Correspondence: Executive Officer
P.O. Box 282 NORTH RYDE
N.S.W. 2113
Telegrams: NATSTANCOM SYDNEY
Telephone: 888 3922

CERTIFICATE OF APPROVAL No 6/4D/55 CANCELLED 01

This Certificate replaces Certificate No 6/4D/55 dated 25 November 1976 and Certificate No 6/4D/55 - Variations Nos 1 and 2 dated 22 December 1977 and 12 June 1978, which are hereby cancelled.

This is to certify that the patterns of the

Ishida Weighing Instrument Model 81

Submitted by Sumitomo Shoji (Aust.) Pty Ltd,
8-18 Bent Street,
Sydney, New South Wales, 2000,

have been approved under the Weights and Measures (Patterns of Instruments) Regulations as being suitable for use for trade.

Date of Approval: 13 July 1978

The patterns are described in Technical Schedule No 6/4D/55 dated 21 August 1978 and in drawings and specifications lodged with the Commission.

The approval is subject to review on or after 1 November 1981.

All instruments conforming to this approval shall be marked with the approval number "NSC No 6/4D/55".

Signed

Acting Executive Officer

21/8/78

CANCELLED

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/55

This Technical Schedule* replaces Technical Schedule No 6/4D/55 dated 25 November 1976 and Technical Schedule No 6/4D/55 - Variations Nos 1 and 2 dated 22 December 1977 and 12 June 1978, which are hereby cancelled.

Pattern: Ishida Weighing Instrument Model 81

Submittor: Sumitomo Shoji (Aust.) Pty Ltd,
8-18 Bent Street,
Sydney, New South Wales, 2000.

Date of Approval: 13 July 1978

All instruments conforming to this approval shall be marked "NSC No 6/4D/55".

Description:

The pattern (see Figures 1 and 2) is a self-indicating price-computing weighing instrument of capacity 5 kg by 0,005-kg graduations with price computing in 1-c increments to $9,99 per kg and total price to $49,95. Weight, unit price and total price are digitally indicated on both the vendor's and purchaser's sides. The unit price is entered sequentially by ten push-buttons and cancelled by pressing a button marked "C".

The load receptor is stayed and supported by the main lever which applies the load to a spring-resistant mechanism (see Figure 3). A slotted mask on the end of the main lever passes through a photo-electric pulse generator, which provides a number of pulses proportional to the deflection of the lever. These pulses are counted and converted to a weight indication. In the computer, the weight information is multiplied by the unit price entered by the push-button to provide the indication of total price. A push-button marked "CH" selects an "all-8" display to check the

* Note: Tables 1 and 2 and Figures 6/4D/55 - 1 to 4 should be retained as they form part of this Technical Schedule.

operation of the indicator segments.

A tool-operated zero adjustment and a tool-operated locking device are accessible from the operator's side of the instrument. A zero light illuminates when the instrument is within 0,25 graduation of zero.

After an interruption of the supply voltage, the indications of weight, unit price and total price are blanked out for not less than one minute.

The instrument is provided with a level indicator and four adjustable feet. Adjacent to the level indicator is a notice advising that the instrument must be level when in use.

The instrument is marked adjacent to each weight reading face:

(III)

Max	=	5 kg
Min	=	0,1 kg
$d_d = e$	=	0,005 kg

The approval includes:

1. The instrument of capacity 10 kg or of 9,99 kg by 0,01-kg scale intervals and 5-kg by 0,005-kg scale intervals with a unit-price range in 1-c increments from 1 c/kg to $99,99/kg and total price to $999,90. After an interruption of the supply voltage with a load on the load receptor, indications of weight, unit price and total price remain blank and are only restored when the load is removed and the supply voltage is switched off, then on again.

   The instruments are marked adjacent to each weight reading face:

(III)

Max	=	10 kg
Min	=	0,2 kg
$d_d = e$	=	0,01 kg

(III)

Max	=	9,99 kg
Min	=	0,2 kg
$d_d = e$	=	0,01 kg

2. The design of the housing being as illustrated in Figure 4.

Special Tests:

1. Zero balance — Check by means of the Commission's digital

zero test (Design Manual No 1, Document 104, Testing Procedure For the Elimination of Rounding Error for Weighing Instruments with Digital Indication) that, when the zero light is illuminated, zero is set within 0,25e of zero.

