6/4C/205
14 April 2010

Australian Government

National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Notification of Change
Certificate of Approval No 6/4C/205
Change No 3

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

The following changes are made to the approval documentation for the

Actronic Model AS675 Weighing Instrument

submitted by Kosel Industries SDN BHD
2586 Lorong Perusahaan 10
Prai Industrial Estate
13600 Perai, Penang
MALAYSIA.

A. In Certificate of Approval No 6/4C/205 dated 1 February 2007;

1. The Condition of Approval referring to the review of the approval should be amended to read:

   "This approval becomes subject to review on 1 October **2013**, and then every 5 years thereafter."

2. The FILING ADVICE should be amended by adding the following:

   "Notification of Change No 3 dated 14 April 2009

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

Australian Government
National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

No 6/4C/205

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

Actronic Model AS675 Weighing Instrument

submitted by Kosel Industries SDN BHD
2586 Lorong Perusahaan 10
Prai Industrial Estate
13600 Perai, Penang
MALAYSIA

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.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 December 2008, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NSC 6/4C/205' (or alternatively NMI 6/4C/205) and only by persons authorised by the submittor.

…./2

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.

The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

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

DESCRIPTIVE ADVICE

Pattern: approved 18 September 1998

- An Actronic model AS675 weighing instrument of 99.9 kg maximum capacity intended for the weighing and filling of liquefied petroleum gas (LPG) containers. May also be known as an Air & Gas Industries model AS675.

Technical Schedule No 6/4C/205 describes the pattern.

Variant: approved 20 August 2001

1. Model AS575 which has a price-computing facility.

Technical Schedule No 6/4C/205 Variation No 1 describes variant 1.

Variant: approved 18 October 2004

2. With a model AS579-DC basework.

Technical Schedule No 6/4C/205 Variation No 2 describes variant 2.

Variants: approved 30 January 2007

3. With a model AS681 or AS780 basework.
4. Models AS675CS or AS575CS which are without filling facilities.
5. With Actronic AS… models known as Kosel Industries KI… models.
6. With the indicator fixed to a 'live' section of the weighing platform.

Technical Schedule No 6/4C/205 Variation No 3 describes variants 3 to 6.

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FILING ADVICE

Certificate of Approval No 6/4C/205 dated 19 October 2004 is superseded by this Certificate, and may be destroyed. The documentation for this approval now comprises

Certificate of Approval No 6/4C/205 dated 1 February 2007
Technical Schedule No 6/4C/205 dated 27 March 1999 (incl. Test Procedure)
Technical Schedule No 6/4C/205 Variation No 1 dated 12 October 2001
Technical Schedule No 6/4C/205 Variation No 2 dated 19 October 2004
Technical Schedule No 6/4C/205 Variation No 3 dated 1 February 2007
(incl. Notification of Change)
Notification of Change No 1 dated 1 March 2004
Notification of Change No 2 dated 6 December 2004
Figures 1 to 3 dated 27 March 1999
Figure 4 dated 12 October 2001
Figure 5 dated 19 October 2004
Figures 6 and 7 dated 1 February 2007

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

TECHNICAL SCHEDULE No 6/4C/205

Pattern: Actronic Model AS675 Weighing Instrument.

Submittor: Actronic Ltd
8 Walls Road
Penrose Auckland 1135
New Zealand

1. Description of Pattern

An Actronic model AS675 weighing instrument (Figure 1) of 99.9 kg maximum capacity with a verification scale interval of 0.1 kg. May also be known as an Air & Gas Industries model AS675.

Instruments are intended for the weighing and filling of liquefied petroleum gas (LPG) containers and have special features for this purpose. Filling is controlled by the control unit/indicator by means of one or two solenoid valves, and in some cases a pump, based on the weight reading of the container and additional data that is entered by the operator.

Further details of these specialised functions are included in the Actronic *Operators' Manual*.

1.1 Basework

The model AS579 basework (Figures 1 and 2) has the load receptor directly supported by a single load cell.

The load receptor has maximum nominal dimensions of 400 x 400 mm.

1.2 Load Cell

A Tedea Huntleigh model 1250 load cell of 150 kg maximum capacity is used, mounted as shown in Figure 2.

