Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

Certificate of Approval
NMI 6/4D/295A

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

Avery Weigh-Tronix Model FX 220 Weighing Instrument

submitted by Avery Berkel (a Division of ITW Limited)
Foundry Lane, Smethwick
West Midlands B66 2LP UK

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 76, *Non-automatic weighing instruments, Parts 1 and 2*, dated July 2004.

This approval becomes subject to review on **1/02/21**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 4 approved – certificate issued	24/01/06
1	Pattern & variants 1 to 4 amended – notification of change issued	6/04/11
2	Pattern & variants 1 to 4 cancelled – cancellation issued [**in error**]	25/01/12
3	Pattern & variants 1 to 4 re-approved (**cancellation rescinded**) – notification of change issued	22/02/13
4	Variants 5 & 6 approved – interim certificate issued	8/04/13
5	Pattern & variants 1 to 4 updated – variants 5 & 6 approved – certificate issued	11/06/13
6	Pattern & variants 1 to 6 **reviewed** – certificate issued	3/11/16

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/295A' and only by persons authorised by the submittor.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates No S1/0/A or No S1/0B.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.

Dr A Rawlinson

TECHNICAL SCHEDULE No 6/4D/295A

1. Description of Pattern approved on 24/01/06

An Avery Weigh-Tronix model FX 220 class (III) single interval self-indicating price-computing non-automatic weighing instrument (Table 1 and Figure 1) of 7.5 kg maximum capacity with a verification scale interval of 0.001 kg. May also be known as Avery Berkel instruments of the same model.

Instruments may be fitted with integral displays (Figure 1), or with the customer display mounted on a column; either version may have the load receptor fitted with attachments providing support for a scoop (Figure 2).

Instruments are powered by a 12 volt DC supply from either an Avery Weigh-Tronix (or Avery Berkel) Type FW 1288 mains adaptor or internal batteries.

Instruments have unit price to $999.99/kg, price to $9999.90, and a price-look-up (PLU) facility.

1.1 Zero

Zero is automatically corrected to within ±0.25 e whenever power is applied and whenever the instrument comes to rest within 0.5e of zero.

The initial zero-setting device of the pattern has a nominal range of approximately 20% of the maximum capacity of the instrument.

The instrument has a semi-automatic zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument.

1.2 Tare

A semi-automatic subtractive tare device of up to 3.75 kg maximum capacity may be fitted.

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 Levelling

Instruments are provided with adjustable feet and a level indicator. Adjacent to the level indicator is a notice stating ‘instrument must be level when in use’, or similar wording.

1.5 Verification Provision

Provision is made for the application of a verification mark.

1.6 Sealing Provision

Provision is made for the calibration adjustments of the instrument to be sealed by means of destructible adhesive labels applied over the calibration plug access cover (inside the battery compartment) and over the rectangular access hole near the centre of the underside of the instrument.

1.7 Descriptive Markings and Notices

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's mark, or name written in full	…….
Indication of accuracy class	(III)
Pattern approval number for the instrument	NMI 6/4D/295A
Maximum capacity	*Max* ..... g or kg #1
Minimum capacity	*Min* ..... g or kg #1
Verification scale interval	*e* = ... g or kg #1
Maximum subtractive tare	*T* = - ……. g or kg #2
Serial number of the instrument	…….

#1 These markings are also shown near the display of the result if they are not already located there.

#2 This marking is required if *T* is not equal to *Max*.

2. Description of Variant 1 **approved on 24/01/06**

Other capacities of the FX 220 series as listed in Table 1. The pattern is shown in **bold** text.

TABLE 1

Model Number	Maximum Capacity	Minimum capacity	Verification Scale Interval	Tare Capacity
FX 220	**7.5 kg**	**0.020 kg**	**0.001 kg**	**3.75 kg**
FX 220	15 kg	0.040 kg	0.002 kg	7.5 kg
FX 220	30 kg	0.100 kg	0.005 kg	15 kg
FX 210	7.5 kg	0.020 kg	0.001 kg	3.75 kg
FX 210	15 kg	0.040 kg	0.002 kg	7.5 kg
FX 210	30 kg	0.100 kg	0.005 kg	15 kg

3. Description of Variant 2 **approved on 24/01/06**

Certain capacities of the FX 210 series as listed in Table 1. These instruments do not have price-computing, i.e. they display mass only.

