cm <sup>2</sup> to 70 kg/cm <sup>2</sup>	1.6 kg/cm <sup>2</sup> to 40 kg/cm <sup>2</sup>
Process Temperature	- 40°C to 200°C or as per fill fluid	- 40°C to 200°C or as per fill fluid	- 40°C to 200°C or as per fill fluid	- 40°C to 200°C or as per fill fluid
Instrument Connection	3/8" BSP(F)	3/8" BSP(F)	1/4" BSP(F)	3/8" BSP(F)
Process Connection	1/2" NPT(M)	1/2" NPT(M)	1/4" BSP(M)	As per DIN 11851, SMS, RJT, IDF
Fill Fluid	Silicon Oil - DC 200	Silicon Oil - DC 200	Silicon Oil - DC 200	Food Grade Oil
Diaphragm Material	AISI 316LSS	AISI 316LSS	AISI 316LSS	AISI 316LSS
Top Chamber	AISI 304SS	AISI 316LSS	AISI 316LSS	AISI 316LSS
Bottom Chamber	AISI 316LSS	AISI 316LSS	AISI 316LSS	AISI 316LSS
Gasket	PTFE (up to 200°C) Metal Seal (up to 350°C)			
Options				

## Chemical Seals



	<b>AE 9.6 DF</b> Screwed Flush Chemical Seal	<b>AE 9.7 DH</b> Sanitary Seal (Clamp Type) Chemical Seal	<b>AE 9.8 DI</b> Flanged - "I" Section Chemical Seal	<b>AE 9.9 DJ</b> Direct Flanged Flush Chemical Seal
General Data	<ul style="list-style-type: none"> <li>• One piece construction</li> <li>• No bolts / gasket</li> <li>• Flush Diaphragm</li> </ul>	<ul style="list-style-type: none"> <li>• Quick connect and disconnect</li> <li>• For Hygiene applications</li> <li>• Easy to clean</li> </ul>	<ul style="list-style-type: none"> <li>• I Section extension to facilitate smaller flange connection</li> <li>• Ideal for general purpose</li> <li>• Suitable for anti corrosive protection</li> </ul>	<ul style="list-style-type: none"> <li>• Welded diaphragm</li> <li>• Flush diaphragm provided</li> <li>• Easy flushing</li> <li>• Most suitable for slurry &amp; corrosive service</li> </ul>
Application	These seals are used in applications where the process media & pulsation may adversely affect gauge life typically used in spray painting, waste water treatment & chlorination plant	Specially designed for applications where high purity in the process is essential - Food & beverage, dairy and pharmaceutical industries	This can be widely used with anti-corrosive treatment/ protection & various flanged sizes.	These kind of seals are widely used in the viscous & corrosive services where flushing is required periodically and frequently
Range	4 kg/cm <sup>2</sup> to 250 kg/cm <sup>2</sup>	-1 kg/cm <sup>2</sup> to 21 kg/cm <sup>2</sup>	-1 kg/cm <sup>2</sup> to 400 kg/cm <sup>2</sup>	-1 kg/cm <sup>2</sup> to 60 kg/cm <sup>2</sup>
Process Temperature	- 40°C to 200°C or as per fill fluid	- 20°C to 140°C or as per fill fluid	- 40°C to 345°C - 20°C to 200°C (for PTFE lined)	- 40°C to 200°C or as per fill fluid
Instrument Connection	1/4" BSP(F)	3/8" BSP(F)	3/8" BSP(F)	3/8" BSP(F)
Process Connection	3/4" BSP(M)	1 1/2" Sanitary (without clamp and gasket)	Flange (as per DIN/BS/ ANSI/JIS)	Flange (as per DIN/BS/ ANSI/JIS)
Fill Fluid	Silicon Oil - DC 200	Food Grade Oil	Silicon Oil - DC 200 (up to -40°C to 200°C)	Silicon Oil - DC 200
Diaphragm Material	AISI 316LSS	AISI 316LSS	AISI 316LSS	AISI 316LSS
Top Chamber	AISI 316LSS	AISI 316LSS	AISI 304SS	AISI 316SS
Bottom Chamber	AISI 316LSS	AISI 316LSS	AISI 316LSS	AISI 316SS
Gasket			PTFE (up to 200°C) Metal Seal (up to 350°C)	
Options		<ul style="list-style-type: none"> <li>• Sanitary clamp and gasket available as accessories</li> </ul>		

