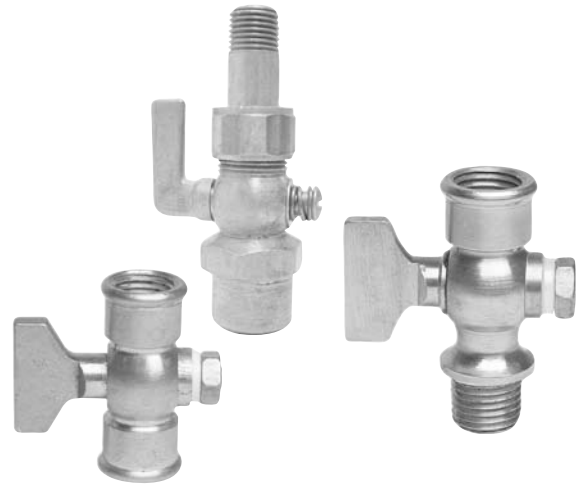


# ACCESSORIES

# Accessories

## Type 910.10

- **Pressure Gauge Cocks**
- **Brass Material**
- **Simple Shut-off Device**



WIKAI gauge cocks provide an economical method for isolating the instrument from the process and for throttling line pressure. They also act as an adjustable flow orifice and are rated to 200 psi. WIKAI's 910.10 gauge cocks are intended for use on light-duty air applications.

### Standard Features

- **Pressure Rating:** Brass: 200 psi
- **Operating Temperature:** Media: max. 140°F (+93°C); min. 0°F (-18°C)
- **Valve Body:** Brass
- **Handle:** Brass, available with "T" or lever type handle
- **Stem Seals:** None
- **Standard Threaded Connection Size:** ¼" NPT or ½" NPT M & F

Type	Material	Lever Type	Connection	Pressure Rating	Max Temp Rating	Part Number
910.10	Brass	"T" handle	¼" X ¼" NPT female	200 PSI	140°F	<b>4339631</b>
	Brass	"T" handle	¼" NPT female X ¼" NPT male	200 PSI	140°F	<b>4339640</b>
	Brass	Lever Handle	¼" X ¼" NPT female	200 PSI	140°F	<b>4339658</b>
	Brass	Lever Handle	½" X ½" NPT female	200 PSI	140°F	4339674
	Brass	Lever Handle	¼" NPT female X ¼" NPT male with union connection	200 PSI	140°F	<b>4339666</b>

**Note:** Stock items shown in **bold, blue** print.

Items shown with part numbers indicate readily available standard WIKAI products.  
 Items shown without part numbers are available on special order.

**Datasheet: 910.10**

# Accessories

## Type 910.11



- Instrument Grade Needle Valves
- Hard Seat or Soft Seat
- Carbon Steel or Stainless Steel



Type 910.11 needle valves can be used to isolate a pressure instrument from the application. For general applications, the hard seat version is the industry standard. Soft seat versions are ideal for gaseous media where a bubble tight seal is required. Both in-line and angle versions are available.



### Standard Features - Carbon Steel Model



- **Pressure Rating:** 10,000 psi @ 200°F max.  
- hard seat 6000 psi @ 200°F max.- soft seat
- **Valve Body:** 12L14 carbon steel
- **Bonnet:** 12L14 carbon steel
- **Valve Stem:** 316 stainless steel
- **Handle:** 12L14 carbon steel
- **Handle Bolt:** Carbon steel
- **Bonnet Lock:** Carbon steel
- **Stem Seals:** Viton® o-ring, Teflon® back-up ring
- **Stem Seal Lock:** Carbon steel (soft seat model)
- **Stem Seat:** Delrin (soft seat model)
- **Nickel-plated finish on carbon steel valves**

### Standard Features - Stainless Steel Model

- **Pressure Rating:** 10,000 psi @ 200°F max.  
- hard seat 6000 psi @ 200°F max.- soft seat
- **Valve Body:** 316 stainless steel
- **Bonnet:** 316 stainless steel
- **Valve Stem:** 316 stainless steel (hard seat models with hard chromed tip and stem threads)
- **Handle:** 316 stainless steel
- **Handle Bolt:** Stainless steel
- **Bonnet Lock:** Stainless steel
- **Stem Seals:** Viton® o-ring, Teflon® back-up ring
- **Stem Seal Lock:** Stainless steel (soft seat model)
- **Stem Seat:** Delrin (soft seat model)
- **Electropolish finish on stainless steel valves**

Hard Seat Needle Valves			
Connection	Body Material	Size	Part Number
 Female-Female	Carbon Steel	1/4" NPT	<b>9698838</b>
		3/8" NPT	<b>4339925</b>
		1/2" NPT	<b>9698846</b>
	Stainless Steel	3/4" NPT	<b>4339933</b>
		1/4" NPT	<b>9698855</b>
		3/8" NPT	<b>4339941</b>
 Male-Female	Carbon Steel	1/4" NPT	<b>9698871</b>
		1/2" NPT	<b>9698889</b>
	Stainless Steel	1/4" NPT	<b>9698897</b>
		1/2" NPT	<b>9698901</b>

Hard Seat 90° Angle Needle Valves			
Connection	Body Material	Size	Part Number
 Female-Female	Carbon Steel	1/4" NPT	<b>9799295</b>
		1/2" NPT	9799308
	Stainless Steel	1/4" NPT	9799316
 Male-Female	Carbon Steel	1/2" NPT	<b>9799325</b>
		1/4" NPT	<b>9799333</b>
	Stainless Steel	1/2" NPT	9799341
		1/4" NPT	<b>9799359</b>
		1/2" NPT	<b>9799367</b>

Soft Seat Needle Valves			
Connection	Body Material	Size	Part Number
 Female-Female	Carbon Steel	1/4" NPT	9698919
		1/2" NPT	<b>9698927</b>
	Stainless Steel	1/4" NPT	<b>9698935</b>
		1/2" NPT	<b>9698944</b>
 Male-Female	Carbon Steel	1/4" NPT	<b>9698952</b>
		1/2" NPT	<b>9698960</b>
	Stainless Steel	1/4" NPT	9698978
		1/2" NPT	<b>9698986</b>

Items without part numbers are available - consult factory.

**Note:** Stock items shown in bold, blue print.

**Datasheet: 910.11**

# Accessories

## Type 910.11.100

- Mini-Needle Valves
- Hard Seat
- Brass, Carbon Steel or 316 Stainless Steel



Brass mini-valves supplied with knurled knob standard.



Carbon steel and stainless steel mini-valves supplied with T-handle.

Type 910.11.100 mini-needle valves can be used to isolate a pressure instrument from the application where space is limited. Three connection versions are available from stock.

### Standard Features

- **Operating Temperature:** Media: max. 200°F (+93°C); min. 0°F (-18°C)
- **Flow Rate:** Max.  $C_v = 0.42$
- **Orifice Size:** 0.172" (4.37mm)

### Standard Features - Brass Model

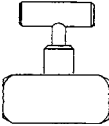
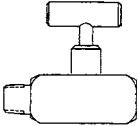
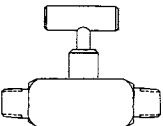
- **Pressure Rating:** 3000 psi
- **Valve Body:** Brass
- **Bonnet:** Brass
- **Valve Stem:** Brass
- **Handle:** Knurled knob, brass
- **Handle Bolt:** Brass, 360
- **Stem Seals:** Viton® o-ring, Teflon® back-up ring

### Standard Features - Carbon Steel Model

- **Pressure Rating:** 6000 psi
- **Valve Body:** Carbon steel
- **Bonnet:** Carbon steel, 12L14
- **Valve Stem:** 316 stainless steel
- **Handle:** T, carbon steel
- **Handle Bolt:** Carbon steel, 12L14
- **Stem Seals:** Viton® o-ring, Teflon® back-up ring

### Standard Features - Stainless Steel Model

- **Pressure Rating:** 6000 psi
- **Valve Body:** 316 ss, electropolished
- **Bonnet:** 316 ss, electropolished
- **Valve Stem:** 316 ss, electropolished
- **Handle:** Tee, 316 ss, electropolished
- **Handle Bolt:** Stainless steel
- **Stem Seals:** Viton® o-ring, Teflon® back-up ring

Connection	Body Material	Conn. Size	Part Number
 Female-Female	Brass	1/8" NPT	4266120
		1/4" NPT	<b>4266138</b>
	Carbon Steel	1/8" NPT	4266146
		1/4" NPT	<b>4266154</b>
	Stainless Steel	1/8" NPT	4266162
		1/4" NPT	<b>4266171</b>
 Male-Female	Brass	1/8" NPT	4266189
		1/4" NPT	<b>4266197</b>
	Carbon Steel	1/8" NPT	4266201
		1/4" NPT	<b>4266219</b>
	Stainless Steel	1/8" NPT	4266227
		1/4" NPT	<b>4266235</b>
 Male-Male	Brass	1/8" NPT	4266243
		1/4" NPT	4266251
	Carbon Steel	1/8" NPT	4266260
		1/4" NPT	4266278
	Stainless Steel	1/8" NPT	4266286
		1/4" NPT	<b>4266294</b>

Items without part numbers are available - consult factory.

