Type Evaluation Report

DANAK
PROD Reg. nr 7026

OIML Certification System

Evaluation of the type testing and examination of non-automatic weighing instrument ATP160xx according to OIML R76:2006.

Performed for XIAMEN ATP TECHNOLOGY Co., Ltd.

Report no.: 123-25950.90.20
Page 1 of 22

21 June 2023

MLS/ches

Title	Evaluation of the type testing and examination of non-automatic weighing instrument ATP160xx according to OIML R76:2006.
Test object	ATP160xx non-automatic weighing instrument.
Report no.	123-25950.90.20
Client	Xiamen ATP Technology Co., Ltd., Room 816, Eastern Commercial Building, Yibing North Road, Huli District, Xiamen China Tel.: +86 18900202589
Contact person	Mr. Robben Yan E-mail: atp005@xmatp.com
Manufacturer	Xiamen ATP Technology Co., Ltd., Xiamen, China
Test report(s) evaluated	121-33865.10 issued by FORCE Technology, Hørsholm
Specifications	OIML R76:2006
Conclusion	The test report(s) has been evaluated and it has been found that the tested equipment fulfils the specifications
Documentation	Filed under number 121-33865
Date	21 June 2023
Responsible	Michael Lang Sørensen Project Manager, B.Sc.E.E. Force Certification

1. Résumé and conclusion

The report is about the evaluation of the type testing and examination of the non-automatic weighing instruments ATP160xx manufactured by Xiamen ATP Technology Co., Ltd.

The testing and examination were performed according to OIML R76:2006 and EN 45501:2015 as reported in type examination report 121-33865.10, dated 10 August 2022, 69 pp. issued by FORCE Technology.

The ATP160xx is a desktop scale intended for direct sale to the public with label printing.
xx is indicating variants and may be A-Z and 0-99

The metrological test was performed on a dual interval, 6/15 kg sample.

Software of the tested sample was BJ_1.0.1.2f

A brief summary of the specifications for the non-automatic weighing instrument is as follows for information:

- Accuracy class III
- Single interval, multi interval (dual)
- Maximum number of verification scale intervals: 3000 or 2x3000
- Maximum capacity (Max): 6 kg to 30 kg
- Minimum capacity (Min): 20 × e
- Verification scale interval(e): ≥ 2 g
- Maximum tare effect: - Max
- Temperature range. -10 °C to +40 °C
- Power supply: 110/220 VAC 50/60Hz

2. OIML R76:2006 CHECKLIST

Application N°: 121-33865…
Pattern designation: ATP160xx

17.1 All types of weighing instruments except non-self-indicating instruments (6.1-6.9, R 76-1)

Requirement	Testing procedures		PASSED	FAILED	Remarks
		Descriptive markings			
7.1.1	**A.3**	**Compulsory in all cases:**			
		manufacturer's mark or name	X		
		accuracy class	X		
(+3.3.1)		maximum capacity, Max, Max_1, Max_2,...	X		
		minimum capacity, Min	X		
(+3.3.1)		verification scale interval, e, e_1, e_2,...	X		
7.1.2	**A.3**	**Compulsory if applicable:**			
		name or mark of manufacturer's agent	/		
		serial number	X		
		identification marks on separate but associated units	/		
		type approval mark	X		
		scale interval d (d <e)	/		
		software identification (if applicable)	/		
		maximum tare effect T (subtractive tare only if T ≠ Max)	/		
		maximum safe load, Lim (if Lim > Max + T)	/		
		special temperature limits	/		
		counting ratio	/		
		ratio between weight platform and load platform	/		
		range of plus/minus indication	/		
7.1.3	**A.3**	**Additional markings:**			
		not to be used for direct sales to the public	/		
		to be used exclusively for:	/		
		the stamp does not guarantee …/guarantees only ...	/		
		to be used only as follows:	/		
3.2		special applications clearly marked (weighings ranges in classes I and II or II and III)	/		
4.15		near display "not to be used for direct sales to the public" (for instruments similar to those used for direct sales to the public)	/		
7.1.4	**A.3**	**Presentation of markings:**			
		indelible	X		
		easily readable	X		
		grouped together in a clearly visible place	X		
		Max, Min, e and d (if d ≠ e) on or near display permanently shown in a clearly visible position	X		
		possible to seal and apply a control mark/removal will result in destruction	X		
		Markings B and G	X		
7.1.4 and 7.1.1 B, 7.1.2 G		additional information shown alternatively on a plate or displayed by a software solution either permanently or accessed by a simple manual command	/		
7.1.5.1	**A.3**	**Instruments with several load receptors and load measuring devices:**			
		identification mark, Max, Min and e of each load receptor on relating load measuring device (Lim and T = + if applicable)	/		