1.3 Control Unit/Indicator

An Actronic model AS670 digital indicator and control unit (Figure 3) is used to process the signal from the load cell for conversion to a weight display, and to control the LPG flow by controlling the pump (if fitted) and solenoid valve/s.

Instruments are fitted with an interface to allow connection of a computer for remote inputing of LPG container data, and connection of auxiliary and/or peripheral devices.

May also be known as an Air & Gas Industries model AS670.

..../2

1.3.1 Zero

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

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.

1.3.2 Tare

A pre-set subtractive taring device of up to 45 kg maximum capacity is fitted.

For containers where data is marked in ‘lb’ units, the ‘lb to kg’ key allows values entered in ‘lb’ units to be converted to ‘kg’ units for internal calculations. All results of calculations are displayed in ‘kg’ units.

In entering data relating to the LPG container to be filled, the tare weight of the container and the weight of the container fittings are entered; together these form the pre-set tare value.

When in ‘filling’ mode, the upper display shows the GROSS WEIGHT on the load receptor, the lower display shows the GAS WEIGHT, which is the gross weight less the pre-set tare value (a ‘NET’ indicator shows that a pre-set tare value is in operation).

Data may be stored in a ‘catalogue’ of containers and container types.

1.3.3 Display Check

A display check is initiated whenever power is applied.

1.4 Power Supply

An Actronic model AS574 power supply unit (Figure 1) provides power to the AS670 indicator/ control unit, and also contains relays that control the pump (if fitted) and solenoid valve/s.

1.5 Levelling

Instruments are provided with adjustable feet and a level indicator.

1.6 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

1.7 Sealing Provision

Provision is made for the calibration adjustment to be sealed by means of the sealing screws provided for the access cover at the rear of the instrument.

1.8 Markings and Notices

Instruments carry the following markings, in the form shown at right:

Manufacturer's mark, or name written in full	Actronic
Indication of accuracy class	(III)
Maximum capacity	*Max* ..... kg *
Minimum capacity	*Min* ..... kg *
Verification scale interval	*e* = ... kg *
Maximum subtractive tare	*T* = - ..... kg
Serial number of the instrument	.....
Pattern approval mark for the instrument	NSC No 6/4C/205

* These markings shall also be repeated near each reading face if they are not already located there.

TEST PROCEDURE

Instruments should be tested in accordance with any relevant tests specified in the Inspector's Handbook.

Testing may be carried out with the instrument in its initial state after switch-on.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors for increasing and decreasing loads on initial verification/certification for loads, *m*, expressed in verification scale intervals, e, are:

$\pm 0.5\ e$ for loads $0 \leq m \leq 500$; and
$\pm 1.0\ e$ for loads $500 < m \leq 2\ 000$.

TECHNICAL SCHEDULE No 6/4C/205

VARIATION No 1

Pattern: Actronic Model AS675 Weighing Instrument.

Submittor: Actronic Ltd
8 Walls Road
Penrose Auckland 1135
New Zealand.

1. Description of Variant 1

An Actronic model AS575 weighing instrument which is similar to the pattern (model AS675) but is fitted with an Actronic model AS570 digital indicator and control unit (Figure 4) which includes a price-computing facility. This variant may also be known as an Air & Gas Industries model AS575.

According to the configuration of the instrument, and the cylinder to be filled, the price may be determined as a "fee to fill" or by calculation from the weight and the unit price.

NOTIFICATION OF CHANGE

In Technical Schedule No 6/4C/205 dated 27 March 1999, clause **1.2 Load Cell** should be amended by adding the following:

"The load cell may also be known as a Precision Transducers model PT1250."

6/4C/205
19 October 2004

TECHNICAL SCHEDULE No 6/4C/205

VARIATION No 2

Pattern: Actronic Model AS675 Weighing Instrument

Submittor: Actronic Ltd
8 Walls Road
Penrose Auckland 1135
New Zealand

1. Description of Variant 2

The model AS579 basework of the pattern replaced by a model AS579-DC basework which has an additional frame mounted on the load receptor (Figure 5).

This additional frame supports the filling hose and control unit, as well as having a secondary hinged platform that can be lowered to allow more comfortable filling of small cylinders – the indicator and power supply unit remain attached to a floor-mounted column (Figure 5).