**Note:** Stock items shown in **bold, blue** print.

**Datasheet: 910.11.100**

# Accessories

## Type 910.11.200

- **Block & Bleed Needle Valves**
- **Instrument Grade**
- **Hard or Soft Seat**



Intended to isolate the pressure gauge from the measured fluid or to provide a means of throttling or dampening pressure pulsation. Allows pressure to be bled-off prior to instrument removal or replacement.

### Standard Features

- **Valve Body:** 12L14 carbon steel, nickel plated, or 316 stainless steel, electropolished
- **Bonnet:** 12L14 carbon steel or 316 stainless steel
- **Valve Stem:** 316 stainless steel (hard chromed on hard seat models)
- **Handle:** 12L14 carbon steel or 316 stainless steel
- **Handle Bolt:** 12L14 carbon steel or 18-8 stainless steel
- **Stem Seals:** Viton® o-ring with PTFE back-up ring
- **Stem Seal Lock (soft seat model):** 12L14 carbon steel or 316 stainless steel
- **Stem Seat (soft seat model):** Delrin
- **Orifice Size:** 0.187 inches (4.75 mm)
- **Pressure Rating:** Hard seat models-10,000 psi @ 200°F max. Soft seat models- 6,000 psi @ 200°F max.
- **Operating Temperature:** Media: max. 200°F (+93°C); min. 0°F (-18°C)
- **Flow Rate:** Hard seat models - Max.  $C_v$  0.44 Soft seat models- Max.  $C_v$  0.76

#### Hard Seat Block & Bleed Needle Valves

Connection	Body Material	Size	Part Number
	Carbon Steel	1/4" NPT	4339682
		1/2" NPT	<b>4339691</b>
	Stainless Steel	1/4" NPT	<b>4339704</b>
		1/2" NPT	<b>4339712</b>
	Carbon Steel	1/4" NPT	4339721
		1/2" NPT	<b>4339739</b>
	Stainless Steel	1/4" NPT	<b>4339747</b>
		1/2" NPT	<b>4339755</b>

#### Soft Seat Block & Bleed Needle Valves

Connection	Body Material	Size	Part Number
	Carbon Steel	1/4" NPT	4339763
		1/2" NPT	4339771
	Stainless Steel	1/4" NPT	4339780
		1/2" NPT	<b>4339798</b>
	Carbon Steel	1/4" NPT	4339801
		1/2" NPT	<b>4339810</b>
	Stainless Steel	1/4" NPT	<b>4339828</b>
		1/2" NPT	<b>4339836</b>

Items without part numbers are available - consult factory.

**Note:** Stock items shown in **bold, blue** print.

**Datasheet: 910.11.200**

# Accessories

## Type 910.11.300 Multi-Port Valves

- Multi-Port Needle Valves
- Instrument Grade
- Hard or Soft Seat



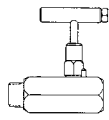
Intended to isolate the pressure gauge from the measured fluid or to provide a means of throttling or dampening pressure pulsation. Allows additional instrument connections without adding permanent piping.

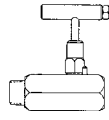
### Standard Features

- **Valve Body:** 12L14 carbon steel, nickel plated, or 316 stainless steel, electropolished
- **Bonnet:** 12L14 carbon steel or 316 stainless steel
- **Valve Stem:** 316 stainless steel (hard chromed on hard seat models)
- **Handle:** 12L14 carbon steel or 316 stainless steel
- **Handle Bolt:** 12L14 carbon steel or 18-8 stainless steel
- **Stem Seals:** Viton® o-ring with PTFE back-up ring
- **Stem Seal Lock (soft seat model):** 12L14 carbon steel or 316 stainless steel
- **Stem Seat (soft seat model):** Delrin
- **Orifice Size:** 0.187 inches (4.75 mm)
- **Pressure Rating:** Hard seat models -10,000 psi @ 200°F max. Soft seat models 6,000 psi @ 200°F max.
- **Operating Temperature: Media:** max. 200°F (+93°C); min. 0°F (-18°C)
- **Flow Rate:** Hard seat models-Max. C<sub>v</sub> 0.44 Soft seat models- Max. C<sub>v</sub> 0.64

### Order Options

Panel mounting bracket  
NACE MRO 175-93 Certification (soft-seat models only)

Hard Seat Multi-Port Needle Valves			
Connection	Body Material	Size	Part Number
Male-Female 	Carbon Steel	1/2" NPT 3/4" M x 1/2" F NPT	<b>4339844</b> 4339852
	Stainless Steel	1/2" NPT 3/4" M x 1/2" NPT	<b>4339861</b> 4339879

Soft Seat Multi-Port Needle Valves			
Connection	Body Material	Size	Part Number
Male-Female 	Carbon Steel	1/2" NPT 3/4" M x 1/2" F NPT	<b>4339887</b> 4339895
	Stainless Steel	1/2" NPT 3/4" M x 1/2" F NPT	<b>4339909</b> <b>4339917</b>

Items without part numbers are available - consult factory.

**Note:** Stock items shown in **bold, blue** print.

# Accessories

## Type 910.12.100, 910.12.200, 910.12.300



- Porous Snubber
- Piston Snubber
- Throttling Snubber

Pressure snubbers protect pressure instruments against surges and pressure shocks. Porous snubbers are suitable for general purpose applications. Piston snubbers are supplied with three pistons to adapt to varying applications. Throttling snubbers have a built-in needle valve that allows you to adjust the amount of snubbing externally.

### Standard Features

- **Pressure Connection:** ¼" NPT or ½" NPT male x female (see selection chart)
- **Material:** Brass or stainless steel
- **O-ring material (adjustable snubber only):**  
Brass: Buna-N  
Stainless steel: Viton®
- **Pressure Rating:**  
Brass: 3000 psi - 5000 psi;  
SS: 5000 psi - 15,000 psi (see selection chart)
- **Temperature Rating:**  
14°F to 248°F (-10°C to 120°C)

### Order Options (by special order)

- Other threaded connections
- Cleaned for use in oxygen service
- Monel® version
- Porous snubbers for different media types (specify media when ordering)

#### Type 910.12.100 Porous Snubbers

Purpose	Material	Connection	Pressure Rating	Part Number
Air, Steam, Gas	Brass	¼" M x ¼" F	5000 psi	<b>4341503</b>
Light Oil, Water	Brass	¼" M x ¼" F	5000 psi	<b>4341511</b>
Air, Steam, Gas	SS	¼" M x ¼" F	15000 psi	<b>4001524</b>
Air, Steam, Gas	Brass	½" M x ½" F	5000 psi	<b>50409671</b>
Air, Steam, Gas	SS	½" M x ½" F	15000 psi	<b>50409662</b>

#### Type 910.12.200 Piston Snubbers

Supplied with five pistons for light to heavy snubbing

Material	Connection	Pressure Rating	Part Number
Brass	¼" NPT	5000 psi	4201639
	½" NPT	5000 psi	<b>4201647</b>
316SS	¼" NPT	15,000 psi	<b>4201655</b>
	½" NPT	15,000 psi	<b>4201663</b>

#### Type 910.12.300 Throttling Snubbers (Adjustable)

Includes a stainless steel needle valve

Material	Connection	Pressure Rating	Part Number
Brass	¼" NPT	3400 psi	<b>50334603</b>
	½" NPT	3400 psi	<b>50334611</b>
316SS	¼" NPT	5800 psi	<b>50334620</b>
	½" NPT	5800 psi	<b>50334638</b>

Items without part numbers are available - consult factory.

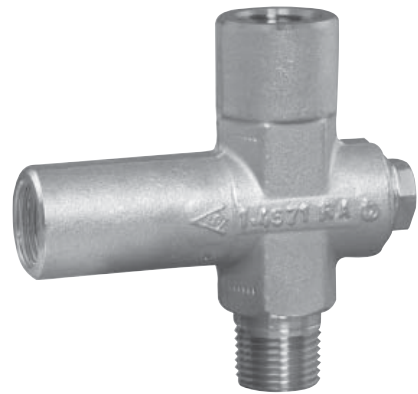
**Note:** Stock items shown in **bold, blue** print.