7.1.5.2	**A.3**	**Separately-built main parts:**			
		identification mark repeated in descriptive markings	/		
4.1.1.3		**Suitability for verification:**			
		identification of devices which have been subject to separate type examination	/		
		Verification marks and sealing			
7.2	**A.3**	**Verification mark:**			
		cannot be removed	X		
		easy application	X		
		visibility without the instrument to be moved when it is in service	X		
7.2.2		**Verification mark support or space:**			
		which ensures conservation of the mark	X		
		for stamp, stamping area ≥ 150 mm^2	/		
		for self-adhesive type, ø ≥ 15 mm	X		
4.1.2.4	**A.3**	**Securing of components and pre-set controls:**			
		location	X		
		form	X		
4.1.2.4		**Securing with software means**			
4.1.2.4 a		legal status of the instrument recognizable	/		
		evidence of any intervention	/		
4.1.2.4 b		protection against changes of parameters and the reference numbers	/		
4.1.2.4 c		facilities for affixing the reference number	/		
4.1.2.5		**Span adjustment device (automatic or semi-automatic):** X	Existent ☐		Non-existent
		external influence impossible after securing			
4.1.2.6		**Gravity compensation:** X	Existent ☐		Non-existent
		external influence on or access to impossible after securing			
		Documentation			
8.2.1	**A.1**	**Technical information and data:**			
8.2.1.1,		characteristics of the instrument	X		
3.10.2		specifications of modules	/		
3.10.2.1		fractions p_i (modules tested separately)	/		
3.10.4		specifications of families	X		
		specifications of components	X		
8.2.1.2		Applicable descriptive documents (acc. to Nº 1-11)	X		
5.3.6.1	**A.1**	specific declaration of the manufacturer	/		
3.9.1.1		limiting value of tilting defined by the manufacturer	X		
8.2.2	**A.2**	**Examination of:**			
		documents	X		
		functions (spotchecks)	X		
		test reports from other authorities	/		
		Indicating device			
4.2.1		**Reading:**			
		reliable, easy and unambiguous	X		
		overall inaccuracy ≤ 0.2 e (analogue indication)	/		
		size, shape and clarity	X		
		by simple juxtaposition	/		
4.2.2.1	**A.3**	**Units of:**			
		mass	X		
		price	X		