## Chemical Seals



	<b>AE 9.10 DK</b> Direct Flanged Insert Chemical Seal	<b>AE 9.11 DL</b> Extended Neck Chemical Seal	<b>AE 9.12 DM</b> Wafer (Pan Cake Type) Chemical Seal	<b>AE 9.13 DN</b> Pulp Seal (Floating Ring Type) Chemical Seal
General Data	<ul style="list-style-type: none"> <li>Welded Diaphragm</li> <li>Wide range of diaphragm material</li> <li>Most suitable for slurry and corrosive service</li> </ul>	<ul style="list-style-type: none"> <li>Suitable for slurry and viscous fluid</li> <li>Continuous duty</li> <li>Welded diaphragm</li> <li>Flange connection</li> </ul>	<ul style="list-style-type: none"> <li>Suitable for slurry and viscous fluid</li> <li>Continuous duty</li> <li>Welded diaphragm</li> <li>Flange connection</li> <li>Space saving</li> </ul>	<ul style="list-style-type: none"> <li>All 316 Stainless steel</li> <li>Continuous duty</li> <li>Welded diaphragm</li> <li>For viscous slurries, example pulp and paper</li> </ul>
Application	These kind of seals are widely used in the viscous & corrosive services where flushing is required periodically and frequently	Diaphragm seals are for isolating corrosive, visuous and sedimented media to the sensing element of pressure gauges, switches and transmitters to avoid clogging and solidification of the sensing element	Diaphragm seals are for isolating corrosive, visuous and sedimented media to the sensing element of pressure gauges, switches and transmitters to avoid clogging and solidification of the sensing element	Specially designed for pulp slurry applications in highly vibration zones
Range	-1 kg/cm <sup>2</sup> to 60 kg/cm <sup>2</sup>	-1 kg/cm <sup>2</sup> to 60 kg/cm <sup>2</sup>	-1 kg/cm <sup>2</sup> to 160 kg/cm <sup>2</sup>	0 kg/cm <sup>2</sup> to 40 kg/cm <sup>2</sup>
Process Temperature	- 40°C to 200°C or as per fill fluid	- 40°C to 200°C or as per fill fluid	- 40°C to 200°C or as per fill fluid	- 40°C to 200°C or as per fill fluid
Instrument Connection	3/8" BSP(F)	3/8" BSP(F)	1/4" BSP(F)	3/8" BSP(F)
Process Connection	Flange (as per DIN/BS/ANSI/JIS)	Flange (as per DIN/BS/ANSI/JIS)	Suitable for >2" flange size (as per DIN/BS/ANSI/JIS)	Please refer to detailed data sheet
Fill Fluid	Silicon Oil - DC 200	Silicon Oil - DC 200	Silicon Oil - DC 200	Silicon Oil - DC 200
Diaphragm Material	AISI 316LSS	AISI 316LSS	AISI 316LSS	AISI 316SS
Top Chamber	AISI 304SS	AISI 316SS	AISI 316LSS	AISI 316SS
Bottom Chamber	AISI 316LSS	AISI 316SS	AISI 316LSS	AISI 304SS
Gasket				
Options				