Datasheet: **910.12**

# Accessories

## Type 910.13

### Overpressure Protector



Type 910.13 overpressure protectors protect pressure instruments from damaging spikes or surges. At a "pre-set" pressure, the overpressure protector "shuts-off" the pressure to the instrument thus preventing damage to the pressure sensing element and protecting the calibration. The set-point is externally adjustable. Type 910.13 overpressure protectors also feature an adjustable piston valve which is designed to dampen system pulsation.

#### Description

The overpressure protector consists of a spring loaded piston valve. Under normal pressure conditions the spring holds the valve open. When the system pressure exceeds the set pressure, the force exerted by the spring is overcome and the valve closes. The valve will remain closed until the system pressure drops approximately 25% below the closing pressure, where upon the force of the spring will open the valve.

Overpressure protectors must not be used as process control devices

#### Standard features

##### Pressure connection

- 1/2" NPT male inlet, female outlet
- Adaptors for 1/4" NPT connection:
- 1/2" NPT-F x 1/4" NPT-M (Part # 1128302)
- 1/2" NPT-M x 1/4" NPT-F (Part # 50311107)

#### Settings with factory mounting

The protector is set to 1.1 x maximum scale value when ordered together with a WIKA pressure gauge.

#### Selectable standard versions

<b>Range (bar)</b>	0.4 to 2.5	2 to 6	5 to 25	20 to 60	50 to 250	240 to 400	400 to 600
<b>Range (psi)</b>	6 to 35	30 to 85	85 to 365	290 to 870	725 to 3625	3500 to 5800	5800 to 8700
<b>Part Number</b>	<b>9091963</b>	<b>9091971</b>	<b>9091980</b>	<b>0690600</b>	<b>0690619</b>	<b>1615130</b>	<b>50311115</b>

**Note:** Stock items shown in **bold, blue** print.

Items shown with part numbers indicate readily available standard WIKA products.  
Items shown without part numbers are available on special order.

#### Special Features

- 7 different setting ranges selectable
- Minimum pressure to 6 psi (0.4 bar)
- Maximum pressure to 8700 psi (600 bar)
- Overpressure safe up to 14,500 psi (1000 bar)
- Vacuum safe

##### Body

316Ti stainless steel

##### Piston Valve

316Ti stainless steel

##### O-Ring

FPM (Viton)

##### Operating Temperature

176 °F (80 °C maximum)

##### Order Options (by special order)

- Other connection thread on request
- Inspection certificate per 3.1.B acc. to EN 10 204
- Degreased, approved for oxygen service, only up to 60°C maximum
- Brass version
- Monel® version
- Version according to NACE

#### Datasheet: 910.13



# Accessories

## Type 910.14.100 Test Port Plugs



- **Pressure & Temperature Test Plug Adaptor**
- **Provides Access for Test Measurements**
- **Self-Sealing Diaphragm**

WIKA's 910.14.100 pressure and temperature test port plugs allow media access ideally for hydronic pressure and temperature measurement, without disturbing the process. The pressure and temperature units are equipped with a self-sealing pierceable rubber diaphragm and are rated at 1000 psi and 200°F (350°F available).

### Standard Features

- **Pressure Connection:** 1/4" NPT or 1/2" NPT male
- **Material:** Brass body; neoprene or nordel diaphragm core
- **Self-Sealing Diaphragm Material:** Neoprene or nordel
- **Pressure Rating:** 1000 psi
- **Temperature Rating:** Neoprene 32-200°F max.; Nordel 32-350°F max.

Type	Material	Connection	Pressure Rating	Plug Core	Max Temp Rating	Part Number
910.14.100	Brass	1/4" NPT Male	1,000 psi	neoprene	200°F	4339950
910.14.100	Brass	1/2" NPT Male	1,000 psi	neoprene	200°F	4339968
910.14.100	Brass	1/4" NPT Male	1,000 psi	nordel	350°F	4343591
910.14.100	Brass	1/2" NPT Male	1,000 psi	nordel	350°F	4343603

Datssheet: [910.14.100](#)

# Accessories

## Type 910.14.200 Adaptors



- Pressure Gauge Adaptors
- Adapts NPT to "G" Metric Threads
- Brass or Stainless Steel Material

Type 910.14.200 pressure gauge adaptors and fittings are used for the installation of pressure gauges and pressure gauge accessories.

### Standard Features

- **Male-Female Adaptor:**  
For adapting NPT to G (metric connections)
- **Pressure Connection:**  
See sizes and other dimensions on chart
- **Materials:**  
Brass, 316 stainless steel

#### Order Options

Chrome-plated brass  
Alternate thread sizes

Type 910.14.200 - NPT to Metric Adaptors		
Sold Separately		
Material	Description	Part Number
Brass	¼" NPT female to G ¼ B male	0084514
	½" NPT female to G ½ B male	187143
Stainless Steel	¼" NPT female to G ¼ B male	1247573
	½" NPT female to G ½ B male	0634603

Note: Sealing "O-ring" on "G" connection not included.

Items shown with part numbers indicate readily available standard WIKA products. Items shown without part numbers are available on special order.

# Accessories

## Type 910.14.300 Couplings



- **Couplings**
- **Brass, Steel, Stainless Steel Material**
- **Eases Siphon Installations**

WIKA offers couplings in a variety of connection sizes and materials. Couplings can be used for adapting siphons and any other instrumentation to the process.

### Standard Features

- **Male-Male Adaptor:** For joining two male connections, e.g. pressure gauge and gauge siphon, standard versions
- **Pressure Connection:** Sizes and other dimensions on chart
- **Materials:** Brass, carbon steel, 316 stainless steel

Couplings (to attach pressure gauges to siphons)		
Connection	Material	Part Number
1/4" x 1/4" NPT female	Brass	1652974
	Steel	1652982
	Stainless Steel	1652990
1/2" x 1/2" NPT female	Brass	1653008
	Steel	1653016
	Stainless Steel	1653024
	Chr. Moly	1601040

### Order Options

Chrome-plated brass  
Alternate thread sizes

Items shown with part numbers indicate readily available standard WIKA products. Items shown without part numbers are available on special order.

**Datasheet: 910.14.300**

# Accessories

## Type 910.15.100 910.15.200

- **Siphons for Steam Service**
- **Pigtail for Vertical Installations**
- **Coil for Horizontal Installations**



Siphons should be used to protect pressure instruments in live steam service or other hot vapor applications. The vapor condenses inside the coil of the siphon which prevents the high temperature vapors from reaching the sensing element of the pressure instrument. Additionally siphons assists in lowering process media temperatures.

### Standard Features

- **Forms:** Pigtail siphon, Coil siphon
- **Materials:** Brass, Steel A120, schedule 40, Steel A106B, schedule 80 & 160, 316 stainless steel, schedules 80 & 160, Chrome Moly steel (A335 P22), XX Heavy
- **Media Temperature Reduction:**  
Approximately 75°F for each 1 foot lineal section of pipe.  
Actual reduction dependent on process/application variables.

Note: When first installed, siphon should be filled with water or any other suitable separating liquid.

Type 910.15.100 Pigtail					
Siphon Form	Body Material	Size	Material Press. Rating (PSI)	Material Temp. Rating (°F)	Part Number
	Brass	¼" NPT	250	400	<b>4201779</b>
	Steel, Sch 40	¼" NPT	500	400	<b>4201787</b>
	316SS, Sch 40	¼" NPT	500	400	<b>4201761</b>
	316SS, Sch 80	½" NPT	2600	500	<b>4362719</b>

Type 910.15.200 Coil					
Siphon Form	Body Material	Size	Material Press. Rating (PSI)	Material Temp. Rating (°F)	Part Number
	Brass	¼" NPT	250	400	4201809
	Steel, Sch 40	¼" NPT	500	400	<b>4201817</b>
	Steel, Sch 80	¼" NPT	3360	400	<b>4201825</b>
	Steel, Sch 80	½" NPT	3000	400	<b>4201833</b>
	Steel, Sch 160	½" NPT	3620	700	<b>4201841</b>
	316SS, Sch 80	½" NPT	2650	500	<b>4201850</b>
	316SS, Sch 160	½" NPT	5600	500	<b>4201795</b>
	Chr. Moly	½" NPT	8205	750	4201868

Items without part numbers are available - consult factory

**Note:** Stock items shown in bold, blue print.

**Order Options**  
Alternate threads  
316 stainless steel cleaned for oxygen service

**Datasheet: 910.15**

# Accessories

## Type CP3000/CP4000



- Indicating Pressure Switches/Alarm Contacts
- Magnetically-Assisted or Inductive
- Solid Front/Blow-out Back Safety Case

WIKA indicating pressure switches combine local pressure indication with alarm and control capabilities into a single economical, reliable and compact system. Superior to conventional gauge and switch connections, WIKA indicating pressure switches are extremely reliable, have low hysteresis, resist corrosion, and have easy set point adjustments. WIKA pressure switches are ideally suited for alarm and control functions on hydraulic, pneumatic and general industrial machinery and equipment. Additionally, pressure switches are used in process industry installations, including chemical and petrochemical plants, oil refineries, electric power plants, pulp and paper mills, and water and waste water treatment plants.

