General Specifications,
Applications and Warranty Information

All Pressure Gauges, manufactured under ISO 9002 quality standards, are offered in a wide variety of sizes, ranges, and configurations to meet the demands of any application. From the most rugged process gauges to the cost effective general purpose gauge.

General Specifications

Dials: Aluminum, black figures on white background. Custom dials, logos, etc are available - consult factory.
Dial sizes: 1.5", 2", 2.5", 3", 4", 4.5", and 6" dials are standard.
Pointers: Balanced black aluminum pointers are standard on most models. Micro adjustable pointers are standard on series PA, PS and PT, and are available on certain other models.
Windows: Glass, plastic, and laminated safety glass are available.
Cases: Case materials are black steel, stainless steel, phenolic and ABS plastic. Series PD and PL cases are intended for dry service; all other cases can be filled at the factory, or in the field. Series PT and PS feature solid front design, which provides maximum safety with a solid wall between the window and the Bourdon tube. The entire rear of the case is designed to blow out and provide pressure relief should the Bourdon tube fail due to over pressure, corrosion, or fatigue.
Movements: The movement is the heart of the pressure gauge; its function is to accurately position the pointer in response to movement of the Bourdon tube. Reotemp movements are designed for smooth movement, low friction, and minimal play. Reotemp movements use high precision gears and low friction bearings to enhance performance, reduce hysteresis, and provide long-term accuracy and reliability. The effects of vibration or pulsation on the movement can be reduced by liquid filling of the case, which both dampens movement, and lubricates contact points. For dry gauges, a special silicone dampened movement can be installed.
Bourdon Tubes: To suit a variety of media applications, Reotemp Bourdon tubes are available in phosphor bronze, AISI 316 stainless steel, and monel. If the process fluid is not compatible with any of these materials, a chemical seal may be necessary. Reotemp Bourdon tubes undergo special heat treating to reduce hysteresis effects, relieving localized stresses in the solder or weld zones and enhancing long-term accuracy of the gauge.

APPLICATION INFORMATION

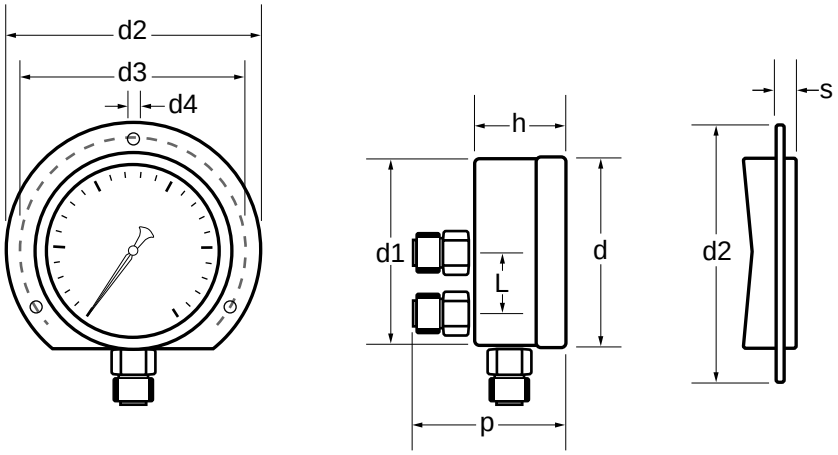
WARNING: All gauge components should be selected after consideration of the pressure, temperature, and media characteristics, to prevent mis-application problems. Mis-application or improper installation can cause gauge damage or failure, which can result in damage to other equipment or personal injury. We suggest that users of pressure gauges
become familiar with ANSI-B40.1 entitled "Gauges, Pressure and Vacuum indicating Dial Type - Elastic Element." This specification is available from American Society of Mechanical Engineers, United Engineering Center, 345 East 47th St., New York, NY 10017.
Pressure Actuation is achieved by Bourdon tube movement. C tubes are typically used for lower pressures up to 600 psi, and coiled tubes are used for higher pressures.
Pressure Ranges: Reotemp Bourdon tube pressure gauges can measure pressures from full vacuum to 40,000 psi. Generally, a range of twice the working pressure is recommended, with maximum working pressure not exceeding 75% of the range. If pulsation occurs, working pressure should not exceed 65% of the range. Never use a gauge at pressure greater than the maximum range on the dial. P.s.i. ranges are standard, and several alternate single and dual ranges are available (see Ranges, p.15).