4.2.2.1		**Form of indication:**			
		for one indication, one unit of mass	X		
		scale interval in the form (1, 2 or 5) x 10^k	X		
		same scale interval for all indicating devices, printing devices and tare weighing devices	X		
4.2.2.2		**Form of digital indication:**			
		at least one figure at right	X		
		Decimal sign:			
		shall maintain its position (scale interval changed automatically)	X		
		separate at least one figure to the left and all to the right	X		
		on one line with the bottom of the figures	X		
		Zero:			
		only one non-significant zero to the right	X		
		for values with decimal sign, non-significant zero only in third position	X		
4.2.3		**Limits:**			
		preventing of indication above Max + 9 e	X		
		preventing of indication below zero unless a tare device is in operation (–20d is accepted)	X		
4.2.4		**"Approximate" displaying device:** Existent ☐ Non-existent X			
		scale interval > Max/100 without being smaller than 20 e			
4.2.5		**Semi-self indicating instruments:**			
		extension of self-indication range ≤ self-indication capacity	/		
		Analogue indication:			
4.3.1		thickness and length of scale marks	/		
4.3.2		scale spacing	/		
4.3.3		limit of movement below zero and above capacity of self-indication	/		
4.3.4		damping of oscillations of displaying component	/		
4.4.1		**Changing of digital indication:**			
		after change in load, previous indication not longer than 1 s	X		
4.4.2		**Stable equilibrium of digital indication:**			
		printed or stored weight values do not deviate more than 1 e from the final weight value	**X**		
		zero or tare operations are within their accuracy requirements	X		
		No printing, data storage, zero-setting, or taring during continuous or temporary disturbance of equilibrium	X		
4.4.3		**Extended digital indication:** Existent ☐ Non-existent X			
		not allowed when there is a differentiated scale division			
		displaying a smaller scale interval only during pressing a key			
		at most, 5 s after manual command			
		prevention of printing while the device is in operation			
4.4.4		**Digital indications other than primary indications:** Existent X Non-existent ☐			
		additional indications do not lead to any ambiguity to primary indications	X		
		quantities identified by units, symbols, signs or designations thereof	X		
		weight values (not weighed) shall be clearly identified or	X		
		display only temporarily on manual command and	X		
		shall not be printed	X		
		the inoperative weighing mode is clear and unambiguously recognisable	X		
4.4.5		**Digital printing:** Existent X Non-existent ☐			
		clear and permanent	X		
		figures ≥ 2 mm high	X		
		name or symbol of units to the right of the value	X		
		name or symbol of units above column of values			
		printing impossible when equilibrium not stable	X		

4.4.6		**Memory storage:** Existent ☐ Non-existent X			
		storage, transfer, totalizing, etc. inhibited when equilibrium not stable			
3.4.1		**Auxiliary indicating device (Classes I and II only; not allowed on multi-interval instruments)** Existent ☐ Non-existent X If existent, type: rider ☐ interpolation ☐ complementary ☐ differentiated scale division ☐			
		only to the right of decimal sign			
3.4.2		$d < e \leq 10\ d$, $e = 10^{k}$ kg or e = 1 mg for class I with d < 1 mg			
Differences between results					
3.6.3		**Differences:**			
		between multiple indications: ≤ mpe	X		
		between digital indications and printout: zero	X		
3.6.4		between two results: ≤ mpe for same load when method of balancing changed (semi-self-indicating)	X		
3.9.1.1		**Tilting of instrument of class** (II), (III) or (IIII)			
		a marking on the level indicator shows the limiting value of tilting	X		
		level indicator fixed firmly in a place clearly visible to the user	X		
		an automatic tilt sensor releases a display switch-off or other appropriate alarm signal	/		
		and inhibits the printout and data transmission	/		
		Zero-setting, -tracking and –indicating Existent / Non-existent Initial zero-setting: X / ☐ Automatic zero-setting: ☐ / X Semi-automatic zero-setting: X / ☐ Non automatic zero-setting: ☐ / X Zero-tracking: X / ☐ Zero-indicating: X / ☐			
4.5.1		Effect shall not alter Max	X		
	A.4.2.1	Overall effect of: zero-setting	X		±2%
		zero-tracking	X		
		initial zero-setting	X		±10%
4.5.2	**A.4.2.3**	**Accuracy:**			
		deviation ≤ 0.25 e	X		
		deviation ≤ 0.5 d (auxiliary indicating device)	/		
4.5.3		**Multiple range:** Existent ☐ Non-existent X			
		effective for greater weighing range (if switching when loaded possible)			
4.5.4		**Control of zero-setting:**			
		separate from that of tare weighing device	X		
		Semi-automatic zero-setting: functions only			
		in stable equilibrium and	X		
		if it cancels any previous tare operation	X		