TECHNICAL SCHEDULE No 6/4C/205

VARIATION No 3

Pattern: Actronic Model AS675 Weighing Instrument

Submittor: Kosel Industries SDN BHD
2586 Lorong Perusahaan 10
13600 Perai Penang MALAYSIA

1. Description of Variants

1.1 Variant 3

The model AS579 basework of the pattern replaced by a model AS681 or model AS780 basework (Figure 6).

The model AS681 basework has maximum nominal dimensions of 400 mm x 500 mm, and the model AS780 has maximum nominal dimensions of 500 mm x 600 mm. In both cases the construction is similar (Figure 6), with the load receptor directly supported by a single Tedea Huntleigh model 1250 class C3 load cell of either 150 kg, 200 kg or 300 kg maximum capacity.

The basework may be provided with additional fittings and attachments on the load receptor (including the possibility of an additional frame similar to that described in variant 2, Figure 5) to facilitate the cylinder filling operations. However it shall be ensured that the maximum capacity of the load cells is not exceeded – that is the maximum capacity of the weighing instrument (99.9 kg) plus the 'dead load' (weight of the platform and any frames, fittings and attachments which are attached to it), shall not exceed 150 kg, 200 kg or 300 kg according to the maximum capacity of the load cell in use.

1.2 Variant 4

The pattern or variants without the facilities for filling cylinders, and using a model AS670CS indicator which has features intended to facilitate checking of cylinders (i.e. under/accept/over facilities). These instruments may be known as a model AS675CS or AS575CS.

1.3 Variant 5

Any of the Actronic model AS…. instruments or modules known instead as Kosel Industries model KI…. instruments or modules (e.g. Actronic model AS675 may alternatively be known as Kosel Industries model KI675). The instruments or modules may also be known as Air and Gas Industries models (in which case the pattern (model AS675) may be known as a model AS675CA).

Note: The model AS670 indicator described for the pattern may also be known as the model AS670FS.

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1.4 Variant 6

The pattern or variants having the indicator fixed to a 'live' section of the weighing platform (e.g. fixed to the frame supporting filling fittings or attachments). The acceptability of this arrangement is dependent on the sequence of operation of the instrument being arranged such that the operator does not touch the indicator whilst the weighing operation is in progress (although the operator may need to enter data prior to, or after, the weighing operation).

Diagrams showing typical arrangements are shown in Figure 7.

NOTIFICATION OF CHANGE

In the Test Procedure (issued as part of the Technical Schedule No 6/4C/205 dated 27 March 1999), add the following after the second paragraph:

> "Tests shall also be carried out to ensure that the effect of any hoses or cables from the 'live' platform to non-'live' parts of the installation do not adversely affect the performance of the instrument."

6/4C/205
1 March 2004

Australian Government

National Standards Commission

12 Lyonpark Road, North Ryde NSW 2113 Australia

Notification of Change

Certificate of Approval No 6/4C/205

Change No 1

The following change is made to the approval documentation for the

Actronic Model AS675 Weighing Instrument

submitted by Actronic Ltd
8 Walls Road
Penrose Auckland 1135
New Zealand.

In Certificate of Approval No 6/4C/205 dated 12 October 2001, the Condition of Approval referring to the review of the approval should be amended to read:

> "This approval becomes subject to review on 1 October **2008**, and then every 5 years thereafter."