4. Description of Variant 3 **approved on 24/01/06**

Certain capacities of the FX 120 and FX 125 series of weighing instruments as listed in Table 2 (Figures 3 to 6).

The FX 125 series are price-computing weighing instruments while the FX 120 series instruments do not have price-computing, i.e. they display mass only. Instruments may be fitted with output sockets (output interfacing capability) for the connection of peripheral and/or auxiliary devices.

Instruments may be fitted with one or two displays, which are either:

(a) fitted within the instrument housing (Figures 3 and 5);

(b) located remotely; or

(c) mounted on a column located either remotely (Figures 4 and 6) or attached to the instrument.

Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC' (or similar wording) unless two displays are present or unless the single display is located such that all primary indications are clearly and simultaneously displayed to both the vendor and the customer.

TABLE 2

Model Number	Maximum Capacity	Minimum Capacity	Verification Scale Interval	Tare Capacity
FX 120	7.5 kg	0.020 kg	0.001 kg	3.75 kg
FX 120	15 kg	0.040 kg	0.002 kg	7.5 kg
FX 120	30 kg	0.100 kg	0.005 kg	15 kg
FX 125	7.5 kg	0.020 kg	0.001 kg	3.75 kg
FX 125	15 kg	0.040 kg	0.002 kg	7.5 kg
FX 125	30 kg	0.100 kg	0.005 kg	15 kg

5. Description of Variant 4 approved on 24/01/06

Model G 220 (Figure 7) which is similar to the model FX 210 (variant 2) but is a mass only weighing instrument with a counting facility. The counting facility is not approved for trade use.

Instruments also have a keyboard-entered pre-set tare facility; pre-set tare values may also be associated with PLU keys.

Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC', or similar wording.

6. Description of Variant 5 approved on 8/04/13

The pattern and variants in certain other capacities of single interval instruments as listed in Table 3.

TABLE 3

Maximum Capacity	Minimum Capacity	Verification Scale Interval	Tare Capacity
6 kg	0.040 kg	0.002 kg	**3** kg
12 kg	0.040 kg	0.002 kg	**6** kg
15 kg	0.100 kg	0.005 kg	**7.5** kg

7. Description of Variant 6 approved on 8/04/13

The pattern and variants in certain capacities of multi-interval instruments as listed in Table 4:

TABLE 4

Maximum Capacity	Minimum Capacity	Verification Scale Interval	Tare Capacity
3/6 kg	0.020 kg	0.001/0.002 kg	**3** kg
6/15 kg	0.040 kg	0.002/0.005 kg	**7.5** kg

Multi-interval instruments shall be marked with the maximum capacity and verification scale interval of each interval range, in addition to the markings included in clause **1.7 Descriptive Markings and Notices**.

