

## WIKA Type 232.50 / 233.50 Pressure Gauge Range Chart

316 SS Bourdon gauge, EN 837-1, 1.0 accuracy class — glycerin-filled (233.50) for vibrating service

A pressure gauge is selected against three things: (a) the pressure range and preferred working point, (b) the media wetted-part material and the service environment (vibration, pulsation, chemistry), and (c) the case size and connection to fit the installed thread pot and readable at the required distance. The WIKA Type 232.50 and Type 233.50 are the industrial workhorses — Bourdon gauge, 316L stainless wetted parts, EN 837-1 accuracy class 1.0, case sizes 63, 100 and 160 mm — with 232.50 the dry version and 233.50 the same gauge filled with glycerin (or silicone for cryogenic) to damp needle chatter under vibration or pulsation. Case seals are IP65 dry, IP65 filled.

Range	Digit	Class	Preferred type	Typical service
0 – 1 bar	0.02 bar	1.0	PG23LT stainless preferred	Diaphragm gauge — capsule element on very low ranges.
0 – 1.6 bar	0.02 bar	1.0	Type 232.50 typical	Standard Bourdon; lowest 232.50 range.
0 – 2.5 bar	0.05 bar	1.0	Type 232.50 typical	General-service water, air, oil.
0 – 4 bar	0.1 bar	1.0	Type 232.50 typical	Compressed-air distribution.
0 – 6 bar	0.1 bar	1.0	Type 232.50 typical	Cooling-water headers.
0 – 10 bar	0.2 bar	1.0	Type 232.50 typical	Hydraulic return.
0 – 16 bar	0.5 bar	1.0	Type 232.50 typical	Steam headers, ballast systems.
0 – 25 bar	0.5 bar	1.0	Type 232.50 / 233.50	General industrial.
0 – 40 bar	1 bar	1.0	Type 232.50 / 233.50	Working-line hydraulics.
0 – 60 bar	2 bar	1.0	Type 233.50 (glycerin)	Vibrating service — filled gauge.
0 – 100 bar	2 bar	1.0	Type 233.50 (glycerin)	Hydraulic power packs.
0 – 160 bar	5 bar	1.0	Type 233.50 (glycerin)	Refinery hydraulic.
0 – 250 bar	10 bar	1.0	Type 233.50 (glycerin)	Hydraulic tool / press.
0 – 400 bar	10 bar	1.0	Type 233.50 (glycerin)	Hydraulic jack, punch.
0 – 600 bar	20 bar	1.0	Type 233.50 (glycerin)	HP test bench.
0 – 1000 bar	20 bar	1.0	Type 233.50 (glycerin)	HP test bench, wire-rope test.
" 1...0 bar	0.02 bar	1.0	Type 232.50 vacuum	Vacuum service.
" 1...+1.5 bar	0.05 bar	1.0	Type 232.50 compound	Suction lines.
" 1...+5 bar	0.2 bar	1.0	Type 232.50 compound	Refrigeration low-side.

### Selecting the right range

- Working point at 60 – 75 % of full scale (EN 837-1 §5.4). A gauge running at 90 – 100 % fatigues the Bourdon fast; at 20 – 30 % the pointer resolution is wasted. If the working pressure is 8 bar, select the 0 – 10 bar range (working at 80 %) — never the 0 – 40 bar range.
- Case size — 63 mm for panels and skid-mounts under 1 m away, 100 mm for standard machinery (the site default), 160 mm for wall / column mounts read from more than 3 m.
- Filling (glycerin) — spec Type 233.50 for pumps, engines, hydraulic power packs and any line with pulsation or vibration; the filled case stops needle chatter and extends the movement life. Silicone fill for cryogenic (< 20 °C).
- Connection — G 1/4 B for 63 mm cases, G 1/2 B or 1/2 in NPT for 100 and 160 mm cases. Bottom-entry is the default; back-entry for panel mount.
- Range with pulsation — spec a snubber (needle valve or sintered snubber) between the tap and the gauge on any diesel-driven or reciprocating-pump line, even if the gauge is filled.
- Accuracy — Class 1.0 is the industrial default ( $\pm 1\%$  of full scale). For calibration test benches step up to Class 0.6 (Type 233.30) or Class 0.25 (Type 332.50 industrial digital).

Reference compiled by cBallast from WIKA data sheet PM 02.03 (Type 232.50 dry) and PM 02.04 (Type 233.50 glycerin-filled), current editions, and EN 837-1 (Bourdon pressure gauges). Values are nominal; the WIKA article code for a specific range, case size, connection and mounting is composed from the type + range + option and confirmed at order. WIKA is a registered trademark of WIKA Alexander Wiegand SE & Co. KG; all trademarks are the property of their respective owners.

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