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

6/4C/205
6 December 2004

Australian Government

National Measurement Institute

12 Lyonpark Road, North Ryde NSW 2113

Notification of Change
Certificate of Approval No 6/4C/205
Change No 2

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

The following change is made to the approval documentation for the

Actronic Model AS675 Weighing Instrument

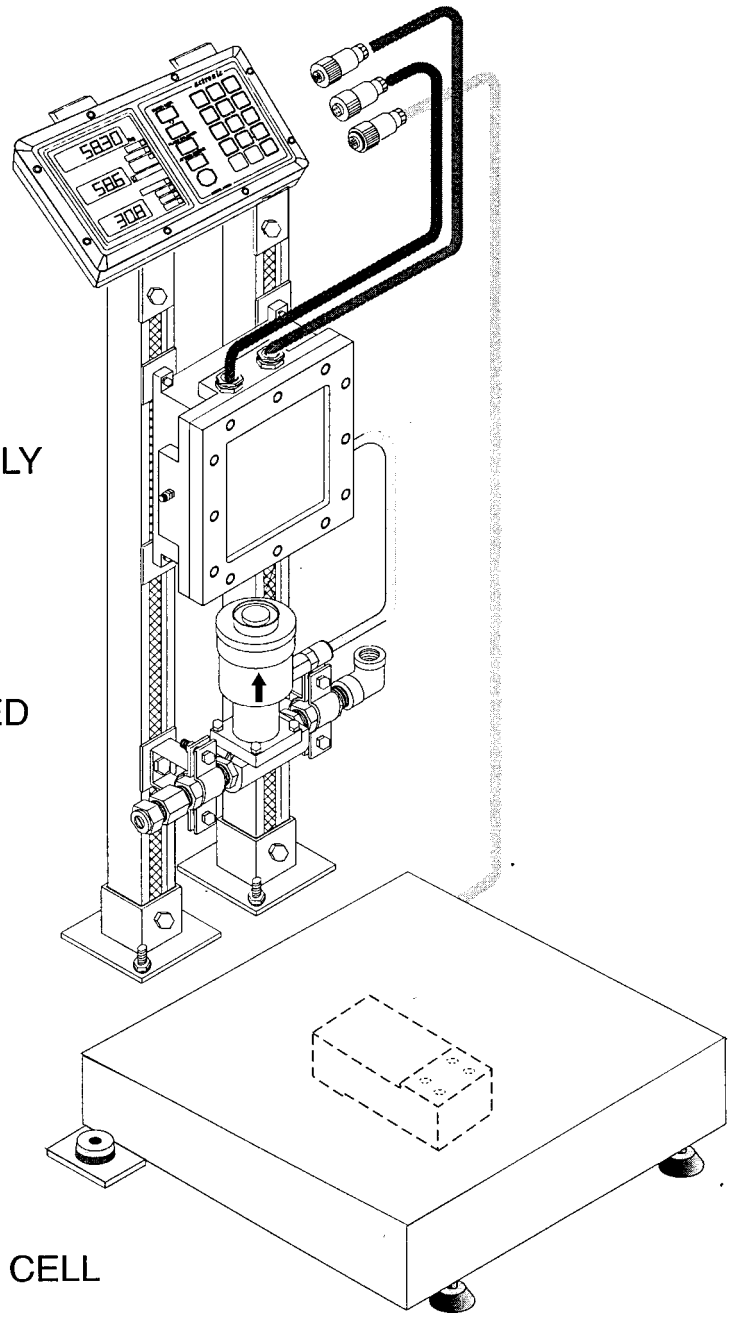
submitted by Actronic Ltd
8 Walls Road
Penrose Auckland 1135
New Zealand.

In Certificate of Approval No 6/4C/205 dated 19 October 2004 and its Technical Schedule Variation No 2, and in Technical Schedule No 6/4C/205 dated 27 March 1999 and Technical Schedule No 6/4C/205 Variation No 1 dated 12 October 2001, all references to the submittor should be amended to read:

"Kosel Industries SDN BHD
2586 Lorong Perusahaan 10
Kawasan Perusahaan Prai
13600 Perai Penang
Malaysia."