TEST PROCEDURE

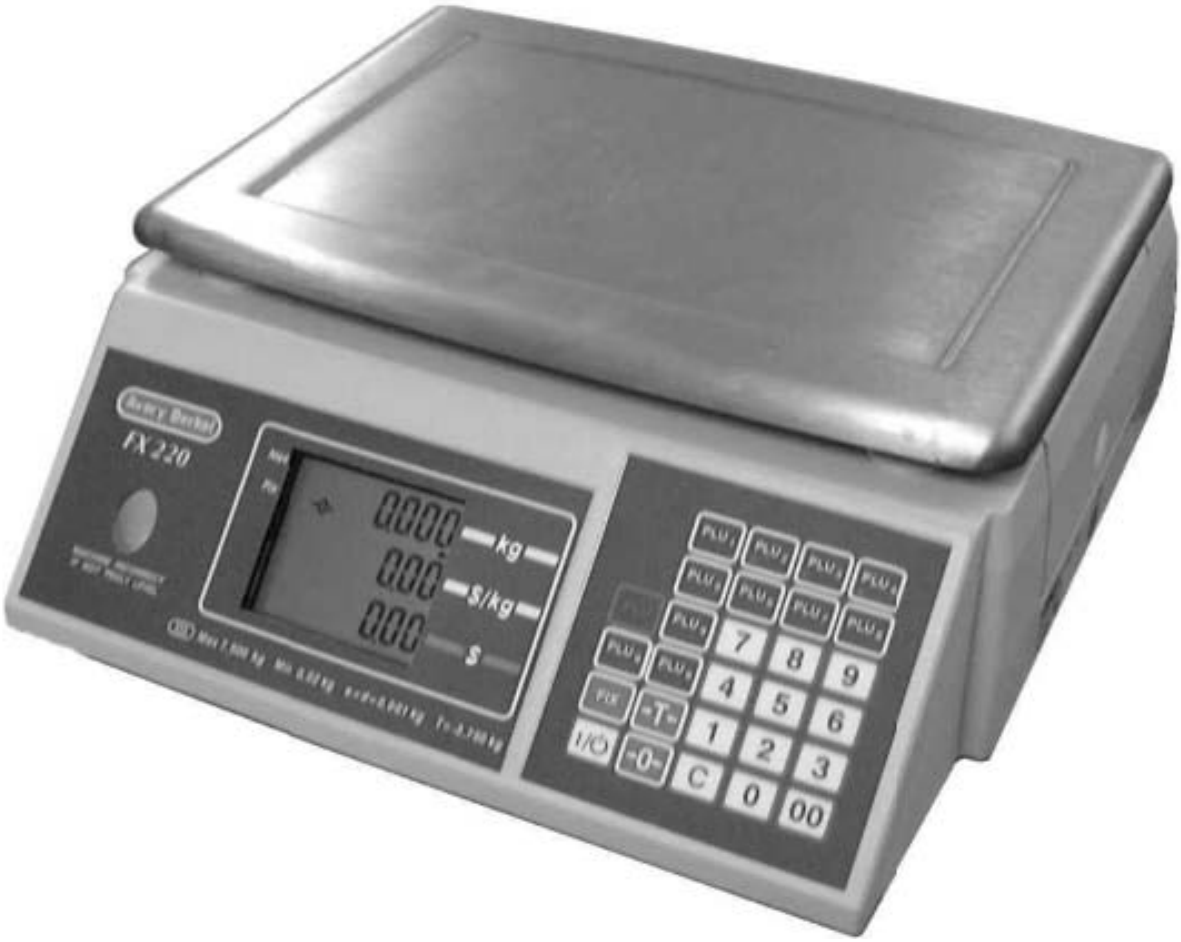
Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

The instrument shall not be adjusted to anything other than as close as practical to zero error, even when these values are within the maximum permissible errors.

Maximum Permissible Errors

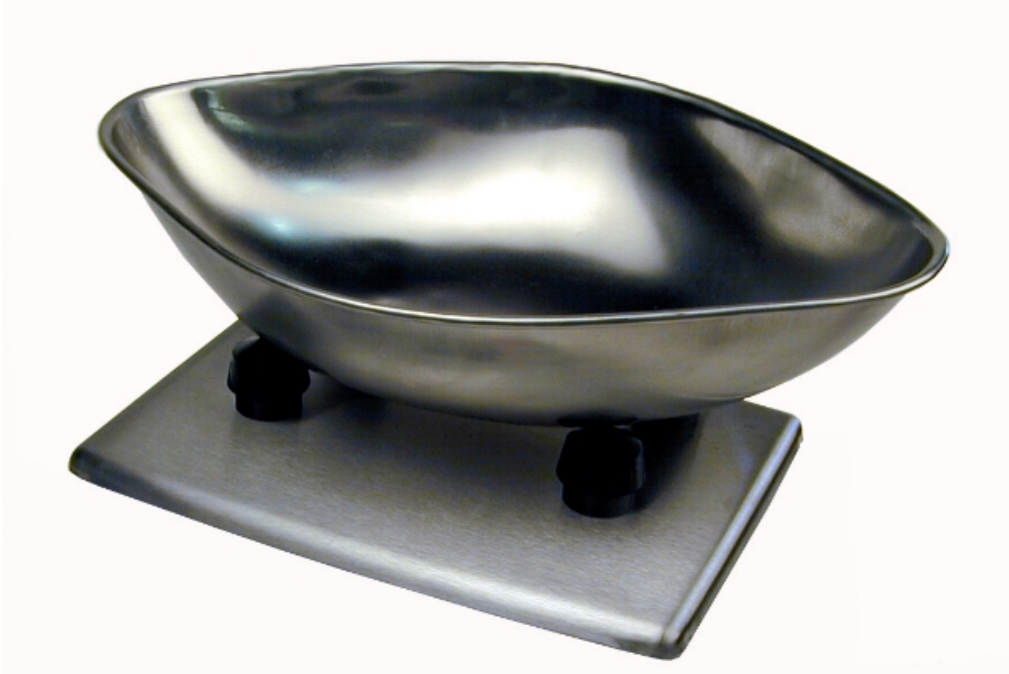
The maximum permissible errors are specified in the *National Trade Measurement Regulations 2009*.