# Temperature Gauges



	<b>AE 712</b> Bimetal Type Temperature Gauge	<b>AE 713</b> Bimetal Type Every Angle Temperature Gauge	<b>AE 714</b> Capillary Type Temperature Gauge	<b>AE 715</b> Mercury or Kerosene Filled Thermometer
General Data	<ul style="list-style-type: none"> <li>All Stainless steel case &amp; stem</li> <li>Bottom / Center Back Entry</li> <li>Optional silicon oil filled for temperature up to +200°C</li> <li>Standards conform in to EN 13190</li> </ul>	<ul style="list-style-type: none"> <li>All Stainless steel case &amp; stem</li> <li>Bottom Every Angle Entry</li> <li>Optional silicon oil filled for temperature up to +200°C</li> <li>Standards conform in to EN 13190</li> </ul>	<ul style="list-style-type: none"> <li>All Stainless steel case &amp; stem</li> <li>With capillary for remote measurement</li> <li>Optional silicon oil filled for temperature up to +200°C</li> <li>Standards conform in to EN 13190</li> </ul>	<ul style="list-style-type: none"> <li>For general purpose non-aggressive media, air, water and oil</li> <li>Cost effective temperature measurement</li> <li>Bottom / Back Entry</li> <li>Compact</li> </ul>
Application: Temperature measurement in	Food & Beverage, Pharmaceutical, Chemical, Fertilizer, Power, Cement, Sugar, Pulp & Paper industries	Food & Beverage, Pharmaceutical, Chemical, Fertilizer, Power, Cement, Sugar, Pulp & Paper industries	Food & Beverage, Pharmaceutical, Chemical, Fertilizer, Power, Cement, Sugar, Pulp & Paper industries	HVAC, Irrigation Equipment, Utilities, Compressed Air System and Other General Industrial Application
Nominal Size	Ø 63, 80, 100, 150 mm	Ø 80, 100, 125, 150 mm	Ø 63, 80, 100, 150 mm	Ø 110, 150, 200 mm
Stem Size (mm)	Ø 6	Ø 6	Ø 6	Ø 10
Stem Length (mm)	85, 100, 150, 200, 300	85, 100, 150, 200, 300	85, 100, 150, 200, 300	40, 60, 100, up to 300 mm
Measuring Ranges	Scale range available from 0 ... 100°C to 0 ... 500°C 0 ... 210°F to 0 ... 920°F	Scale range available from 0 ... 100°C to 0 ... 500°C 0 ... 210°F to 0 ... 920°F	Scale range available from 0 ... 100°C to 0 ... 500°C 0 ... 210°F to 0 ... 920°F	Scale range available from 0 ... 50°C to 0 ... 200°C 0 ... 120°F to 0 ... 400°F
Process Temperature / Over Temperature Limit	Up to +600°C Dry / 15% of full scale range or 600°C	Up to +600°C Dry / 15% of full scale range or 600°C	Up to +600°C Dry / 15% of full scale range or 600°C	Up to +600°C / 15% of full scale range or 600°C
Operating Pressure	Up to +15kg/cm <sup>2</sup> (without thermowell)	Up to +15kg/cm <sup>2</sup> (without thermowell)	Up to +15kg/cm <sup>2</sup> (without thermowell)	Up to +15kg/cm <sup>2</sup> (without thermowell)
Accuracy	Class 1 as per EN 13190	Class 1 as per EN 13190	Class 1 as per EN 13190	-
Materials	Case: AISI 304 SS Ring: AISI 304 SS Stem: AISI 316 SS Sensing: Bi-Metal strip coil Joints: Tig Argon Welding Dial: Aluminium Pointer: Aluminium Window: Sheet Glass Gasket: Neoprene	Case: AISI 304 SS Ring: AISI 304 SS Stem: AISI 316 SS Sensing: Bi-Metal strip coil Joints: Tig Argon Welding Dial: Aluminium Pointer: Aluminium Window: Sheet Glass Gasket: Neoprene	Case: AISI 304 SS Ring: AISI 304 SS Stem: AISI 316 SS Capillary: AISI 304 SS Joints: Tig Argon Welding Dial: Aluminium Pointer: Aluminium Window: Sheet Glass Gasket: Neoprene	Case: Aluminium Sight Tube: Glass / Trigonal Glass Stem: Brass
Mounting	<ul style="list-style-type: none"> <li>Direct Bottom Entry</li> <li>Direct Center Back Entry</li> <li>45° angle mounting (for nominal size Ø100 mm only)</li> </ul>	<ul style="list-style-type: none"> <li>Every Angle Back Entry</li> </ul>	<ul style="list-style-type: none"> <li>Push Fit Type</li> <li>Capillary length : 3, 5, 10 m (Special length on request)</li> </ul>	<ul style="list-style-type: none"> <li>Direct Bottom Entry</li> <li>Direct Lower Back Entry</li> </ul>
Connection	1/2" Male NPT or BSP threaded connection	1/2" Male NPT or BSP threaded connection	1/2" Male NPT or BSP threaded connection	3/8" or 1/2" Male NPT or BSP threaded connection
Options	<ul style="list-style-type: none"> <li>Shatterproof Glass / Safety Glass</li> <li>Dampening liquid silicon oil</li> <li>AISI 316 Case &amp; Bezel</li> <li>Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>Shatterproof Glass / Safety Glass</li> <li>Dampening liquid silicon oil</li> <li>AISI 316 Case &amp; Bezel</li> <li>Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>Shatterproof Glass / Safety Glass</li> <li>Dampening liquid silicon oil</li> <li>AISI 316 Case &amp; Bezel</li> <li>Custom designed dial</li> </ul>	<ul style="list-style-type: none"> <li>Custom designed scale</li> </ul>