### Standard Features

- **Area of Installation:**  
Non-hazardous
- **Indicating Pressure Range:**  
0-60 to 0-20,000 psi
- **Set Point Pressure Range:**  
0-30 to 0-20,000 psi
- **Contact Rating AC:**  
24-220VAC, 65VA
- **Switching Hysteresis:**  
± 3.0%

Order Option (by special order)  
Contact assembly available  
for 6" process gauge (2XX.34)

Abbreviations  
N.O. - Normally Open  
N.C. - Normally Closed

**Datasheet: CP3000/CP4000**

#### Type CP3000- Magnetically Assisted Alarm Contacts (for 2XX.34, 4½")

Contact Type	Contact Arrangement	Installed <sup>1</sup>	Sold Separately
		Part Number	Part Number
828.1	N.O.	828.1	774901
828.2	N.C.	828.2	774910
828.11	N.O./N.O.	828.11	774928
828.12	N.O./N.C.	828.12	691178
828.21	N.C./N.O.	828.21	691186
828.22	N.C./N.C.	828.22	774936
Adder to remove Triacs for DC Service		NO TRIAC	
Silicone fill (installed only)		SIL	

<sup>1</sup>Does not include price of the process gauge.

#### Type CP4000- Inductive Proximity Alarm Contacts (for 2XX.34, 4½")

Contact Type	Contact Arrangement	Installed <sup>1</sup>	Sold Separately
		Part Number	Part Number
838.1	N.O.	838.1	771775
838.2	N.C.	838.2	1193368
838.11	N.O./N.O.	838.11	771791
838.12	N.O./N.C.	838.12	1193376
838.21	N.C./N.O.	838.21	1193384
838.22	N.C./N.C.	838.22	1193392
Permanently attach reset knob			2069334

<sup>1</sup>Intrinsically Safe (Type SN) with Fail/Safe Control is available as a special order option. Contact WIKA for quote.

#### HOW TO ORDER (Example)

To order an indicating pressure switch for a hazardous location, with intrinsically safe circuitry, a pressure range from 0-600 psi, Monel<sup>®</sup> wetted parts, liquid filled version, inductive proximity sensors with two normally closed alarm contacts, and a 1/2" NPT process connection, specify:

	Type	Description	Part No.
Gauge	262.34	4½" 600 psi ½" NPT	9835172
Contact	838.22	N.C./N.C. (installed)	838.22
Control Unit	904.16	Intrinsically Safe	1195352

<sup>1</sup>Does not include price of the process gauge.

### CP 3000 - Magnetically-Assisted Contacts

CP 3000 magnetically assisted contacts feature one or two magnetically-assisted mechanical contacts. The contact assembly includes a built-in Triac switching amplifier which minimizes contact wear and allows load switching to 65VA. In this design, a movable contact couples to the gauge pointer through a special adaptor. As the contact approaches the set pointer, the magnetic force of a small permanent magnet attached to the set pointer assists in closing and holding the contacts in place. This avoids arching and reduces contact wear. The switching amplifier further reduces potential wear by its ability to switch large load currents with small control current. The technical specifications are listed in Table 1 on the next page. These switches are designed for use on alternating current (for DC consult WIKA).

### CP 4000 - Inductive Proximity Sensors

CP 4000 inductive proximity sensors feature one or two inductive non-contact proximity sensors in place of mechanical contacts and provide a high degree of reliability and operating safety. The system consists of a sensing head, containing two axial coils with air gap, a metallic control flag and a switching amplifier. The sensing head is carried by the set pointer, while the control flag is coupled to the gauge pointer by way of a special adaptor. Movement of the control flag in and out of the air gap causes an impedance change in the transistor oscillator circuit formed by the two coils which in turn triggers the switching amplifier. When the flag is inside the slot, circuit impedance is high and the contact relay is de-energized. Conversely, when the flag is outside the slot, the relay is energized. The technical specifications are listed in Table 1 on the next page.

#### Control Units for CP 4000

The switching amplifier and control relay are housed in a separate control unit. Depending on the type of control unit used, inductive proximity sensor systems can be furnished in the following versions: standard for nonhazardous locations; intrinsically safe for hazardous locations; intrinsically safe with fail-safe circuitry. Control Units are FM approved for use in Division I, Classes I and II, Groups A through G hazardous locations. The control units must be located outside the hazardous area. (See Table 2 on next page).

#### Fail Safe Circuitry

Type SN inductive proximity sensor together with control unit Type 904.17 is self monitoring, and its function is superimposed on the regular control function. Should any fault occur in the sensing head (such as short or open circuit, power failure or component failure), the control wiring or the control unit, the output relay is automatically de-energized.

### Control Units

required for inductive proximity alarm contacts - sold separately

General Use Control Units			
Contact Rating	Type	For Use With	Part Number
220 VAC, 5A, 1100VA	904.25	Single Contacts Type 838.X	1195298
	904.26	Double Contacts Type 838.XX	1195310

Intrinsically Safe Control Units <sup>1</sup> (FM Approved)			
Contact Rating	Type	For Use With	Part Number
250 VAC, 4A, 500VA	904.15	Single Contacts Type 838.X	1195344
	904.16	Double Contacts Type 838.XX	1195352
	904.17	Fail Safe (for one contact)	1195360

Items shown with part numbers indicate readily available standard WIKA products. Items shown without part numbers are available on special order.

**Table 1**

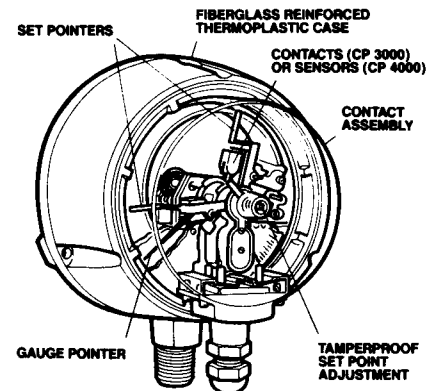
Contact	Magnetic CP3000	Inductive Proximity CP4000				
		Non-Hazardous		Hazardous Environment <FM>		
Control Unit #	(Built-in Triac)	904.25	904.26	904.15	904.16	904.17 Fail-safe
		MSR010-1	MSR020-1	WE77/EX-1	WE77/EX-2	WE77/EX-SH-03
Indicating Pressure Range	0/60 to 0/20,000 psi	0/30 to 0/20,000 psi				Set Point
Pressure Range	30 - 20,000 psi	5 - 20,000 psi				
Momentary Pressure	130%	130%				
Indicating Accuracy	± 3.0% FS	± 1.0% FS				
Operating Voltage	110 VAC/60Hz	110 VAC/60Hz				
Contact Rating	24-220 VAC, 65 VA <sup>1</sup>	220 VAC, 5A, 1100VA	250 VAC, 4A, 500VA		30V, 1.6A	
Switching Frequency (Max)	- - -	20 Hz	10Hz		0.5 Hz	
Control Circuit						
Voltage	- - -	- - -	8 VDC		8 VDC	
Current	min 30mA	- - -	8 mA		10 mA	
Switching Point	- - -	- - -	1.2 mA - 2.1 mA		1.5 mA - 3.0 mA	
Control Wire Resistance (Max)	- - -	- - -	100 Ohms		- - -	
Allowable Ext. Inductance	- - -	- - -	31 mH / 7.6 mH		32 mH	
Allowable Ext. Capacitance	- - -	- - -	609 nF / 539 nF		804 nF	
Ambient Temperature Range	-10° to 140° F	-10° to 140°F	-10° to 140° F		-10° to 140°F	

**Table 2**

Contact Type	Control System	Area of Installation	# Of Contacts	Control Unit <sup>2</sup>	Control Unit Type Number
Magnetically-assisted	Standard	Non-Hazardous	1	- - -	0
			2	- - -	0
Inductive Proximity	Intrinsically Safe	Hazardous	1	904.25	1
			2	904.26	2
			1	904.15	3
			2	904.16	4
Inductive Proximity Type SN	Intrinsically Safe with Fail-Safe Control		1	904.17	5
			2	904.17 <sup>3</sup>	6

**Table 3**

Contact Arrangement	
Function	Type Number
N.O.	8X8.1
N.C.	8X8.2
N.O. / N.O.	8X8.11
N.O. / N.C.	8X8.12
N.C. / N.O.	8X8.21
N.C. / N.C.	8X8.22


<sup>1</sup> Minimum current of 10 mA must continuously flow from load.