FIGURE 6/4D/295A – 1



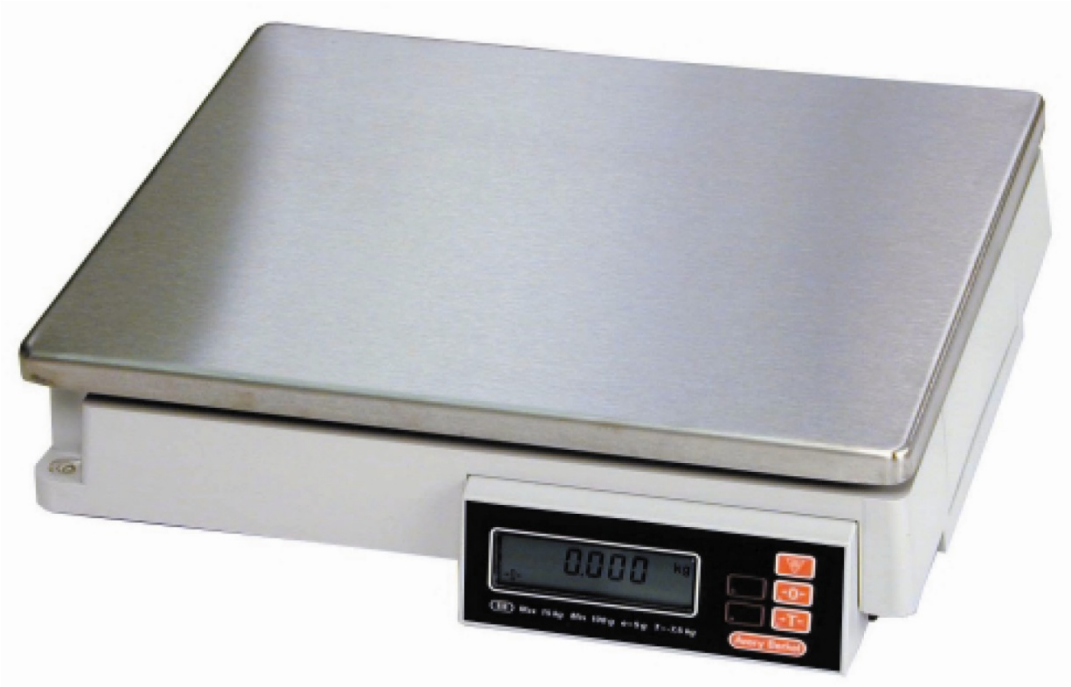
Avery Weigh-Tronix Model FX 220 Weighing Instrument – The Pattern