## Rotameters



**AE 717 Z200T**  
**AE 717 Z300T / KT**  
Panel Mount Rotameter

**AE 717 Z300**  
Panel Mount Rotameter

**AE 717 Z7000**  
Panel Mount Rotameter

**AE 717 Z400**  
Pipeline Rotameter

General Data	<ul style="list-style-type: none"> <li>One piece machined and polished acrylic meter body</li> <li>Suitable for outdoor installations</li> <li>Bulkhead nuts attach directly to inside panel</li> <li>White back reflector for easy reading</li> </ul>	<ul style="list-style-type: none"> <li>One piece machined and polished acrylic meter body</li> <li>Suitable for outdoor installations</li> <li>Bulkhead nuts attach directly to inside panel</li> <li>White back reflector for easy reading</li> </ul>	<ul style="list-style-type: none"> <li>Injection molded tough, clear and shatter proof polycarbonate housing</li> <li>Special integral flow guides to prevent float from hunting</li> <li>Small size</li> <li>Easy to install</li> <li>Economical</li> </ul>	<ul style="list-style-type: none"> <li>One piece machined and polished acrylic meter body</li> <li>Suitable for outdoor installations</li> <li>Economical</li> <li>Detachable clear acrylic scale plate</li> <li>Silk screened for enhance readability</li> </ul>
Applications / Industries	For general application in the process industries, water treatment, potable water, environmental protection equipment, food and beverage industries	For general application in the process industries, water treatment, potable water, environmental protection equipment, food and beverage industries	For general application to measure small air or liquid flow	For general application in the process industries, water treatment, potable water, environmental protection equipment, food and beverage industries
Measuring Range	<p>Scale range available from For Z200T:</p> <p>Air 0.1...1 LPM to 1...10 LPM</p> <p>Water 2...20 L/h to 6...60 L/h</p> <p>Dual Scale For Z300T: 0.1...1.4 LPM to 10...60 LPM 0.03...0.35 GPM to 2...16 GPM</p> <p>For Z300KT: 0.5...4 LPM to 10...130 LPM 0.1...1 GPM to 5...35 GPM</p>	<p>Scale range available from Dual Scale</p> <p>0.03...0.35 GPM to 5...35 GPM 0.1...1.4 LPM to 30...130 LPM</p> <p>Optional 10...100 LPH to 1,400...7,000 LPH</p>	<p>Scale range available from Air</p> <p>0.05...0.5 LPM to 30...300 LPM</p> <p>Liquid 0.1...1.1 LPM to 1...9 LPM</p>	<p>Scale range available from Dual Scale</p> <p>0.2...2 GPM to 60...200 GPM 1...7 LPM to 200...800 LPM</p> <p>Optional 50...400 LPH to 10,000...50,000 LPH</p>
Materials	Acrylic Housing SS304 Float NBR seal	Acrylic Housing SS304 Float NBR seal	Polycarbonate Housing SS304 Float NBR seal	Acrylic Housing PP or SS304 Joint SS304 Float NBR seal
Accuracy	± 6%	± 5%	± 5%	± 6%
Working Pressure	Z200T / Z300KT Up to +4 bar  Z300T Up to +6 bar	Up to +6 bar	Up to +6 bar	Up to +6 bar
Working Temperature	Up to +55°C	Up to +55°C	Up to +60°C	Up to +55°C
Connections	Panel Mount 1/8", 1/4" MBSP	Panel Mount 1/2", 3/4", 1" BSP	Panel Mount Ø6 mm, 1/8", 1/4" PT	1/2", 3/4", 1", 2" FBSP 11/2" MBSP
Options	<ul style="list-style-type: none"> <li>Adjustable flow control valve for easy installation</li> </ul> <p>* Not suitable for aromatic hydrocarbon, hydrocarbon oxide, alcohol and other organic solvent</p>	<ul style="list-style-type: none"> <li>Adjustable flow control valve for easy installation</li> </ul> <p>* Not suitable for aromatic hydrocarbon, hydrocarbon oxide, alcohol and other organic solvent</p>	<ul style="list-style-type: none"> <li>Adjustable flow control valve for easy installation</li> </ul>	<p>* Not suitable for aromatic hydrocarbon, hydrocarbon oxide, alcohol and other organic solvent</p>