<sup>2</sup> Type 904 control units are combination power supply, switching modules for panel or relay rack mount. 904.15 & 904.25 units are 1.57" (40mm) wide, 2.76" (70mm) high and 4.33" (110mm) deep with mounting holes on 1.18" (30mm) horizontal & 2.36" (60mm) vertical centers. The wider 904.16/.17 and 904.26 units are 2.35" (60mm) wide with 1.96" (50mm) horizontal mounting centers. Minimum mounting screw clearance is .19" (4.8mm).

<sup>3</sup> Requires 2 units, one per contact.

# Accessories

## Socket Restrictor Drag Pointer Alarm Contacts

- Full Line of Accessories
- Custom Configure
- Factory Installed



WIKA offers a full line of gauge accessories, including socket restrictors, drag pointers, and alarm contacts. Each of these products is an enhancement to the extensive WIKA product line.



### Socket Restrictor

Available in brass, stainless steel, or Monel®, the socket restrictor reduces the size of the internal bore. The restrictor dampens the effects of pulsation which in turn helps prevent internal damage to the Bourdon tube and movement and extends the life of the gauge.

### Drag Pointer (High Point Indicator)

The red drag pointer follows the regular pointer on increasing pressure, and remains at the highest point until it is reset by a knob on the front of the window. Drag pointers are best suited for dry gauges.



### Alarm Contacts

Many WIKA 2" (830.1E), 2½", 4", 4½" & 6" pressure gauges can be supplied with alarm contacts. Both inductive and magnetically-assisted contacts are available for dry and liquid-filled gauges. In addition, alarm contact assemblies are available for intrinsically-safe environments. Available on models from Germany: 212.20, 232.30, 232.50, 4XX.XX, 7XX.XX, and U.S. model: 2X2.34 only.



# Pressure Gauge Accessories

## Alternate Window Assemblies

Gauge Size	Gauge Type	Window Type	Installed	Sold Separately
			Code	Part Number
2½"	611.10	Instrument Glass <sup>1</sup>	GLS	1208152
		Safety Glass <sup>1</sup>	SG	1205960
	213.40	Instrument Glass	GLS	1208160
		Safety Glass	SG	1206761
	232.30	High Temp Glass	HT	1327001
233.30	Safety Glass	SG	1613367	
	232.54	(PMMA) Acrylic	PMMA	1397796
4"	612.20	Safety Glass	SG	54380
	213.40	Safety Glass	SG	1208190
	212.54/232.54	PC/Lexan	PC	1376675
4½"	2X2.34/6X2.34	Instrument Glass	GLS	561134
		Safety Glass	SG	561150
6"	2XX.34	Safety Glass	SG	154075

<sup>1</sup>Includes black steel frictioning

## Adjustable Pointers

Gauge Size	Gauge Type	Sold Separately
		Part Number
2 ½"	232.54	1552813
	232.30	60992
4"	232.54	1398709
6"	232.50	61000

## Liquid Case Fills

Fill Type	2½"	4"	4½" <sup>1</sup>	6"
Silicone				
DC200 - 1000 cs	SIL	SIL	SIL	SIL
Halocarbon	HALO	HALO	HALO	HALO
Fluorolube	FLR	FLR	FLR	FLR

NOTE: Only inert (Halocarbon/Fluorolube) fill fluid is compatible for use with oxygen service.

**NOTE: Any discount that applies to a pressure gauge also applies to its related accessories. All "Assemblies" sold separately include any additional parts (i.e. screws, gaskets, etc.) needed for installation.**

# Pressure Gauge Accessories cont'd

## Drag Pointer Assemblies

(Also referred to as High Point or Max. Hand Indicators)

Gauge Size	Gauge Type	Window Type	Reset Knob Type	Installed	Sold Separately
				Part Number	Part Number
2½" <sup>3</sup>	232.30 <sup>3</sup>	Acrylic	Permanent	DP	759805
	213.40 <sup>1</sup>	Acrylic	Permanent	DP	738344 <sup>4</sup>
	2XX.53 <sup>3</sup>	Acrylic	Permanent	DP	1193864 <sup>4</sup>
	2XX.54 <sup>3</sup>	Acrylic	Permanent	DP	1416405
4"	213.40 <sup>1</sup>	Glass	Removeable	DP GLR	738352 <sup>4</sup>
		Acrylic	Permanent	DP	1326651 <sup>4</sup>
		Acrylic <sup>2</sup>	Permanent	DP	738395 <sup>4</sup>
		2XX.53	Acrylic	Permanent	DP
	2XX.54	Acrylic	Removeable	DP PMMAR	1410911
	232.30	Acrylic	Permanent	DP	1326635
		Acrylic <sup>2</sup>	Permanent	DP PMMA	1206133
		Acrylic	Removeable	DP PMMAR	738360
		Glass	Permanent	DP GL	1326678
		Glass <sup>2</sup>	Permanent	DP GL	738425
		Glass	Removeable	DP GLR	738387
		Safety Glass	Permanent	DP SG	1326660
		Safety Glass <sup>2</sup>	Permanent	DP SG	738417
Safety Glass	Removeable	DP SGR	738379		
4½"	2X2.34	Acrylic	Permanent	DP	738441
		Acrylic	Removeable	DP PMMAR	738433
6"	232.50 & 312.20	Acrylic	Permanent	DP	738492
		Acrylic	Removeable	DP PMMAR	738450
		Glass	Permanent	DP GL	738506
		Glass	Removeable	DP GLR	738476
		Safety Glass	Permanent	DP SG	738484
		Safety Glass	Removeable	DP SGR	738468
Attach "removeable" knob with permanent adhesive					2069334

<sup>1</sup> Minimum pressure range of 160 psi is required. Due to its high viscosity, the standard glycerine filling is replaced with a glycerine/water filling.

Accuracy is reduced to ± 5.0% of full span.

<sup>2</sup> Use for pressures equal to or below 30 psi full span.

<sup>3</sup> For 2½" drag pointers: For pressure ranges ≤100 psi; Additional accuracy reduction: DRY: ±3%FS, LF:±5%

For pressure ranges > 100 psi; Additional accuracy reduction: DRY: ± 1.5%FS, LF:±3%

<sup>4</sup> Special tooling required for Part Numbers 738344, 1193864, 738352, 1326651, 738395 & 1416570

## Certifying Gauges to ASME B40.100 Cleanliness Level IV

(Includes cap on socket. Individually bagged and labeled)

Gauge Type	Part Number
111.XX	2250578
2X2.53, 2X2.54, 132.53, 2X2.34 LM, 2X2.25HR, & 332.54	2250560
712.XX	2250586

NOTE: For high volume orders, contact factory about a special order production to lower costs.