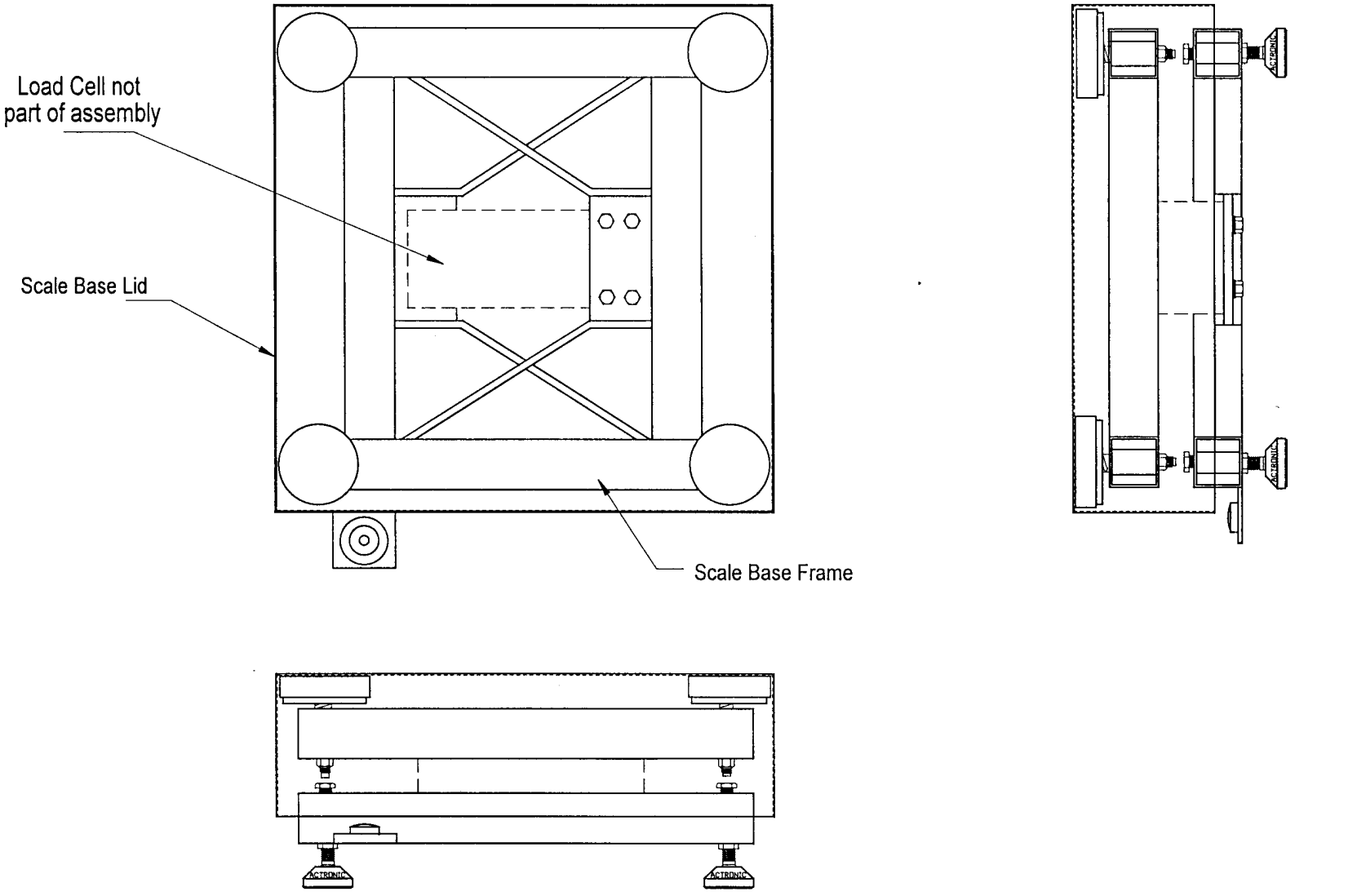
Signed by a person authorised by the Chief Metrologist to exercise his powers under Regulation 60 of the National Measurement Regulations 1999.

FIGURE 6/4C/205 - 1



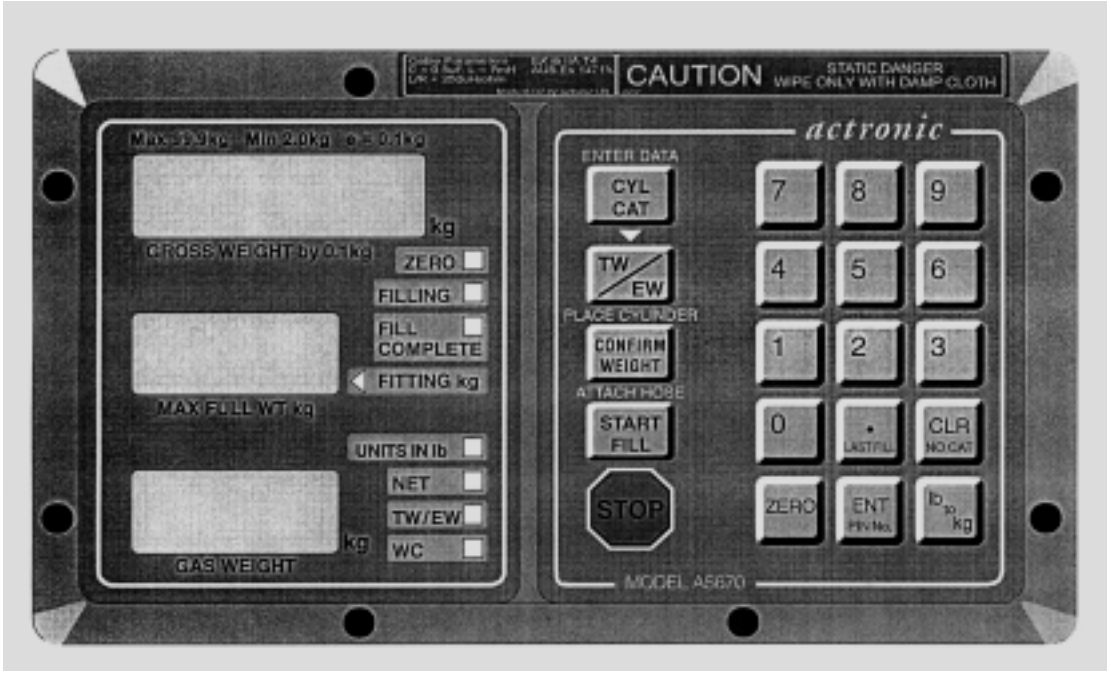
Actronic Model AS675 Weighing Instrument