## Rotameters



**AE 717 Z500**  
Pipeline Rotameter

**AE 717 DK800**  
Panel Mount Glass  
Rotameter

**AE 717 FA40**  
Pipeline Glass  
Rotameter

**AE 717 GA24S**  
Pipeline Glass  
Rotameter

General Data	<ul style="list-style-type: none"> <li>• High precision Injection molded plastic</li> <li>• Easy to read scale</li> <li>• Choice of different connections</li> <li>• Choice of float materials</li> <li>• Light weight</li> </ul>	<ul style="list-style-type: none"> <li>• Small size</li> <li>• Light weight</li> <li>• Easy to install</li> <li>• Easy maintenance on site</li> <li>• Clear and accurate reading</li> </ul>	<ul style="list-style-type: none"> <li>• Wide range of sizes and measuring range</li> <li>• Full stainless steel or plastic construction</li> <li>• Robust design</li> <li>• Easy to install</li> </ul>	<ul style="list-style-type: none"> <li>• Wide range of sizes and measuring range</li> <li>• Safety cover of special laminated glass</li> <li>• High safety factor</li> <li>• Robust design</li> <li>• Easy to install</li> <li>• Easy to maintain</li> </ul>
Applications / Industries	For clean water application in the general process industries, water treatment, potable water, environmental protection equipment, food and beverage industries	For measuring non pulsating fluid (liquid or gas) in the chemical, petroleum, medical, food, environmental protection and many other general industries	For demanding applications in the process industries, water treatment, semi-conductor, chemical, food and beverage industries	For demanding applications in the process industries, water treatment, semi-conductor, chemical, power plant, oil & gas, food and beverage industries
Measuring Range	Scale range available from Dual Scale 0.1...1 GPM to 50...250 GPM 0.5...4 LPM to 200...1,000 LPM	Scale range available from Air 0.18...1.8 L/h to 430...4,300 L/h Water 0.15...1.5 L/h to 20...200 L/h	Scale range available from Air 10...100 LPM to 90...900 M³/h Water 30...300 L/h to 10...100 M³/h	Scale range available from Air 0.12...1.2 M³/h to 300...1,500 M³/h Water 4...40 L/h to 10,000...50,000 L/h
Materials	Polycarbonate Tube uPVC Connectors SS304 or ABS Float EPDM seal	SS304 Housing Glass tube SS304 Float FKM seal	SS304 Housing Glass tube SS304 Float EPDM seal	Cl, SS304 Housing Glass tube SS304, PTFE Float EPDM seal
Accuracy	± 5%	± 2.5%	± 5%	± 5%
Working Pressure	Up to + 6 bar	Up to + 10 bar	SS304 Type Up to + 7 bar (DN15 to 32) Up to + 5 bar (DN40) Up to + 3 bar (DN50 to DN100) uPVC Type Up to + 4 bar (DN15 to 32) Up to + 3 bar (DN40) Up to + 2.5 bar (DN50 to DN100)	Up to + 10 bar (DN15, 25) Up to + 9 bar (DN40) Up to + 6 bar (DN50) Up to + 4 bar (DN65, 80)
Working Temperature	Up to +60°C	Up to +120°C	Up to +100°C (SS304 Type) Up to +60°C (uPVC Type)	-20°C to +120°C
Connections	Ø20, 32, 40, 63, 75 mm Male Thread 1/2", 3/4", 1", 2" BSP / NPT Female Thread 1/2", 3/4", 1", 2", 2 1/2" BSP/NPT Elbow 1/2", 3/4", 1", 2" BSP / NPT	Panel mount 1/4" BSP / NPT	Flange to DIN DN15, 20, 25, 32, 40, 50, 65, 80, 100 PN10/16	Flange to DIN DN15, 25, 40, 50, 65, 80 PN10/16
Options	<ul style="list-style-type: none"> <li>• Customized flow range</li> <li>• FKM seal</li> <li>• SS316 Float</li> </ul>	<ul style="list-style-type: none"> <li>• Brass Housing</li> </ul>	<ul style="list-style-type: none"> <li>• Other Flange standard available on request</li> </ul>	<ul style="list-style-type: none"> <li>• SS316 Housing</li> <li>• SS316 Float</li> <li>• Other Flange standard available on request</li> </ul>