4.5.5	**A.4.2.2**	**Zero-indicating device (digital indication):**			
		shows deviation ≤ 0.25 e	X		
		not mandatory if auxiliary indicating device or rate of zero-tracking ≥ 0.25 d/s	/		
4.5.6		**Automatic zero-setting:**			
		operates only when equilibrium stable and	/		
		indication has remained stable below zero at least 5 seconds	/		
4.5.7		**Zero-tracking:**			
		operates only when indication at zero or	X		
		at negative net value equivalent to gross zero and	X		
		equilibrium stable	X		
		corrections ≤ 0.5 d/s	X		
		when operates after tare, the overall effect may be 4 % of Max	X		
		Tare devices Existent . Non-existent Tare weighing X ☐ Tare balancing ☐ X Combined zero-setting and tare balancing X ☐ Tare indicating X ☐ Type : Subtractive X Additive ☐			
4.6.1		applicable requirements from 4.1 through 4.4 are fulfilled	X		
4.6.2		**Tare weighing device:**			
		$d_T = d$	X		
4.6.3	**A.4.6.2**	**Accuracy:**			
		± 0.25 e (electronic instruments and instruments with analogue indication), $e = e_1$ for multi-interval	X		
		better than ± 0.5 d (mechanical instruments with digital indication	/		
4.6.4		**Operating range:**			
		prevention of operation at its zero effect	X		
		or below its zero effect			
		prevention of operation above its maximum indicated	X		
4.6.5		**Visibility of operation:**			
		operation indicated	X		
		net with sign "NET", "Net", "net" or complete word (digital indication)	X		
		NET disappears if gross displayed temporarily	X		
		tare value or letter "T" (mechanical additive tare device)	/		
4.6.6		**Subtracting tare:**			
		prevention of use above Max or indication that capacity is reached	X		
4.6.7		**Multiple range:**			
		operation effective in greater weighing ranges if switching when loaded possible	/		
		tare values are rounded to the scale interval of the actual weighing range which is in operation	/		
4.6.8		**Semi-automatic or automatic tare:**			
		operation only in stable equilibrium	X		

4.6.9		**Combined zero/tare:**			
		accuracy (4.5.2)	/		
		zero indicating device (4.5.5)	/		
		zero-tracking (4.5.7)	/		
4.6.10		**Consecutive tare operations:**			
		indicated or printed tare weight values clearly designated (if tare devices operative at the same time)	X		
4.6.11		**Printing net or gross:**			
		without designation	/		
		designation: by G or B (gross)	X		
		by N (only net printed)	X		
		designation of net and tare by N and T (if net printed with gross and/or tare)	X		
		instead of G, B, N and T, complete words	/		
		printing separately net and tare with identification (determined by different tare devices)	X		
		Preset tare	Existent ☐ Non-existent X		
4.7.1		d_T = d or automatically rounded to d			
		transferred from one range to another one with larger e_i, shall be rounded to the latter (multiple range)			
		tare value ≤ Max_1 for the same net weight value (multi-interval) and calculated net value rounded to the scale interval for the same net weight value			
4.7.2		4.6.10 applies			
		cannot be modified/cancelled if tare operated after the preset tare is still in use			
		operates automatically if clearly identified with load			
4.7.3		4.6.5 applies			
		possibility to indicate preset tare			
		if calculated net printed then preset tare value is printed as well			
		4.6.11 applies			
		designation of preset tare by PT or complete word			
		Locking devices	Existent ☐ Non-existent X		
4.8.1		**Positions:**			
		only two stable positions			
		weighing only in ‘weigh” position			
4.8.2		positions clearly shown			
		Multiple ranges	Existent ☐ Non-existent X		
4.10		**Selection of weighing ranges:**			
		range in operation clearly indicated			
		selection from smaller to greater range possible at any load (manual)			
		selection from smaller to the following greater range (automatic) possible only for load ≥ Max_i of smaller range			
		selection from a greater to a smaller range (manually) or to the smallest range (automatically) only			
		- at no load when zero or negative net value is indicated			
		- tare is cancelled automatically			
		- zero is set to ± 0.25 e_1 automatically			