FIGURE 6/4C/205 - 2



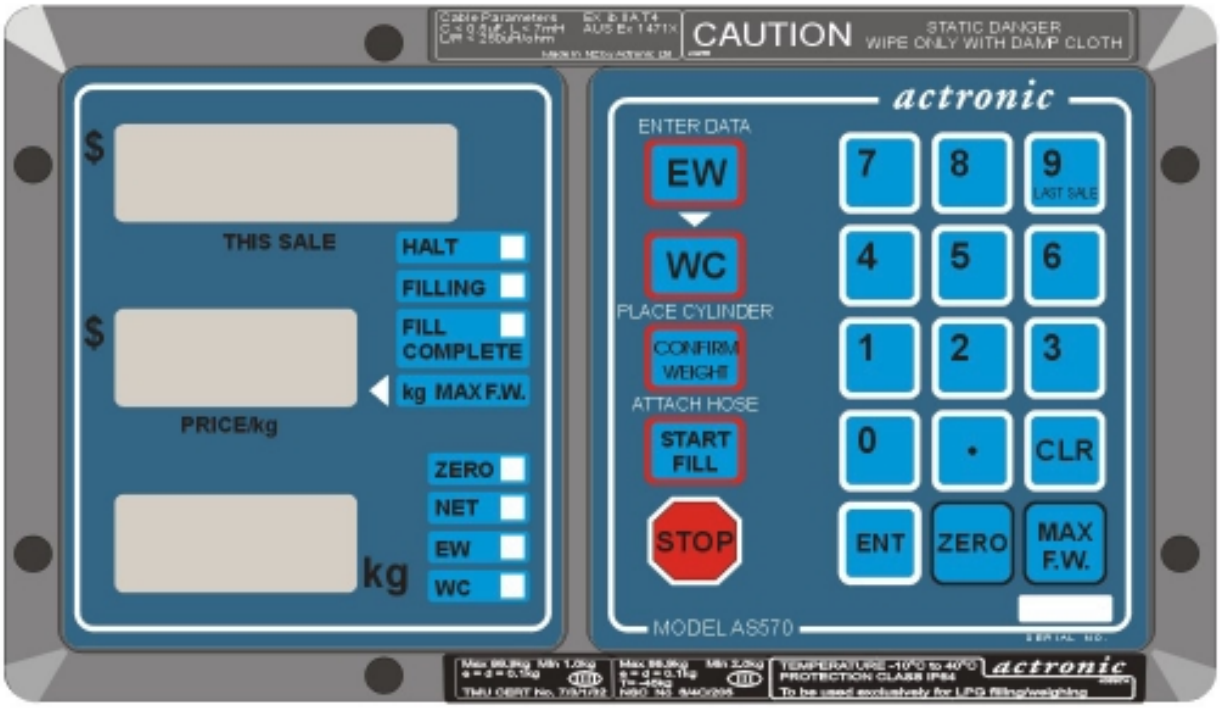
Actronic Model AS579 Basework

FIGURE 6/4C/205 - 3



Actronic Model AS670 Control Unit/indicator

FIGURE 6/4C/205 - 4



Actronic Model AS570 Control Unit/Indicator