FIGURE 6/4D/295A – 2



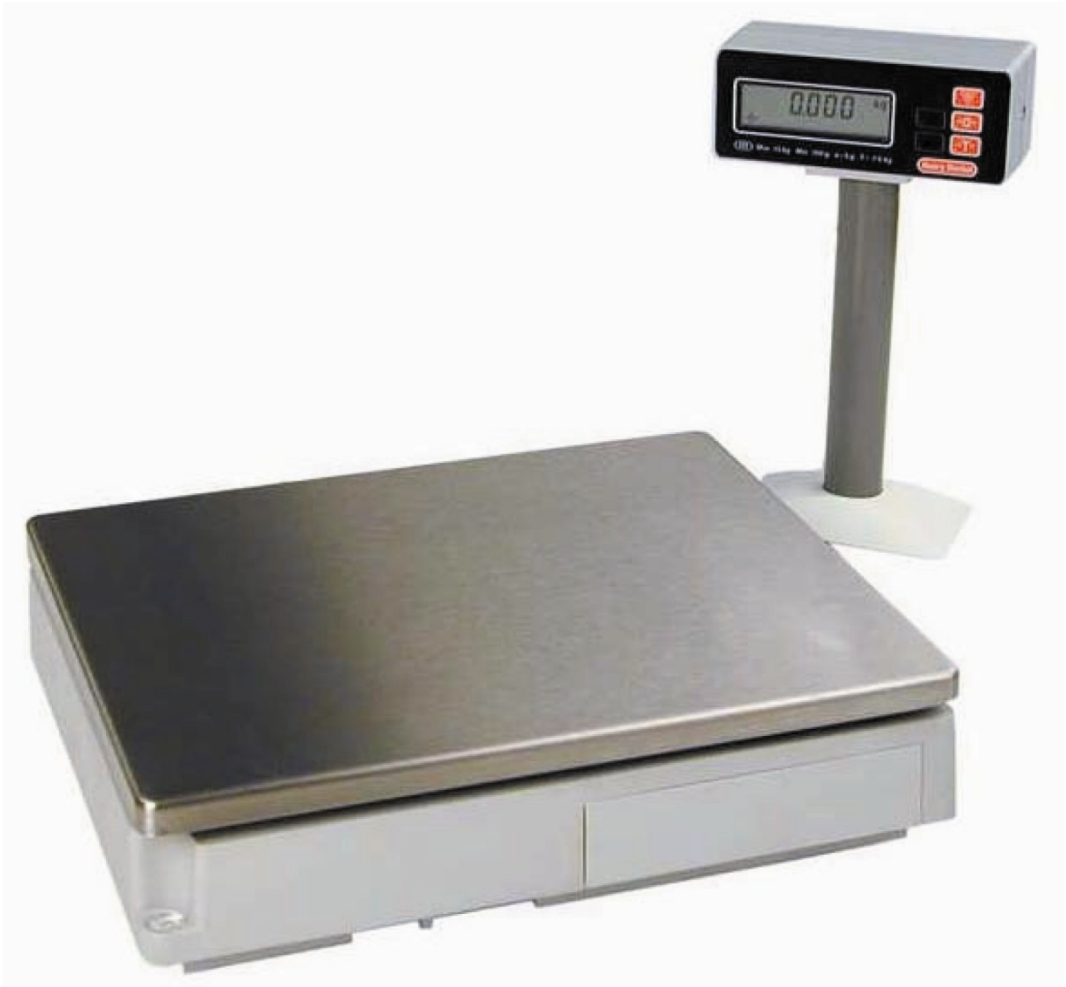
Typical Scoop

FIGURE 6/4D/295A – 3



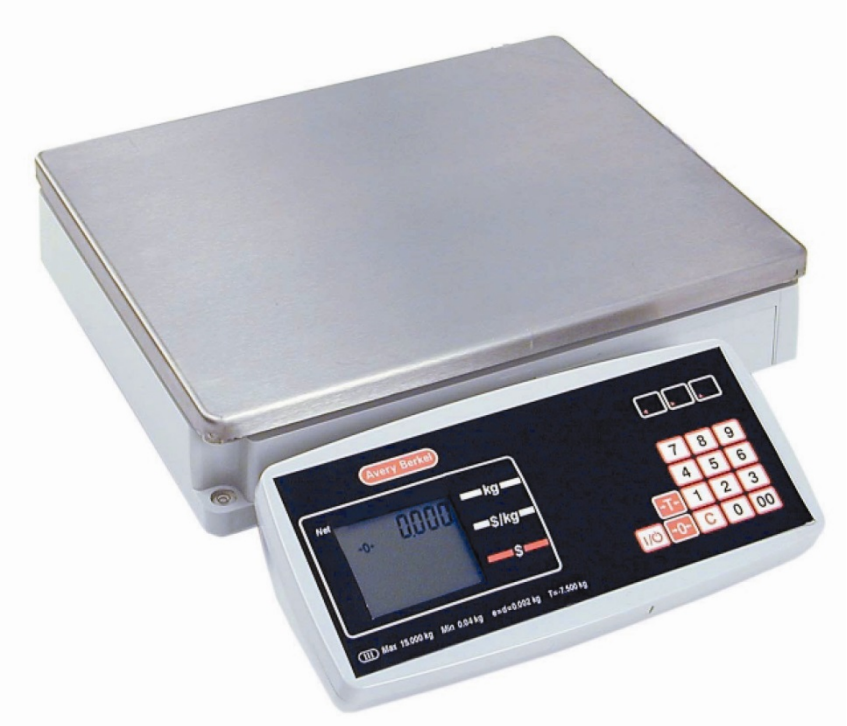
Model FX 120 With Integral Display – Variant 3