Selection between load receptors, transmitting and measuring devices			Existent ☐		Non-existent X
4.11, 4.11.1		compensation for unequal no-load effect			
4.11.2		zero-setting without ambiguity and in accordance with 4.5			
4.11.3		weighing impossible while selection			
4.11.4		combinations easy identifiable			
4.12		**"Plus and "minus" comparator instruments**			
4.12.1		**Distinction of zones:**			
		"+" and "-" signs (analogue indication)	/		
		by inscription (digital indication)	/		
4.12.2		**Scale:**			
		with at least one scale division d = e on either side of zero and	/		
		value of d = e shown at either end	/		
		Mechanical counting instruments with unit weigh receptor			
4.17.1		**Scale:**			
		with at least one scale division d = e on either side of zero and	/		
		value of d = e shown on the scale	/		
4.17.2		**Counting ratio:**			
		shown clearly above each counting platform or	/		
		each counting scale mark	/		
4.20		**Modes of operation:** Non-existent ☐			
		clearly identification of mode which is actually in operation	/		
		manual switching back to weighing mode in any mode and at any time possible	/		
		automatic selection of mode only within a weighing sequence	/		
		automatic switching back to the weighing mode at the end of the weighing sequence	/		
		zero indication after returning from switch-off condition	X		
		automatic check of zero position before returning from switch-off condition	X		

17.2 Instruments for direct sales toe the public and price computing and labelling instruments

Requirement	Testing procedures		PASSED	FAILED	Remarks
Miscellaneous checkings (direct sales to the public)					
4.5.4		**Combined semi-automatic zero-setting device and semi-automatic tare-balancing device operated by the same key:**			
		not allowed	X		
4.8.1		**"Preweigh" position:**			
		not allowed	X		
4.13.10		**Counting ratio:**			
		1/10 or 1/100 (mechanical counting instrument)	/		
4.13.5		**Impossibility of weighing during:**			
		locking operation	/		
		adding or subtracting weights	X		
4.13.7		**Auxiliary and extended indicating device:**			
		not allowed	X		
4.13.9		**When significant fault has been detected (electronic instruments):**			
		visible or audible alarm provided for customer and (1)	X		
		data transmission prevented (1)	X		
		until user takes action or cause disappears	X		
Indication device (direct sales to the public)					
4.13.1, 4.13.6		**Primary indications (4.14.1) to both vendor and customer:**			
		2 display sets, one vendor- and one customer display: Yes X No ☐			
		One display set for vendor and customer Yes ☐ No X			
		weight	X		
		information about correct zero position	X		
		tare operation	X		
		preset tare operation	/		
		height of numerical figures displayed to the customer ≥ 9.5 mm	X		
		Instruments to be used with weights:			
		value of weights possible to distinguish	/		
Zero-setting device (direct sales to the public)					
4.13.2		**Non-automatic zero-setting:**			
		only allowed when operated with a tool	/		

(1) Checked by verifying the compliance with documents or by simulating faults; this check does not duplicate the disturbance tests 12.1 through 12.7.