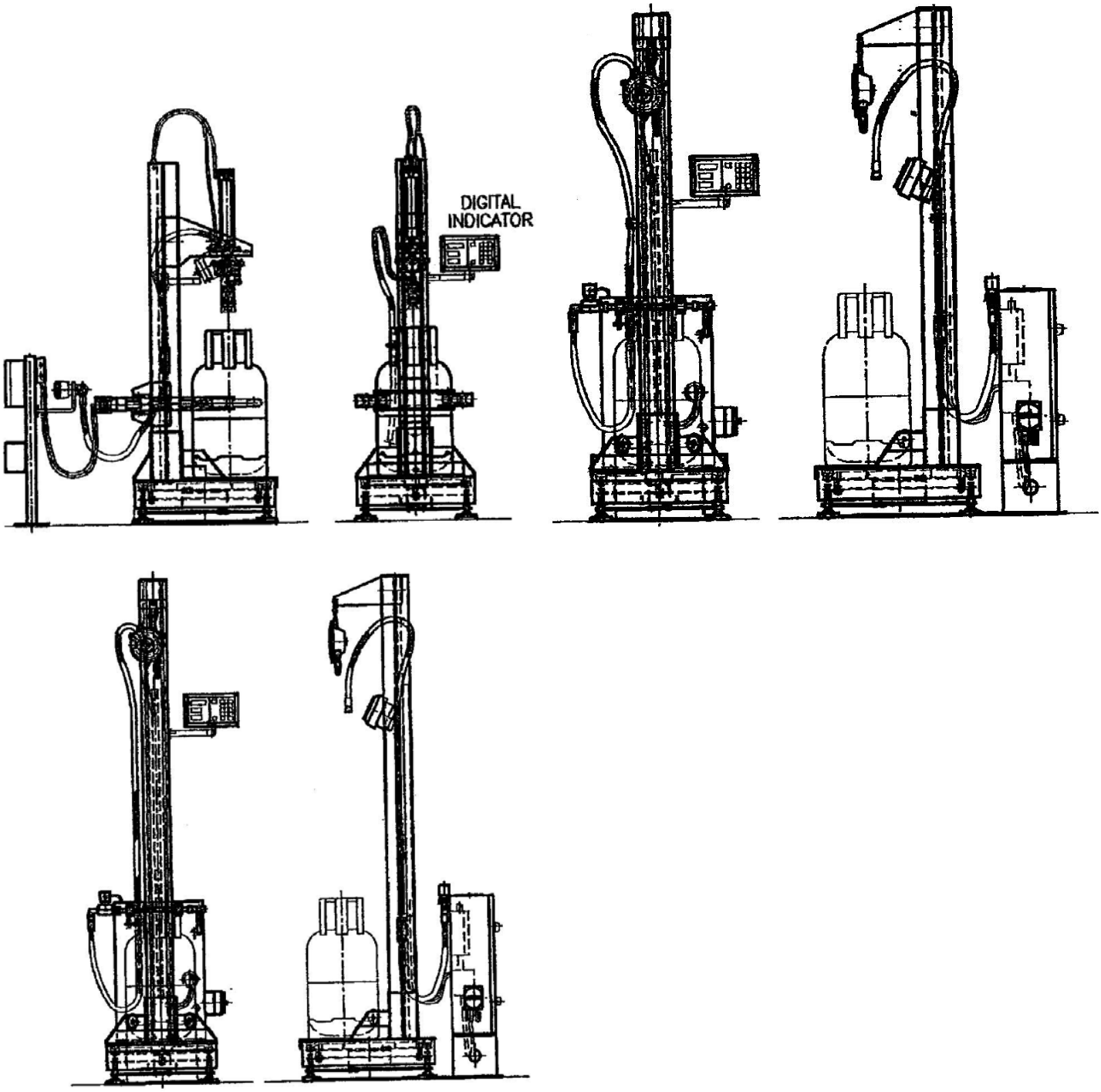
FIGURE 6/4C/205 – 5

Model AS579-DC Basework

FIGURE 6/4C/205 – 6

Model AS 780 Basework

FIGURE 6/4C/205 – 7



Typical Indicator/Fitting Arrangements – Variant 6