## Rotameters



### AE 717 GA24V

Pipeline Glass  
Rotameter

### AE 717 VA30

Pipeline Glass  
Rotameter

### AE 717 Z6000

Pipeline Glass  
Rotameter

### AE 717

Alarm Switches  
for Rotameter

General Data	<ul style="list-style-type: none"> <li>• Wide range of sizes and measuring range</li> <li>• Safety cover of special laminated glass</li> <li>• High safety factor</li> <li>• Robust design</li> <li>• Easy to install</li> <li>• Easy to maintain</li> </ul>	<ul style="list-style-type: none"> <li>• Wide range of sizes and measuring range</li> <li>• High measuring precision</li> <li>• Multiple connection</li> <li>• Loose flange design type for easy installation</li> <li>• Robust design</li> <li>• Easy to maintain</li> </ul>	<ul style="list-style-type: none"> <li>• Any mounting position</li> <li>• High strength engineering plastic construction</li> <li>• Break proof</li> <li>• Corrosion proof</li> <li>• Easy to read</li> <li>• Indicating marker for upper and lower limit of flow</li> </ul>	<ul style="list-style-type: none"> <li>• Can be retrofitted on the series 717, Type Z500, Z6000 and FA40 pipeline Rotameter</li> <li>• Adjustable alarm position</li> <li>• High or Low limit or both</li> </ul>
Applications / Industries	For demanding applications in the process industries, water treatment, semi-conductor, chemical, power plant, oil & gas, food and beverage industries	For demanding applications in the process industries, water treatment, semi-conductor, chemical, power plant, oil & gas, food and beverage industries	For application in the general process industries, water treatment, potable water, environmental protection equipment, food and beverage industries	Power Supply: Max 24VDC, 24VAC  Operating Current: Max. 0.3A  Permanent Current: Max. DC 0.1A  Rupturing Capacity: Max. 1 VA  Forward Resistance: <200mΩ  Insulating Impedance: >109Ω  Working Temperature: 0°C to +55°C  Protection: IP65  Lag Behind: 4 mm  Size: 45 x 20 x 45 mm
Measuring Range	Scale range available from Air 0.12...1.2 M³/h to 30...300 M³/h Water 4...40 L/h to 4,000...16,000 L/h	Scale range available from Air 0.12...1.2 M³/h to 30...300 M³/h Water 4...40 L/h to 4,000...16,000 L/h	Scale range available from Dual Scale 1/2" to 1" : Air 60...600 LPM to 300...3,000 LPM 18...180 GPM to 80...800 GPM Water 2...20 LPM to 20...100 LPM 0.5...5 GPM to 4...28 GPM 11/2" and 2" : Water 12...90 LPM to 40...380 LPM 3...25 GPM to 10...100 GPM	
Materials	SS304 Housing Glass tube SS304, PTFE Float EPDM seal	SS304 Housing Glass tube SS304, PTFE Float EPDM seal	Polycarbonate or Polysulfone Housing SS304 or uPVC Connection FKM seal	
Accuracy	± 5%	± 5%	± 6%	
Working Pressure	Up to + 10 bar (DN15, 25) Up to + 9 bar (DN40) Up to + 6 bar (DN50)	Up to + 10 bar (DN15, 25) Up to + 9 bar (DN40) Up to + 7 bar (DN50)	Up to + 10 bar	
Working Temperature	-20°C to +120°C	-20°C to +120°C	Up to +60°C (Polycarbonate) Up to +100°C (Polysulfone)	
Connections	1/2", 1", 11/2", 2" FBSP / NPT	1/2", 1", 11/2", 2" FBSP / NPT	1/2", 3/4", 11/2", 2" FNPT 3/4", 1" MNPT	
Options	<ul style="list-style-type: none"> <li>• SS316 Housing</li> <li>• SS316 Float</li> </ul>	<ul style="list-style-type: none"> <li>• SS316 Housing</li> <li>• SS316 Float</li> <li>• Loose flange design</li> </ul>	<ul style="list-style-type: none"> <li>• Version with alarm switch</li> <li>• BSP threaded version on request</li> </ul>	



Singapore Office  
**Anderson Eurotech Singapore Pte Ltd**  
1, Yishun Industrial Street 1, #08-05,  
A'Posh BizHub, Singapore 768160  
☎️ +65 66944233  
sales@andersoneurotech.com  
www.andersoneurotech.com

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