Tare device (direct sales to the public)					
4.13.3		not allowed on mechanical instrument with weights receptor	/		
		on instruments with one platform public can see whether - tare is in use	X		
		- tare setting is altered	X		
		only one tare shall be in operation at any given time	X		
		while tare or preset tare is in operation recalling of gross values is prohibited	X		
4.13.3.1		**Non-automatic tare:**			
		displacement of 5 mm at most e	/		
4.13.3.2		**Semi-automatic tare:**			
		reduction of value of tare not permitted and	X		
		cancelling of tare effect only if no load on the receptor	X		
		One of the following condition fulfilled:			
		tare value indicated permanently in a separate display	X		
		indicated with sign "-" when no load on the receptor	/		
		tare effect cancelled automatically when unloading after net weighing	/		
4.13.3.3		**Automatic tare:**			
		not allowed	X		
4.13.4		**Preset tare:**			
		indicated on separate display clearly differentiated from weight display	/		
		reduction of tare value not permitted and	/		
		cancelling of tare effect only if no load on the receptor	/		
		impossible to operate if tare device in operation	/		
		cancelled at the same time as PLU if associated with PLU	/		
4.13.11		**Self-service instruments:** with one set of scales or displays X two sets of scales or displays ☐			
		instrument has two sets of scales or displays	X		
		Primary indications shall include the product designation if a ticket is printed	X		
Price computing instruments and price scales (direct sales to the public)					
4.14		Requirements of 4.13 for direct sales to the public are met	X		
4.14.1		**Supplementary primary indications (4.13.6)**			
		unit price	X		
		price to pay	X		
		if applicable number, unit price and price to pay for non-weighed articles, price totals	X		
4.14.2		**Price scales:**			
4.2		4.2 and 4.3.1 through 4.3.3	X		
4.3.1-4.3.3		error of price scale $\lvert W \cdot U - P \rvert \leq e \cdot U$	X		
4.14.3		**Price computing:**			
		multiplication of indicated weight and unit price as indicated	X		
		rounding to the nearest interval of price to pay	X		
		unit price: Price/100 g or price/kg	X		
		Indications of weights, unit price and price to pay visible:			
		while load on load receptor and for at least 1 s after stable weight indication or after any introduction of unit price	X		
		freezing for ≤ 3 s after removing load and not possible to introduce or change unit price (if indication has been stable before and would otherwise be zero)	X		
		printing weight, unit price and price to pay	X		

		Stored in memory:			
		before printing	/		
		same data not to be printed twice for customer	/		
4.14.4		**Additional functions for trade and management:**			
		all transactions are printed for customer	X		
		they shall not lead to confusion	X		
4.14.4.1		**Prices-to-pay (positive or negative) of non-weighed articles:**			
		weight indication zero or	/		
		weighing mode inoperative	/		
		prices shall be shown on price-to-pay display	/		
		Prices for more than one equal articles:			
		number of articles shown on weight display without being taken for a weight	/		
		price for one article shown on unit price display	/		
		supplementary display for number of articles and/or article prices	/		
4.14.4.2		**Totalization of transactions on one or several tickets:**			
		price total indicated on price-to-pay display and	X		
		printed accompanied by a special word or symbol and	X		
		reference to commodities whose prices are totalized if a separate ticket is issued for total	X		
		all prices-to-pay shall be printed and price total shall be the algebraic sum of these printed prices	X		
		Totalization of transactions from linked instruments:			
		price-to-pay scale intervals of all connected instruments identical	/		
4.14.4.3		**Instrument used by several vendors or to serve more than one customer at the same time:**			
		connection between transactions and vendor or customer identified	X		
4.14.4.4		**Cancelling previous transactions:**			
		transaction is already printed: the price-to-pay cancelled shall be printed with comment	/		
		transaction not yet printed and displayed to customer: transaction clearly differentiated from normal transactions	/		
4.14.4.5		**Printing additional information:**			
		clearly correlated to transaction and	X		
		does not interfere with assignment of weight value to unit symbol	X		
Price labelling instruments					
4.16		Requirements 4.13.8, 4.14.3 (paragraphs 1 and 5), 4.14.4.1 (paragraph 1) and 4.14.4.5 are met	X		
		Display:			
		for weight	X		
		possibility to verify values of unit price and preset tare during the use of the instrument	X		
		Printing:			
		prevention of printing below Min	X		
		labels with fixed values of weight, unit price and price-to-pay allowed provided weighing mode is inoperative	X		

4.18.1		**Mobile instruments used outside** Existent ☐ Non-existent X			
		means to indicate that the limiting value of tilting has been exceeded and to inhibit printout and data transmission			
		automatic zero-setting or tare balancing operation after each moving of the vehicle			
		indication when instrument is not in the weighing window			
		equipped with an appropriate protection system if the load measuring device is sensitive to moving or driving influences			
		prevention of wrong weighing results if the cardanic suspension system or load receptor comes into contact with the surrounding frame construction			
4.18.2		**Other mobile instruments not to be used outside** with a levelling device and a level indicator			
		the levelling device shall be operated easily without tools	/		
		appropriate inscription pointing the user to the necessity of levelling after each movement	/		