2. Price-computing and weight circuits — The indications of weight, unit price and total price, as listed in Tables 1 to 4, will indicate that the price-computing and weighing circuits are functioning correctly. The exact figures should be indicated as rounding is effected within the computer.

Note: This test does not establish correct weight indications; a separate test in accordance with the Commission's recommended testing procedures for the elimination of rounding errors — Document 104 — is necessary.

3. Level sensitivity — When the instrument is tilted so that the bubble in the level indicator moves 2 mm, zero should not change by more than two graduations, and when zero is reset in the tilted position the instrument should satisfy the weighing-accuracy specification, that is, ± 0,5 scale interval for the first 500 scale intervals and ± 1 scale interval for scale intervals over 500 and up to 1 000 scale intervals.

4. Range of Indication

(a) The maximum weight indicated should not exceed maximum capacity (max); above this indicated weight the indicator should be blank.

(b) The minimum weight indicated should be zero; below this indicated weight the indicator should be blank.

5. Power Interruption

(a) 5-kg instruments with unit-price range 1 c/kg to $9,99/kg — check that when the supply voltage is turned off, then on, either by the mains switch or the switch on the instrument, the indications of weight, unit price and total price remain blank for at least one minute after the power is turned on.

(b) Instruments with unit-price range 1 c/kg to $99,99/kg — with a load on the load receptor check that when the supply voltage is switched off, then on, either by the mains switch or the switch on the instrument, the indications of weight, unit price and total price remain blank and are only restored when the load is removed and the power is again switched off, then on.

TABLE 1

Indicated weight kg	Unit price $	Total price $
0,100	9,99	1,00
0,105	8,98	0,94
0,110	7,97	0,88
0,120	6,90	0,83
0,130	5,90	0,77
0,140	4,90	0,69
0,150	3,80	0,57
0,160	2,80	0,45
0,170	1,80	0,31
0,180	0,80	0,14
0,190	5,71	1,08
0,20	6,62	1,32
0,30	7,53	2,26
0,40	8,44	3,38
0,50	9,34	4,67
0,60	9,25	5,55
0,70	9,16	6,41
0,80	9,07	7,26
0,90	9,58	8,62
1,0	9,68	9,68
2,0	9,89	19,78
3,0	9,89	29,67
4,0	9,99	39,96
5,0	9,99	49,95

Test Procedure — 5 kg by 0,005-kg Instrument

TABLE 2

Indicated weight	Price per kg	Total price
kg	$	$
0,00	00,00	00,00
0,20	99,99	20,00
0,21	98,98	20,79
0,22	97,97	21,55
0,33	96,96	32,00
0,34	95,95	32,62
0,45	94,94	42,72
0,46	83,83	38,56
0,57	72,72	41,45
0,58	61,61	35,73
0,69	50,51	34,85
0,65	49,49	32,17
0,70	39,39	27,57
0,75	29,29	21,97
0,80	19,19	15,35
0,85	09,09	07,73
0,90	55,16	49,64
1,10	53,31	58,64
2,00	58,99	117,98
3,00	70,99	212,97
4,00	75,99	303,96
5,00	80,99	404,95
6,00	94,38	566,28
7,00	96,99	678,93
8,00	97,99	783,92
9,00	98,99	890,91
10,00	99,99	999,90

Test Procedure — 10,00-kg Instrument with Unit Price to $99,99

TABLE 3

Indicated weight	Price per kg	Total price
kg	$	$
0,000	00,00	00,00
0,100	99,90	9,99
0,105	98,99	10,39
0,110	97,99	10,78
0,120	96,99	11,64
0,130	95,99	12,48
0,140	94,99	13,30
0,150	93,99	14,10
0,160	92,99	14,88
0,170	91,90	15,62
0,180	90,98	16,38
0,190	89,88	17,08
0,200	79,77	15,95
0,300	69,66	20,90
0,400	59,55	23,82
0,500	49,44	24,72
0,600	39,33	23,60
0,700	29,22	20,45
0,800	19,11	15,29
0,900	09,01	08,11
1,000	20,33	20,33
1,500	20,98	31,47
2,000	25,99	51,98
2,500	24,98	62,45
3,000	56,99	170,97
3,500	81,98	286,93
4,000	99,89	399,56
5,000	99,99	499,95