FIGURE 6/4D/295A – 4



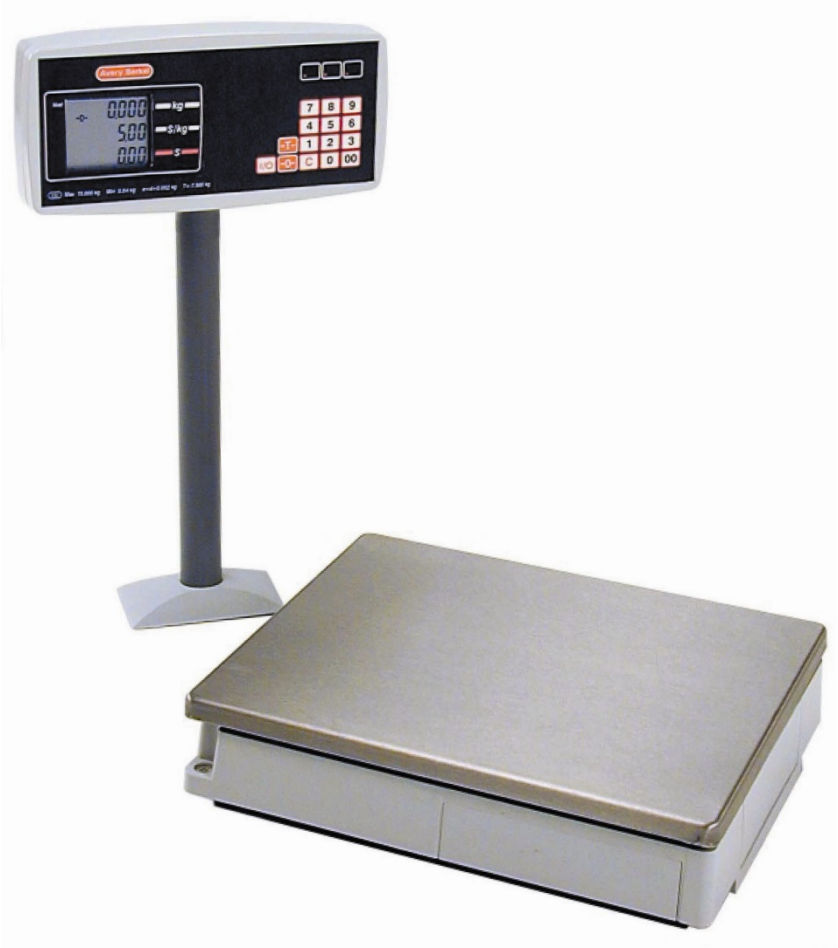
Model FX 120 With Remote Column-mounted Display – Variant 3

FIGURE 6/4D/295A – 5



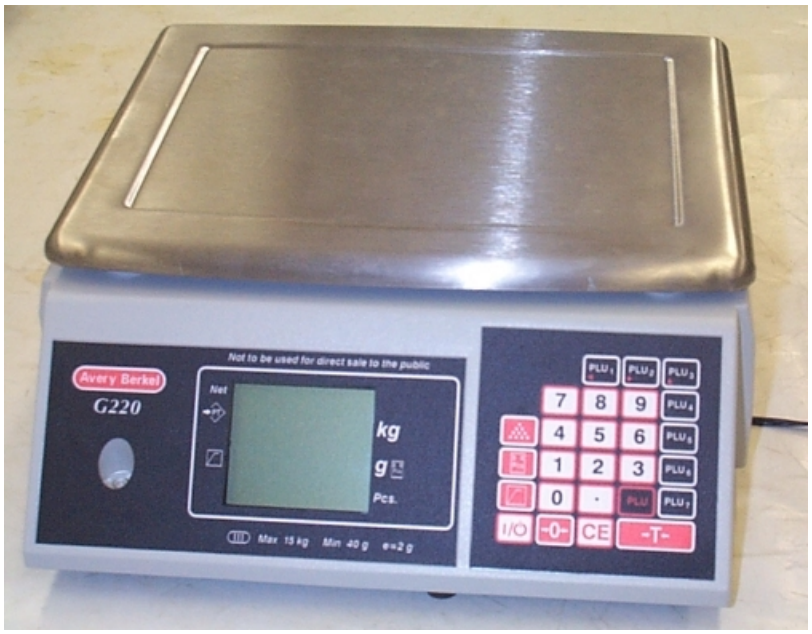
Model FX 125 With Integral Display – Variant 3

FIGURE 6/4D/295A – 6



Model FX 125 With Remote Column-mounted Display – Variant 3

FIGURE 6/4D/295A – 7



Model G 220 Weighing Instrument – Variant 4

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