17.3 Electronic weighing instruments

Requirement	Testing procedures		PASSED	FAILED	Remarks
Disturbances					
5.1.1		indication of significant faults in the display does not lead to confusion with other messages	X		
5.2		**Acting upon significant faults in case 5.1.1, b):**			
		instrument made automatically inoperative (1), or	X		
		visual or audible indication until user takes action or fault disappears (1)	X		
Display check					
5.3.1		**Upon switch-on:**			
		signs of indication are active and non-active long enough to be checked by operator	X		
External equipment					
5.3.6		**Interfaces (mechanical, electrical, logical) do not allow:**			
		- functions and measurement data to be inadmissibly influenced by peripheral devices, or other connected instruments, or disturbances	X		
5.3.6.1		- displaying data which could be mistaken for a weighing result	X		
		- falsifying weighing results (displayed, processed, stored)	X		
		- changing adjustment factor or adjusting the instrument (except authorized cases)	X		
		- falsifying displayed primary indications (direct sales)	X		
5.3.6.2		interfaces that do not fulfil 5.3.6.1 can be secured	/		
5.3.6.3		interfaces transmit data so that peripheral device can meet requirements	X		
5.3.6		Metrologically relevant functions performed or initiated through the interface meet relevant requirements of Nº 4, R76-1	X		

(1) Checked by verifying the compliance with documents or by simulating faults; this check does not duplicate the disturbance tests 12.1 through 12.7.

17.4 Software-controlled digital devices and instruments

Requirement	Testing procedures		PASSED	FAILED	Remarks
Devices with embedded software			Existent X	Non-existent ☐	
5.5.1	**G.1**	Declaration of the manufacturer that the software - is used in a fixed hardware and software environment, and	X		
		- cannot be modified or uploaded by any means after securing/ verification	X		
		The software documentation contains: - description of the legally relevant functions	X		
		- description of the securing means (evidence of an intervention)	X		
		- software identification	X		BJ_1.0.1,2f
		- description how to check the actual software identification	X		
		The software identification is - clearly assigned to the legally relevant software and functions	X		
		- provided by the instrument as documented	X		
Personal computers, instruments with PC components, and other instruments, devices, modules, and elements with programmable or loadable legally relevant software			Existent ☐	Non-existent X	
5.5.2.2 d	**G.2.1**	The legally relevant software is - documented with all relevant information			
5.5.2.2 a		- protected against accidental or intentional changes			
5.5.2.2 a		Evidence of intervention is available until the next verification / inspection			
5.5.2.2	**G.2.2.1**	**Operation system / programs not accessible for the user**			
		description of all commands via keys or interfaces			
		declaration of completeness of commands			
5.5.2.2	**G.2.2.2**	**Operating system / programs accessible for the user**			
		checksum or signature generated over the machine code of the legally relevant software			
		legally relevant software cannot be started if the code is falsified			
	G.2.2.3	**In addition to the cases G.2.2.1 or G.2.2.2**			
		device-specific parameters sufficiently protected			
		audit trail for the protection of the parameters and description			
		some practical spot checks performed			
5.5.2.2 b	**G.2.3**	**Software interfaces**			
		If there is associated software providing other than measuring functions, the legally relevant software part - is separated from associated software			
		- identified			
		- cannot be influenced by the associated software			
		program modules of legally relevant software are defined and separated from the modules of associated software by a defined protective software interface			
		protective software interface itself is part of the legally relevant software			
		description and definition of functions of the legally relevant software that can be released via the protective software interface			
		description and definition of parameters that may be exchanged via the protective software interface			