Accuracy: Gauges are available with accuracies from +/–0.25% (ASME grade 3A) to +/–3/2/3% (ASME grade B). Percent accuracies are expressed as percent of full scale. As a rule, higher accuracies are found in larger gauges, and/or reflect more costly components.
Ambient Temperature: Normal ambient temperature limits for Reotemp pressure gauges are -30°F to 150°F (-35°C to +65°C) for dry gauges, and 23°F to 140°F (-5°C to +60°C) for glycerine filled gauges. Reotemp gauges are calibrated at 70°F (20°C). Change in ambient temperature causes +/–0.3% error per 18°F (10°C) rise/fall, respectively. Ambient error for Reotemp test gauges is +/–0.05% per +/–18°F (10°C), respectively.
Process Temperature: Gauges with stainless steel wetted parts have welded tube and socket, and will withstand 750°F (400°C). Gauges with soldered copper alloy joints will withstand 150°F (65°C); with silver brazed joints, 250°F (120°C). Maximum process temperatures should only be reached intermittently to avoid rupture, and may result in loss of calibration or damage to other parts of the gauge.
Severe Conditions: In applications involving severe pulsation, the use of snubbers and/or restrictors is recommended. Also, for vibrating or pulsating applications, liquid filling will help prevent wear and extend the service life of the gauge. Glycerine is the standard fill material. Also available (with special gasketing) are silicone and Halocarbon. Halocarbon, though quite costly, is recommended for service with oxidizing agents such as oxygen, hydrogen peroxide, chlorine, nitric acid, etc.
Pressurized Medium Considerations: All pressure gauge components should be selected to suit the characteristics of the fluid being measured. For steam service, a siphon is required. For corrosive chemicals, stainless steel (or monel) wetted parts, or a chemical seal should be considered (monel wetted parts are available on special order). For fluids that solidify or leave deposits, a diaphragm seal should be considered. For oxidizing fluids, no oil should be present .
Mounting: NPT connections are located in the center back ( ), lower back ( ), or bottom ( ) of the case in most models. Rear flanges (also known as "back flanges" or "wall flanges") are available for surface mounting. For panel mounting, front flanges or "U" or "O" clamps are available. Special threads (BSP, Metric, ISO) are also available; consult Reotemp Customer Service. All Reotemp pressure gauges should be mounted in the upright position.

Warranty Information

Warranty: REO*TEMP* warrants all pressure gauges and pressure products against defective workmanship or materials under normal use and service for one year following date of shipment. Reotemp's liability is limited to repair or replacement at the factory, shipping charges prepaid. This warranty does not cover deterioration from normal wear and tear, exposure to corrosive materials, exposure to temperatures or pressures in excess of those recommended, excessive vibration, or forces or abrasion which cause deformation of component parts. This warranty is expressly in lieu of any other warranty, expressed or implied. Reotemp shall not be liable for any direct or consequential damages arising out of any defects or from any cause whatsoever.

Pressure Gauge Dimensions



Pressure Gauge Dimensions

		D	D1	D2	D3	D4	H	L	S	P	P dim based on
PD15N,X	mm	44	40	-	-	-	24	-	-	44	1/8”NPT
	in.	1.73	1.57				0.94			1.73	
PD20N,X	mm	55	50.8	71	60	3.6	28	-	-	50	1/8”NPT
	in.	2.17	2.00	2.80	2.36	0.14	1.10			1.97	
PD25N,X	mm	68	62.5	85	75	3.6	29	-	4	50	1/4”NPT
	in.	2.68	2.46	3.35	2.95	0.14	1.14		0.16	1.97	
PD40Y,S	mm	101.5	98	130	118	6	42	29.5	5.5	80	1/2”NPT
	in.	4.00	3.86	5.12	4.65	0.24	1.65	1.16	0.22	3.15	
PD60Y,S	mm	160	158	190	178	6	9	29.5	5.5	80	1/2”NPT
	in.	6.30	6.22	7.48	7.01	0.24	1.93	1.16	0.22	3.15	
PD40B	mm	101.5	98	130	118	6	32	-	-	-	-
	in.	4.00	3.86	5.12	4.65	0.24	1.26				
PC25N	mm	62.5	62.5	85	75	3.6	34	-	4	50	1/4”NPT
	in.	2.46	2.46	3.35	2.95	0.14	1.34		0.16	1.97	
PC40S	mm	101	98.5	130	116	6	49	-	5.5	80	1/4”NPT
	in.	3.98	3.88	5.12	4.57	0.24	1.93		0.22	3.15	
PC60S	mm	160	153	190	178	6	49	-	5.5	80	1/4”NPT
	in.	6.30	6.02	7.48	7.01	0.24	1.93		0.22	3.15	
PM25C	mm	68	63	85	75	3.6	30	135	7	54	1/4”NPT
	in.	2.68	2.48	3.35	2.95	0.14	1.18	5.3	0.28	2.13	
PM40C	mm	110	101	130	118	6	47	-	-	-	-
	in.	4.33	3.98	5.12	4.65	0.24	1.85				
PG25C	mm	68	63	85	75	3.6	30	-	7	54	1/4”NPT
	in.	2.68	2.48	3.35	2.95	0.14	1.18	-	0.28	2.13	
PG40C	mm	110	101	130	118	6	47	34.5	12.5	65	1/2”NPT
	in.	4.33	3.98	5.12	4.65	0.24	1.85	1.36	0.49		
PR40S	mm	111	101	130	118	6	48	34.5	19	80	1/2”NPT
	in.	4.37	3.98	5.12	4.65	0.24	1.89	1.36	0.75	3.15	
PR60S	mm	161	150	190	175	6	50	53	25	80	1/2”NPT
	in.	6.34	5.91	7.48	6.89	0.24	1.97	2.09	0.98	3.15	
PA40A	mm	114	100	130	118	6	48	-	-	-	-
	in.	4.49	3.94	5.12	4.65	0.24	1.89				
PS40S	mm	111	100	130	116	6	61	-	-	-	-
	in.	4.37	3.94	5.12	4.57	0.24	2.40				
PS60S	mm	162	150	190	175	6	64	-	-	-	1/2”NPT
	in.	6.38	5.91	7.48	6.89	0.24	2.52				
PL60	mm	161	150	190	175	6	50	53	25	88	1/2”NPT
	in.	6.34	5.91	7.48	6.89	0.24	1.97	2.09	0.98	3.46	
PT45P	mm	129	148	148	137	6	87	-	-	-	-
	in.	5.08	5.83	5.83	5.39	0.24	3.43				

Note: diagrams not to scale.