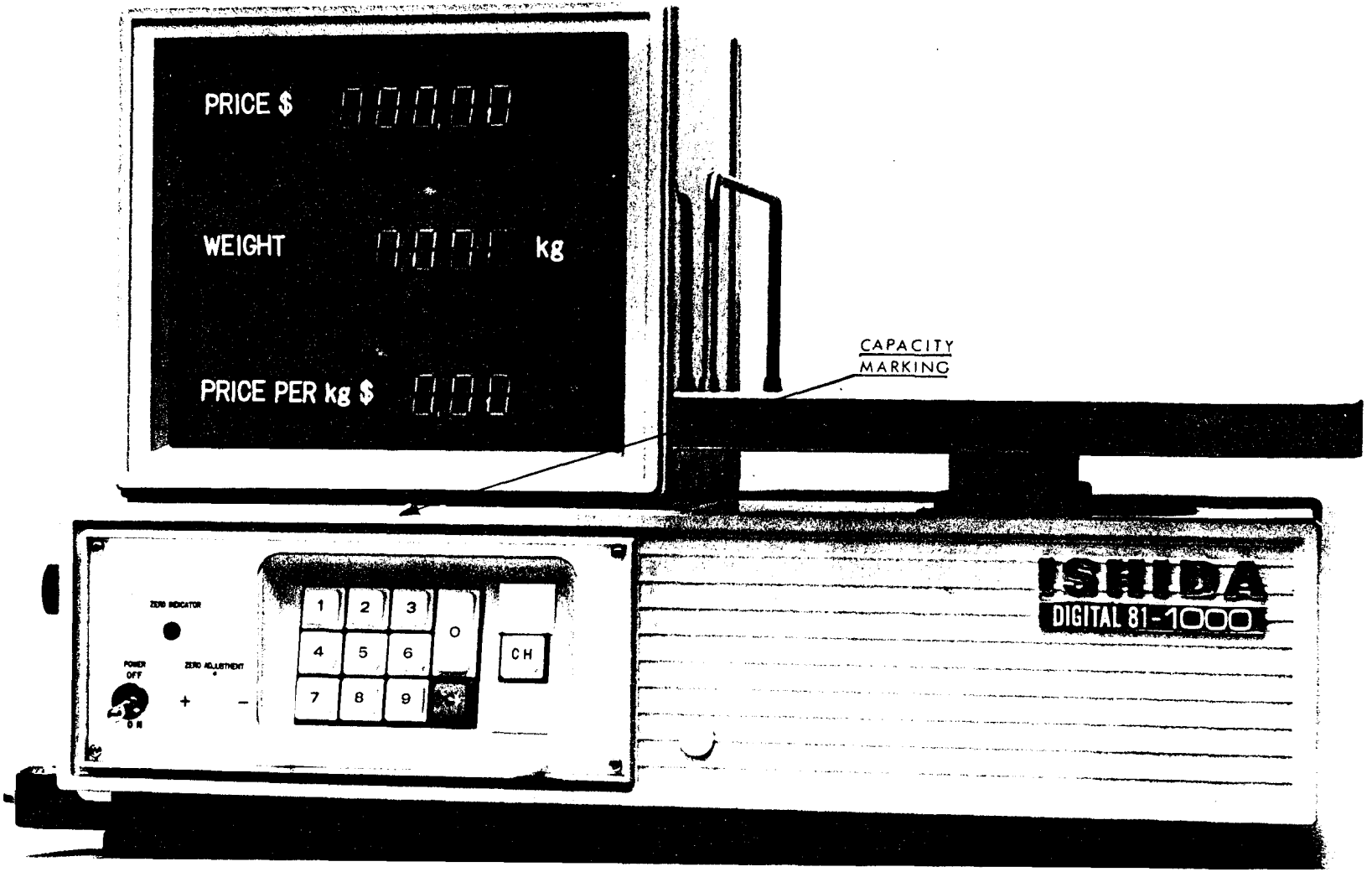
Test Procedure - 5-kg Instrument with
Unit Price to $99,99/kg

TABLE 4

Indicated Weight	Price per kg	Total price
kg	$	$
0,00	00,00	00,00
0,20	99,99	20,00
0,21	98,98	20,79
0,22	97,97	21,55
0,33	96,96	32,00
0,34	95,95	32,62
0,45	94,94	42,72
0,46	83,83	38,56
0,57	72,72	41,45
0,58	61,61	35,73
0,69	50,51	34,85
0,65	49,49	32,17
0,70	39,39	27,57
0,75	29,29	21,97
0,80	19,19	15,35
0,85	09,09	07,73
0,90	55,16	49,64
1,10	53,31	58,64
2,00	58,99	117,98
3,00	70,99	212,97
4,00	75,99	303,96
5,00	80,99	404,95
6,00	94,38	566,28
7,00	96,99	678,93
8,00	97,99	783,92
9,00	98,99	890,91
9,99	99,99	998,90