Requirement	Testing procedures		PASSED	FAILED	Remarks
		description of the functions and parameters conclusive and complete			
		each documented function and parameter does not contradict to the requirements of this Recommendation			
		appropriate instructions for the application programmer concerning the protectiveness of the software interface			
5.5.2.2 c	**G.2.4**	**Software identification**			
		The legally relevant software is identified by a software identification			
		The software identification - covers all program modules of the legally relevant software and the type-specific parameters at runtime of the instrument			
		- is easily provided by the instrument			
		- can be compared with the reference identification fixed at type approval			
		Spot checks whether the checksums (signatures) are generated and work as documented			
		There exists an effective audit trail			
Data storage devices (DSD)			Existent ☐	Non-existent X	
5.5.3	**G.3.1**	DSD realised with embedded software (examine software acc. to G.1)			Yes ☐ No ☐
		DSD realised with programmable/loadable software (examine software acc. to G.1)			Yes ☐ No ☐
		documentation with all relevant information			
5.5.3.1	**G.3.2**	sufficient storage capacity for the intended purpose			
		data are stored and given back correctly			
		sufficient description of measures to prevent data loss			
5.5.3.2	**G.3.3**	storage of all relevant information necessary to reconstruct an earlier weighing, i.e. gross, net, tare values, decimal signs, units, identifications of the data set, instrument number, load receptor, (if applicable), checksum / signature of the data set stored.			
5.5.3.3	**G.3.4**	protection of the stored legally relevant data against accidental or intentional changes			
		protection of the stored legally relevant data at least with a parity check during transmission to the storage device			
		protection of the stored legally relevant data at least with a parity check of a storage device with embedded software (5.5.1)			
		protection of the stored legally relevant data by an adequate checksum or of a storage device with programmable or loadable software (5.5.2)			
5.5.3.4	**G.3.5**	identification and indication of the stored legally relevant data with an identification number			
		record of the identification number on the official transaction medium, i.e. on the print-out			
5.5.3.5	**G.3.6**	automatic storage of the legally relevant data			
5.5.3.6	**G.3.7**	a device subject to legal control prints or displays the stored legally relevant data for verifying			

3. Pictures

Figure 1 ATP160xx front view.

Figure 2 ATP160xx (pole model) front view.

Figure 3 ATP160xx rear view.

Figure 4 ATP160xx(pole model) rear view.

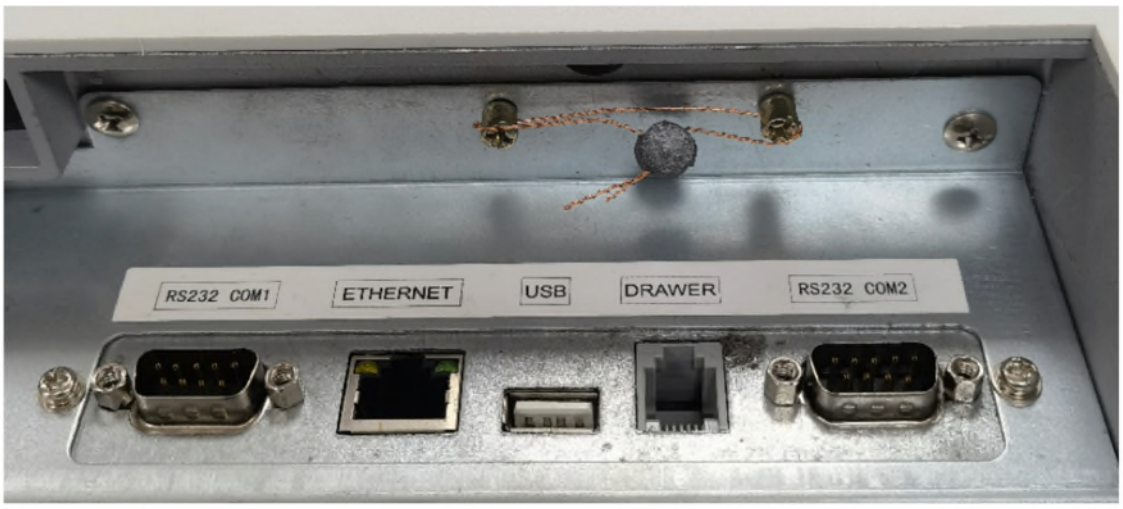

Figure 5 Sealing method.