**NOTE: Any discount that applies to a pressure gauge also applies to its related accessories. All "Assemblies" sold separately include any additional parts (i.e. screws, gaskets, etc.) needed for installation.**

# Pressure Gauge Accessories cont'd

Certificates of Calibration	
Traceable to N.I.S.T. standards	
N.I.S.T. Standard	Part Number
± 0.1% accuracy (Type 342.XX)	CC
± 0.25% accuracy (Type 3X2.20 / 332.X4)	CC
± 0.5% to ±3/2/3% accuracy <sup>1</sup>	CC

<sup>1</sup>Any discount that applies to a pressure gauge also applies to this NIST certificate

Front Flange Assemblies - Sold Separately				
(Includes screws to mount to case where necessary)				
Size	Fits Gauge	Description	Mounting	Part Number
2"	111.12	Black painted steel	screw retained	1327080
		Chrome plated steel	screw retained	1327082
	21X.53	Stainless steel polished	arbor press <sup>1</sup>	1184954
2½"	111.10	Black painted steel	screw retained	1327084
		Chrome plated steel	screw retained	1327086
	113.13	Black ABS plastic	snap-fit	572861
	213.40	Brass polished	screw retained	1327116
		Chrome plated steel	screw retained	1327118
		Stainless steel polished	screw retained	1327114
	23X.30/50	Stainless steel polished	bayonet	50618393
	2XX.53	Stainless steel polished	arbor press <sup>1</sup>	4005899
23X.54	Stainless steel polished	arbor press <sup>1</sup>	4005902	
611.10	Chrome plated brass (CBM)	screw retained	659606	
	Black painted steel (CBM)	screw retained	659614	
4"	212.20	Stainless steel polished	bayonet lock	659576
	213.40	Chrome plated brass	screw retained	501115
	2XX.53 / 54	Stainless steel polished	arbor press <sup>1</sup>	1418556
	23X.30	Stainless steel polished	bayonet lock	659576
	612.20	Stainless steel polished	bayonet lock	659576
	632.50	Stainless steel polished	bayonet lock	659576
4½" Panel Adapters (For 4" gauges)	213.40	Stainless steel polished	screw-retained	738549
	2XX.53/2XX.54	Stainless steel polished	arbor press <sup>1</sup>	1653903
	2XX.34	Stainless steel polished	hand-threaded	738581
6"	212.20	Stainless steel polished	bayonet lock	659584
	23X.50	Stainless steel polished	bayonet lock	659584
	312.20	Stainless steel polished	bayonet lock	659584

<sup>1</sup> Special arbor press and fixtures required for installation. Contact factory for price and availability of press and fixtures.

**NOTE: Any discount that applies to a pressure gauge also applies to its related accessories. All "Assemblies" sold separately include any additional parts (i.e. screws, gaskets, etc.) needed for installation.**

# Pressure Gauge Accessories cont'd

## Rear Flange Assemblies - Sold Separately

(Includes screws to mount to case where necessary)

Size	Fits Gauge	Description	Mounting	Part Number
2½"	213.40	Polished brass	screw retained <sup>2</sup>	1206621
	2XX.53	Polished stainless steel	snap-fit, crimp tab <sup>1</sup>	1491695
	2XX.54	Polished stainless steel	snap-fit, crimp tab <sup>1</sup>	2256096
4"	111.10	Black ABS plastic	screw-retained	1207555
	213.40	Chrome plated brass	screw retained <sup>2</sup>	1206630
	2XX.53	Polished stainless steel	snap-fit, crimp tab <sup>1</sup>	1572865
	2XX.54	Polished stainless steel	snap-fit, crimp tab <sup>1</sup>	1572865
4½"	111.25	Satin-finish stainless steel	spot welded	4001605
6"	212.20	Polished stainless steel	spot welded	1353217
	312.20	Polished stainless steel	spot welded	1353217
	23X.50	Polished stainless steel	spot welded	1353217

<sup>1</sup> Rear flange snaps onto case. Two tabs must be crimped to secure flange to the case. Special tool available. Contact factory.

<sup>2</sup> Special case required. Must be factory installed.

## U-clamp Assemblies - Sold Separately

(Includes profile ring, bracket, & screws where necessary)

Size	Fits Gauge	Profile Ring Material	Bracket Material	Mounting	Part Number
2"	21X.53	Polished stainless steel	Zinc plated steel	twist-on socket	1184890
2 ½"	213.40	Chrome plated steel	Zinc plated steel	screw retained	659665
	2XX.53	Polished stainless steel	Zinc plated steel	snap-fit bracket	9092331
		Polished stainless steel	Stainless steel	snap-fit bracket	1405829
	23X.54	Polished stainless steel	Zinc plated steel	snap-fit bracket	1410334 <sup>2</sup>
		Polished stainless steel	Stainless steel	snap-fit bracket	1410342 <sup>2</sup>
4"	213.40	Chrome plated steel	Zinc plated steel	screw retained	659673
	2XX.53	Polished stainless steel	Zinc plated steel	snap-fit bracket	1487850
		Polished stainless steel	Stainless steel	snap-fit bracket	1487841
	23X.54	Polished stainless steel	Zinc plated steel	arbor press <sup>1</sup>	1410318
		Polished stainless steel	Stainless steel	arbor press <sup>1</sup>	1410326

<sup>1</sup> Installation requires special tooling. Contact factory for more information.

<sup>2</sup> Includes U-Clamp and standoff ring

## Individual Restrictors - Sold Separately

Fits Gauge	Description	Thread	Orifice	Part Number
212.20/21X.34	Brass threaded	M4	.023" (.6mm)	4324
26X.34	Monel threaded	M4	.023" (.6mm)	607797
111.10/111.12/21X.53	Brass, press-in	--	.012" (.3mm)	525340
All others	SS threaded for 1½", 2", 2½"	M3.5	.012" (.3mm)	165522
	SS threaded for 2½", 4", 4½" & 6"	M4	.023" (.6mm)	29122
	Brass threaded	M3.5	.020" (.5mm)	30872

Threaded restrictors require gauges to have an internal tap. (Internal tap is standard on all 4½" Type 2xx.34 process gauges).  
Press-in restrictors require a special tool for insertion.

<sup>1</sup> Use M4 size restrictor for current Type 23X.5X with welded case-to-socket connection.

**NOTE: Any discount that applies to a pressure gauge also applies to its related accessories.**

**All "Assemblies" sold separately include any additional parts (i.e. screws, gaskets, etc.) needed for installation.**

# Pressure Gauge Accessories cont'd

## Miscellaneous Accessories

Size	Fits Gauge	Description	Part Number
2½"	111.10 / 113.13 / 21X.53 / 23X.53 / 23X.50	Blue rubber cover - LM	9090894
	111.10 / 113.13 / 21X.53 / 23X.53 / 23X.50	Red rubber cover - LM	9090886
	111.12 / 21X.53 / 23X.53 / 23X.50	Blue rubber cover - CBM	2169542
4"	111.10	Blue rubber cover - LM	50990773
	13X.53 / 21X.53 / 23X.53 / 23X.50	Blue rubber cover - LM	9090916
2"	111.12	Clear plastic adaptor ring <sup>1</sup>	644838
	111.12	Black plastic adaptor ring <sup>1</sup>	1601105
2½"	111.12	Clear plastic adaptor ring <sup>1</sup>	646989
	111.12	Black plastic adaptor ring <sup>1</sup>	658332

<sup>1</sup> For CBM only

## Fill Liquids - Sold Separately

Fill Liquid	Size (Volume)	Part Number
Glycerine	Gallon (128 oz.)	251
	Squirt bottle (8 oz.)	204
Silicone oil	Gallon (128 oz.)	279
	Squirt bottle (8 oz.)	207
Halocarbon	Squirt bottle (8 oz.)	206
Fluorolube	Squirt bottle (8 oz.)	277

## Pressure Gauge Tools

Description	Part Number
Cover ring remover for Type 213.40 - 2½"	1456784
Pointer puller tool	9091823
Spare tips for pointer puller tool	1400401
Threaded ring tool (for Type 2XX.34- 4½")	1031589
Pointer puller adaptor for "Long-Hub"	2246954
Pointers (use with #9091823 above)	

## Tags

Size	Fits Gauge	Description	Code
All	All	SS Tag (attached) With Up to 10 Character, Single-line Imprint <sup>1</sup>	Tag
All	All	Paper Tag	Ptag

**NOTE:** Any discount that applies to a pressure gauge also applies to its related accessories. All "Assemblies" sold separately include any additional parts (i.e. screws, gaskets, etc.) needed for installation.

