

# AUTOMATIC MASS COMPARATOR AKM-2



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Mass comparators AKM-2/X series featuring automatic mass loaders enable automatic determining of mass deviations of a single weight in a single cycle. The AKM-2/X is designed to compare weights from 5 kg to 50 kg. The system of automatic mass comparator is commonly applicable in mass measuring laboratories, and particularly in certification units for weights classes E, F and M.

The supervising part of a mass comparator is a digital module which cooperates with a controller of instrument's mechanical components. The automatic mass loader features a basis with self-centring fields, a robot and steel body. The digital module and the robot are located in mass comparator's weighing chamber. The robot is controlled by the computer's controller. The instrument is operated from level of mass indicating digital display which is plugged to mass comparator's controller. Lengthwise shift of the robot with weights is carried out automatically using solenoid actuators. Additional software functions enable loading and taking off the weights, data processing and storing, and data export to instrument's memory.

## Technical specification:

	AKM-2/10	AKM-2/20.1	AKM-2/20.5	AKM-2/50
E1	2 kg ÷ 10 kg	5 kg ÷ 20 kg	5 kg ÷ 20 kg	20 kg ÷ 50 kg
E2	500 g ÷ 10 kg	1 kg ÷ 20 kg	5 kg ÷ 20 kg	5 kg ÷ 50 kg
F1	500 g ÷ 10 kg	1 kg ÷ 20 kg	5 kg ÷ 20 kg	5 kg ÷ 50 kg
F2	500 g ÷ 10 kg	1 kg ÷ 20 kg	5 kg ÷ 20 kg	5 kg ÷ 50 kg
M1	-	-	-	-
M2	-	-	-	-
Maximum Capacity	10,2 kg	20,5 kg	20,5 kg	51 kg
Readability [d]	0,1 mg	0,1 mg	0,1 mg	1 mg
* Repeatability at nominal load	0,2 mg (10 kg)	0,4 mg (20 kg)	0,4 mg (20 kg)	2 mg (50 kg)
* Repeatability at low load	0,2 mg (500 g)	0,4 mg (1 kg)	0,4 mg (1 kg)	2 mg (5 kg)
Electric compensation range	- 100 g ÷ 200 g	± 500 g	± 500 g	± 1000 g
Supplementary weights internal	half automatic	half automatic	half automatic	half automatic
Supplementary weights external	none	none	none	none
Eccentricity (tested load)	0 mg	0 mg	0 mg	0 mg
Stabilization time	30 s	30 s	30 s	30 s
Adjustment	external	external	external	external
Magazine positions	2	2	2	2
<b>Ambient conditions</b>				
Working temperature	(10 ÷ 30) °C	(10 ÷ 30) °C	(10 ÷ 30) °C	(10 ÷ 30) °C
Change rate of working temperatures	±0,5°C/12h (±0,3°C/4h)	±0,5°C/12h (±0,3°C/4h)	±0,5°C/12h (±0,3°C/4h)	±0,5°C/12h (±0,3°C/4h)
Atmospheric humidity	(40 ÷ 60) %	(40 ÷ 60) %	(40 ÷ 60) %	(40 ÷ 60) %
Change rate of atmospheric humidity	± 2 % / 12 h	± 2 % / 12 h	± 2 % / 12 h	± 2 % / 12 h
<b>Dimensions</b>				
Weighing pan dimensions	ø 90 mm	ø 90 mm	ø 90 mm	ø 100 mm
Weighing unit dimensions	950 × 650 × 1150 mm	950 × 650 × 1150 mm	950 × 650 × 1150 mm	1220 × 1050 × 700 mm
Control unit dimensions	206 × 140 × 70 mm	206 × 140 × 70 mm	206 × 140 × 70 mm	206 × 140 × 70 mm
Anti-draft chamber dimensions	-	-	-	-
Net weight/Gross weight	230 kg / 350 kg	235 kg / 352 kg	235 kg / 352 kg	260 kg / 380 kg
Comparators packaging size	30 kg / 59 kg	39 kg / 68 kg	39 kg / 68 kg	60 kg / 94 kg
Packaging size	1050 × 800 × 1320 mm	1050 × 800 × 1320 mm	1050 × 800 × 1320 mm	1170 × 550 × 700 mm

\*) Repeatability is expressed as a standard deviation determined for 6 ABBA cycles. Standard deviation is experimentally determined under ambient conditions for calibration of E1 class mass standards specified in OIML R111 (Table C.1.) document.



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