

Technical data (limit values)

Model	AX204DR	AX304	AX504
Maximum load	220 g	310 g	510 g
Maximum load, fine range	81 g	—	—
Readability	1 mg	0.1 mg	0.1 mg
Readability, fine range	0.1 mg	—	—
Repeatability (sd) at full load ¹⁾	0.6 mg	0.1 mg	0.1 mg
Repeatability (sd) (at gross load) ¹⁾	0.05 mg (10 g)	0.07 mg (10 g)	0.07 mg (10 g)
Linearity	0.3 mg	0.3 mg	0.4 mg
Eccentric load deviation at 1/2 maximum capacity ²⁾	0.25 mg	0.5 mg	0.6 mg
Sensitivity offset ³⁾	3.0×10^{-6}	5.0×10^{-6}	5.0×10^{-6}
Sensitivity temperature drift ⁴⁾	0.0001 %/°C	0.0001 %/°C	0.0001 %/°C
Sensitivity stability ⁵⁾	0.0001 %/a	0.0001 %/a	0.0001 %/a
Weighing time typical ⁶⁾	4 s	4 s	4 s
Interface update rate	7 /s	7 /s	7 /s
Balance dimensions (WxDxH) (mm)	241x505x293	241x505x293	241x505x293
Control unit dimensions (WxDxH) (mm)	—	—	—
Usable height of draft shield	240 mm	240 mm	240 mm
Weighing pan dimensions (WxD) (mm)	80 x 80	80 x 80	80 x 80

Typical data for determination of the measurement uncertainty

Repeatability (sd) typical	$0.4 \text{ mg} + 5 \times 10^{-7} \cdot R_{gr}$	$0.04 \text{ mg} + 6 \times 10^{-8} \cdot R_{gr}$	$0.04 \text{ mg} + 6 \times 10^{-8} \cdot R_{gr}$
Repeatability (sd) in fine range typical ⁷⁾	$0.04 \text{ mg} + 1.2 \times 10^{-7} \cdot R_{gr}$	—	—
Differential nonlinearity (sd) typical	$\sqrt{1 \times 10^{-11} \cdot R_{nt}}$	$\sqrt{8 \times 10^{-12} \cdot R_{nt}}$	$\sqrt{8 \times 10^{-12} \cdot R_{nt}}$
Diff. eccentric load deviation (sd) typical	$2.5 \times 10^{-7} \cdot R_{nt}$	$2.5 \times 10^{-7} \cdot R_{nt}$	$2 \times 10^{-7} \cdot R_{nt}$
Sensitivity offset (sd) typical ³⁾	$6 \times 10^{-7} \cdot R_{nt}$	$6 \times 10^{-7} \cdot R_{nt}$	$8 \times 10^{-7} \cdot R_{nt}$
Minimum weight (according to USP) typical ⁸⁾	$1200 \text{ mg} + 1.5 \times 10^{-3} \cdot R_{gr}$	$120 \text{ mg} + 1.8 \times 10^{-4} \cdot R_{gr}$	$120 \text{ mg} + 1.8 \times 10^{-4} \cdot R_{gr}$
Minimum weight (according to USP) in fine range typical ⁷⁾	$120 \text{ mg} + 3.6 \times 10^{-4} \cdot R_{gr}$	—	—
Minimum weight (@ U=1&, 2 sd) typical	$80 \text{ mg} + 1 \times 10^{-4} \cdot R_{gr}$	$8 \text{ mg} + 1.2 \times 10^{-5} \cdot R_{gr}$	$8 \text{ mg} + 1.2 \times 10^{-5} \cdot R_{gr}$
Minimum weight (@ U=1&, 2 sd) in fine range typical ⁷⁾	$8 \text{ mg} + 2.4 \times 10^{-5} \cdot R_{gr}$	—	—

¹⁾ Valid for compact objects²⁾ According to OIML R76³⁾ After adjustment with built-in reference weight⁴⁾ In the temperature range 10...30 °C⁵⁾ Sensitivity drift/year after putting into operation for the first time, with the FACT self-calibration function activated⁶⁾ Includes sample handling and setting time⁷⁾ With DeltaRange models: Fine range starting at zero gross load

sd = Standard deviation

R_{gr} = Gross weightR_{nt} = Net weight (sample weight)

a = Year (annum)

⁸⁾ The minimum weight can be improved by the following measures:

- Selecting suitable weighing parameters
- Choosing a better location
- Using smaller taring containers
- Using an inner draft shield (AX)

The information contained in this document has been carefully prepared and represents the most up-to-date status. Data shown as typical are reference values for calculation of the expected measurement uncertainty. The actual measurement performance may be affected negatively or positively by the place of use and/or the settings.