# Available Dial Artwork

## Standard Pressure Ranges for all Sizes

(All ranges not stocked)

Single Scale Ranges			Dual Scale Ranges (psi / ...)		
psi	bar	kPa	/kg-cm <sup>2</sup>	/bar	/kPa
30"Hg/0 (VAC)	-1	-100	-1	-1	-100
30"Hg/0/15 psi	-1 / +1	-100 / +100	-1 / +1	-1 / +1	-100 / +102
30"Hg/0/30 psi	-1 / +2.5	-100 / +250	-1 / +2.1	-1 / +2	-100 / +205
30"Hg/0/60 psi	-1 / +4	-100 / +400	-1 / +4.2	-1 / +4	-100 / +410
30"Hg/0/100 psi	-1 / +6	-100 / +600	-1 / +7	-1 / +6.8	-100 / +680
30"Hg/0/160 psi	-1 / +10	-100 / +1,000	-1 / +11	-1 / +11	-100 / +1,100
30"Hg/0/200 psi	-1 / +16	-100 / +1,600	-1 / +14	-1 / +13.5	-100 / +1,380
0/10	0/0.6	0/60	--	--	0/69
0/15	0/1	0/100	0/1.04	0/1.02	0/100
0/30	0/2.5	0/250	0/2.1	0/2.05	0/200
0/60	0/4	0/400	0/4.2	0/4.1	0/410
0/100	0/6	0/600	0/7	0/6.8	0/690
0/160	0/10	0/1,000	0/11.2	0/11	0/1,100
0/200	0/16	0/1,600	0/14	0/13.5	0/1,350
0/300	--	--	0/21	0/20.5	0/2,050
0/400	0/25	0/2,500	0/28	0/27	0/2,700
0/600	0/40	0/4,000	0/43	0/41	0/4,100
0/800	--	--	0/56	0/55	0/5,400
0/1,000	0/60	0/6,000	0/70	0/68	0/6,800
0/1,500	0/100	0/10,000	0/104	0/102	0/10,200
0/2,000	0/160	0/16,000	0/140	0/135	0/13,500
0/3,000	0/250	0/25000	0/210	0/205	0/20,500
0/5,000	--	--	0/350	0/340	0/34,000
0/6,000	0/400	0/40000	0/420	0/410	0/41,000
0/7,500	--	--	0/530	0/517	0/50,000
0/10,000	0/600	0/60,000	0/700	0/690	0/68,000
0/15,000	0/1,000	0/100,000	0/1,050	0/1,030	0/102,000
0/20,000	0/1,600	0/160,000	0/1,400	0/1,380	0/137,000

### PSI / Ft. H<sub>2</sub>O Dual Scales For Type 2XX.34 - 4 1/2"

PSI	Ft. H <sub>2</sub> O
30/0/15	-34/0/34
30/0/30	-34/0/70
30/0/60	-34/0/140
15	34
30	70
60	140
100	230
160	370
200	460

To order Type 2XX.34 gauges with dual scale psi/ft. H<sub>2</sub>O dials, specify gauge part number + the following numbers:

XXX = psi range desired

Ex: 232.34 4 1/2" XXX / psi / ft. H<sub>2</sub>O 1/2" L

#### NOTE:

WIKA is capable of producing almost any type of custom artwork, including special scales, fonts and logo's. Please contact your WIKA distributor or the factory for availability, price and lead times.

# **GENERAL INFORMATION**

# Standard Dial Layouts

**Accuracy + 3/2/3%, 2.5%, 1.5% ± 2/1/2 & 1.0% F.S.**  
Types 1XX.XX and 2XX.XX  
(not including Type 2XX.34 Process Gauges)

PRESSURE RANGES				
Range	Size 1½", 2" & 2½"		Size 3½", 4" & 6"	
	Fig. Inter.	Grad. Inter.	Fig. Inter.	Grad. Inter.
PSI	PSI	PSI	PSI	PSI
10	2	0.2	--	--
15	3	0.2	3	0.2
30	5	0.5	5	0.5
60	10	1	10	1
100	20	2	10	1
160	20	2	20	2
200	50	5	20	2
300	50	5	50	5
400	100	10	50	5
600	100	10	100	10
800	200	20	100	10
1000	200	20	100	10
1500	300	20	300	20
2000	500	50	200	20
3000	500	50	500	50
5000	1000	100	500	50
7500	1000	100	--	--
10000	2000	200	1000	100
15000	3000	200	3000	200
20000	---	---	2000	200

VACUUM RANGE <sup>1</sup>				
Range	Fig. Inter.		Grad. Inter.	
	"Hg	PSI	"Hg	PSI
30-0	15	10	5	3
30-0-	30	10	10	5
30-0-	60	30	20	10
30-0-	100	30	20	10
30-0-	160	30	20	10
30-0-	200	30	50	10

COMPOUND RANGES				
Range	Fig. Inter.		Grad. Inter.	
	"Hg	PSI	"Hg	PSI
30-0	5	5	5	3
30-0-	10	10	10	5
30-0-	20	20	20	10
30-0-	30	30	30	10
30-0-	50	50	50	10
30-0-	100	100	100	10

**ABBREVIATIONS**  
**Fig. Inter.** - spacing between numbers (figures) printed on dial.  
**Grad. Inter.** - spacing between tick marks (graduations) printed on dial.  
**F.S.** - full scale. All accuracies are percentages of the full scale range of the gauge.

**Accuracy + 1.5% F.S.**  
Type 6XX.XX Low Pressure Gauges

PRESSURE RANGE				
Range	Size 2½"		Size 4"	
	Fig. Inter.	Grad. Inter.	Fig. Inter.	Grad. Inter.
(dual scale)	(dual scale)	(dual scale)	(dual scale)	(dual scale)
Inch. (mm)	Inch. (mm)	Inch. (mm)	Inch. (mm)	Inch. (mm)
Water	Water	Water	Water	Water
15 (380)	5 (100)	0.5 (10)	3 (50)	0.2 (5)
30 (760)	5 (200)	0.5 (20)	5 (100)	0.5 (10)
60 (1500)	10 (500)	1 (50)	10 (300)	1 (20)
100 (2500)	20 (500)	2 (50)	10 (500)	1 (50)
200 (5000)	50 (1000)	5 (100)	20 (1000)	2 (100)
<b>Range</b>	<b>Fig. Inter.</b>	<b>Grad. Inter.</b>	<b>Fig. Inter.</b>	<b>Grad. Inter.</b>
(dual scale)	(dual scale)	(dual scale)	(dual scale)	(dual scale)
Oz./ (mm)	Oz./ (mm)	Oz./ (mm)	Oz./ (mm)	Oz./ (mm)
Sq.in. Water	Sq.in. Water	Sq.in. Water	Sq.in. Water	Sq.in. Water
10 (400)	2 (100)	0.2 (10)	1 (100)	0.1 (10)
15 (660)	5 (100)	0.5 (10)	3 (100)	0.2 (10)
20 (880)	5 (200)	0.5 (20)	2 (200)	0.2 (20)
30 (1320)	5 (200)	0.5 (50)	5 (200)	0.5 (20)
35 (1540)	5 (500)	0.5 (50)	5 (300)	0.5 (20)
60 (2640)	10 (500)	1 (50)	10 (500)	1 (50)
<b>Range</b>	<b>Fig. Inter.</b>	<b>Grad. Inter.</b>	<b>Fig. Inter.</b>	<b>Grad. Inter.</b>
(dual scale)	(dual scale)	(dual scale)	(dual scale)	(dual scale)
Oz./ (In.	Oz./ (In.	Oz./ (In.	Oz./	Oz./
Sq.in. Water)	Sq.in. Water)	Sq.in. Water)	Sq.in.	Sq.in.
20 (34)	5 (10)	0.5 (1)	--	--
32 (55)	5 (10)	0.5 (1)	--	--
<b>Range</b>	<b>Fig. Inter.</b>	<b>Grad. Inter.</b>	<b>Fig. Inter.</b>	<b>Grad. Inter.</b>
PSI	PSI	PSI	PSI	PSI
3	0.5	0.05	0.5	0.05
5	1	0.1	0.5	0.5
10	2	0.2	1	0.1
VACUUM RANGE <sup>1</sup>				
<b>Range</b>	<b>Fig. Inter.</b>	<b>Grad. Inter.</b>	<b>Fig. Inter.</b>	<b>Grad. Inter.</b>
(dual scale)	(dual scale)	(dual scale)	(dual scale)	(dual scale)
Inch. (mm)	Inch. (mm)	Inch. (mm)	Inch. (mm)	Inch. (mm)
Water	Water	Water	Water	Water
30-0 (760)	5 (200)	0.5 (20)	5 (100)	0.5 (10)

<sup>1</sup>Numbers in Italic are dual scale ranges which are printed in red on dual scale dials  
<sup>1</sup>Pointer travel in vacuum range gauges is counter-clockwise



**Accuracy + 1.5% & 2.5% of span**  
Type 4XX.XX Sealgauges®

PRESSURE RANGES Sealgauges® Size 4"			
Range	Fig. Inter.	Grad.	Inter.
in. Water	in. Water	in. Water	
5	1	0.10	0.10
10	1	0.10	0.10
15	3	0.25	0.25
30	5	0.50	0.50
60	10	1	1
100	10	1	1
200	20	2	2
Range	Fig. Inter.	Grad.	Inter.
Oz./Sq. in.	Oz./Sq. in.	Oz./Sq. in.	
5	1	0.10	0.10
10	1	0.10	0.10
15	3	0.25	0.25
20	2	0.20	0.20
30	5	0.50	0.50
35	5	0.50	0.50
60	10	1	1
100	20	2	2
180	50	5	5
Range	Fig. Inter.	Grad.	Inter.
PSI	PSI	PSI	
10	1	0.2	0.2
15	3	0.5	0.5
30	5	0.5	0.5
60	10	1	1
100	10	1	1
160	20	2	2
200	20	2	2
300	50	5	5
400	50	5	5
600	50	5	5
VACUUM RANGE <sup>1</sup>			
Range	Fig. Inter.	Grad.	Inter.
30-0 "Hg	5 "Hg	0.5 "Hg	
COMPOUND RANGES			
Range	Fig. Inter.	Grad.	Inter.
"Hg PSI	"Hg PSI	"Hg PSI	
30-0-10	5 2	0.5 0.2	0.5 0.2
30-0-15	5 3	1 0.5	1 0.5
30-0-30	10 5	1 0.5	1 0.5
30-0-60	10 10	2 2	2 2
30-0-100	10 10	5 2	5 2
30-0-160	30 20	5 2	5 2
30-0-200	30 20	5 2	5 2
30-0-300	30 50	5 2	5 2
30-0-400	30 50	10 5	10 5

# Standard Dial Layouts continued

<sup>1</sup>Pointer travel in vacuum range gauges is counter-clockwise

**Accuracy + 0.1% of span**  
Type 342.11 Precision Test Gauges

PRESSURE RANGES Size 10"			
Range	Fig. Inter.	Grad.	Inter.
PSI	PSI	PSI	
10	0.5	0.02	0.02
15	0.5	0.02	0.02
20	1	0.05	0.05
30	1	0.05	0.05
60	2	0.1	0.1
100	5	0.2	0.2
150	5	0.2	0.2
200	10	0.5	0.5
300	10	0.5	0.5
400	20	1	1
600	20	1	1
800	20	1	1
1000	50	2	2
1500	50	2	2
2000	100	5	5
3000	100	5	5
4000	200	10	10
5000	500	10	10
6000	200	10	10
7500	500	20	20
10000	500	20	20
15000	500	20	20
20000	1000	50	50
Range	Fig. Inter.	Grad.	Inter.
in. Water	in. Water	in. Water	
300	10	0.5	0.5
400	20	1	1
500	20	1	1
600	20	1	1
800	20	1	1
1000	50	2	2
VACUUM RANGE <sup>1</sup>			
Range	Fig. Inter.	Grad.	Inter.
30-0 "Hg	2 "Hg	0.1 "Hg	
COMPOUND RANGES			
Range	Fig. Inter.	Grad.	Inter.
"Hg PSI	"Hg PSI	"Hg PSI	
30-0-15	2 2	0.1 0.1	0.1 0.1
30-0-30	2 2	0.1 0.1	0.1 0.1
30-0-60	5 5	0.2 0.2	0.2 0.2
30-0-100	10 10	0.5 0.5	0.5 0.5
30-0-150	10 10	1 0.5	1 0.5
30-0-300	10 10	1 0.5	1 0.5

**Accuracy + 0.25% of span**  
Type 3XX.XX Test Gauges

PRESSURE RANGES Size 4" & 6"			
Range	Fig. Inter.	Grad.	Inter.
PSI	PSI	PSI	
15	1	0.05	0.05
30	2	0.1	0.1
60	5	0.2	0.2
100	10	0.5	0.5
160	10	1	1
200	20	1	1
300	20	1	1
400	50	2	2
600	50	2	2
800	100	5	5
1000	100	5	5
1500	100	5	5
2000	200	10	10
3000	200	10	10
5000	500	20	20
10000	1000	50	50
15000	1000	50	50
20000	2000	100	100
VACUUM RANGE <sup>1</sup>			
Range	Fig. Inter.	Grad.	Inter.
30-0 "Hg	2 "Hg	0.1 "Hg	
COMPOUND RANGES			
Range	Fig. Inter.	Grad.	Inter.
"Hg PSI	"Hg PSI	"Hg PSI	
30-0-15	5 5	0.2 0.1	0.2 0.1
30-0-30	5 5	0.5 0.2	0.5 0.2
30-0-60	10 5	1 0.5	1 0.5
30-0-100	10 10	1 0.5	1 0.5
30-0-160	30 10	2 1	2 1
30-0-200	30 20	2 1	2 1

**Accuracy + 0.5% of span**  
Type 2XX.34 Process Gauges

PRESSURE RANGES Size 4½" & 6"			
Range	Fig. Inter.	Grad.	Inter.
PSI	PSI	PSI	
15	1	0.1	0.1
30	5	0.2	0.2
60	5	0.5	0.5
100	10	1	1
160	20	1	1
200	20	2	2
300	50	2	2
400	50	5	5
600	50	5	5
800	100	10	10
1000	100	10	10
1500	200	10	10
2000	200	20	20
3000	500	20	20
5000	500	50	50
10000	1000	100	100
15000	2000	100	100
20000	2000	200	200
VACUUM RANGE <sup>1</sup>			
Range	Fig. Inter.	Grad.	Inter.
30-0 "Hg	5 "Hg	0.2 "Hg	
COMPOUND RANGES			
Range	Fig. Inter.	Grad.	Inter.
"Hg PSI	"Hg PSI	"Hg PSI	
30-0-15	5 3	0.5 0.2	0.5 0.2
30-0-30	10 5	1 0.5	1 0.5
30-0-60	10 10	1 1	1 1
30-0-100	30 10	2 1	2 1
30-0-160	30 20	5 2	5 2
30-0-200	30 20	5 2	5 2



# Pressure Units Cross Reference Chart

PSI	atms.	" H <sub>2</sub> O	mm H <sub>2</sub> O	cm H <sub>2</sub> O	oz/in <sup>2</sup>	Kg/cm <sup>2</sup>	"Hg	mm Hg (Torr)	cm Hg	mbar	bar	Pa (Nm <sup>2</sup> )	kPa	MPa
1	0.0681	27.71	703.8	70.38	16	0.0704	2.036	51.715	5.17	68.95	0.0689	6895	6.895	0.0069
14.7	1	407.2	10,343	1,034.3	235.1	1.033	29.92	760	76	1013	1.013	101,325	101.3	0.1013
0.0361	0.00246	1	25.4	2.54	0.5775	0.00254	0.0735	1.866	0.187	2.488	0.00249	248.8	0.249	0.00025
0.001421	0.000097	0.0394	1	0.1	0.0227	0.0001	0.00289	0.0735	0.00735	0.098	0.000098	9.8	0.0098	0.00001
0.01421	0.000967	0.3937	10	1	0.227	0.001	0.0289	0.735	0.0735	0.98	0.00098	98	0.098	0.0001
0.0625	0.00425	1.732	43.986	4.40	1	0.0044	0.1273	3.232	0.323	4.31	0.00431	431	0.431	0.00043
14.22	0.968	394.1	100,010	1,001	227.6	1	28.96	735.6	73.56	980.7	0.981	98,067	98.07	0.0981
0.4912	0.03342	13.61	345.7	34.57	7.858	0.0345	1	25.4	2.54	33.86	0.0339	3386	3.386	0.00339
0.01934	0.001316	0.536	13.61	1.361	0.310	0.00136	0.0394	1	.1	1.333	0.001333	133.3	0.1333	0.000133
0.1934	0.01316	5.358	136.1	13.61	3.10	0.0136	0.394	10	1	13.33	0.01333	1333	1.333	0.00133
0.0145	0.000987	0.4012	10.21	1.021	0.2321	0.00102	0.0295	0.75	0.075	1	0.001	100	0.1	0.0001
14.504	0.987	401.9	10,210	1021	232.1	1.02	29.53	750	75	1000	1	100,000	100	0.1
0.000145	0.00001	0.00402	0.102	0.0102	0.00232	0.00001	0.000295	0.0075	0.00075	0.01	0.00001	1	0.001	0.000001
0.14504	0.00987	4.019	102.07	10.207	2.321	0.0102	0.295	7.5	0.75	10	0.01	1,000	1	0.001
145.04	9.869	4019	102,074	10,207	2321	10.2	295.3	7500	750	10,000	10	1,000,000	1,000	1

To use this chart:

1. Find the column with the units you want to convert from.
2. Move down that column until you find the "1".
3. Staying in the same row, move horizontally to the column with the units you are converting to.
4. Multiply the number in that box by the amount you are changing from to get the converted value.