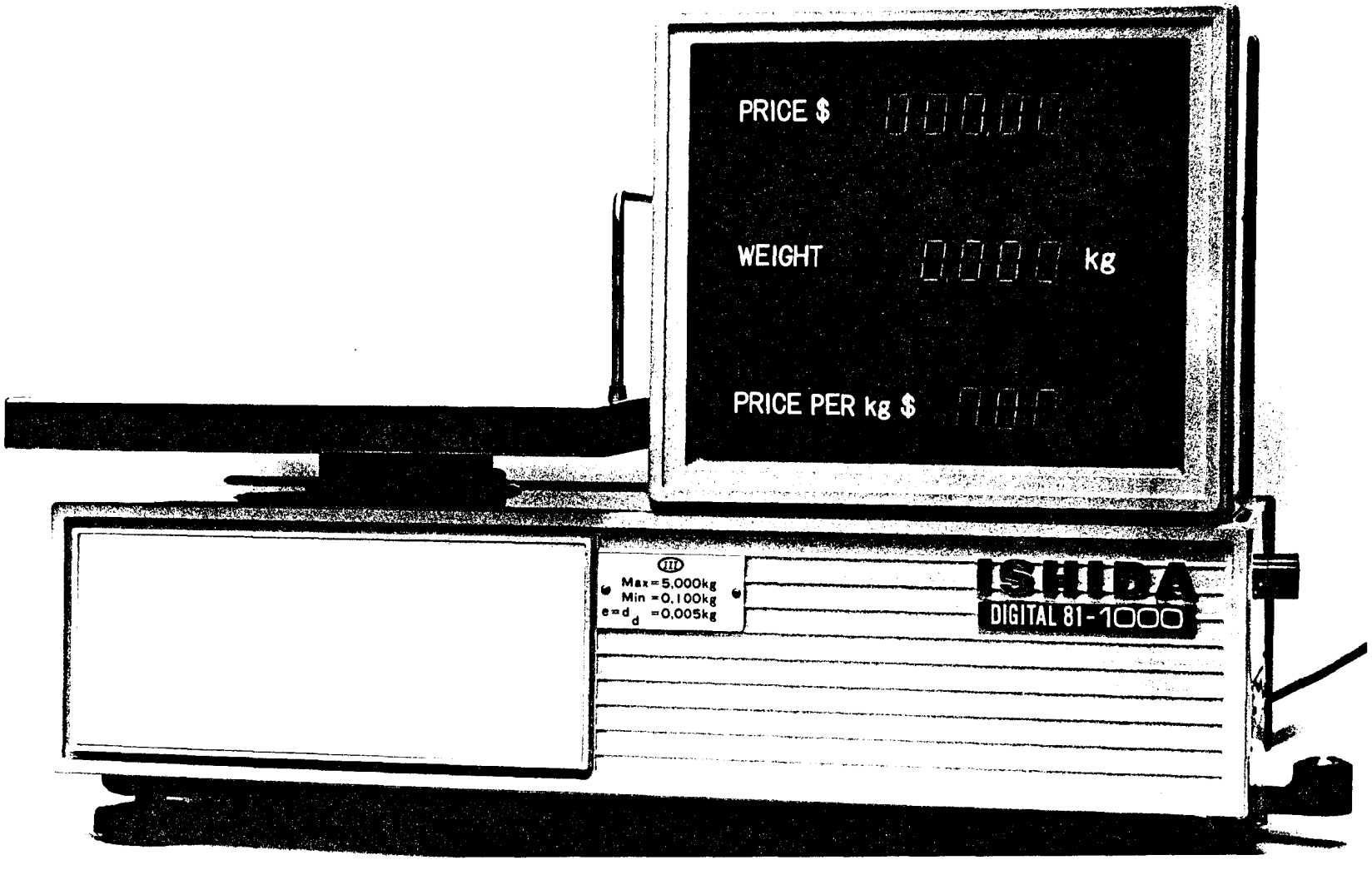
Test Procedure - 9,99-kg Instrument with
Unit Price to $99,99

FIGURE 6/4D/55 - 1



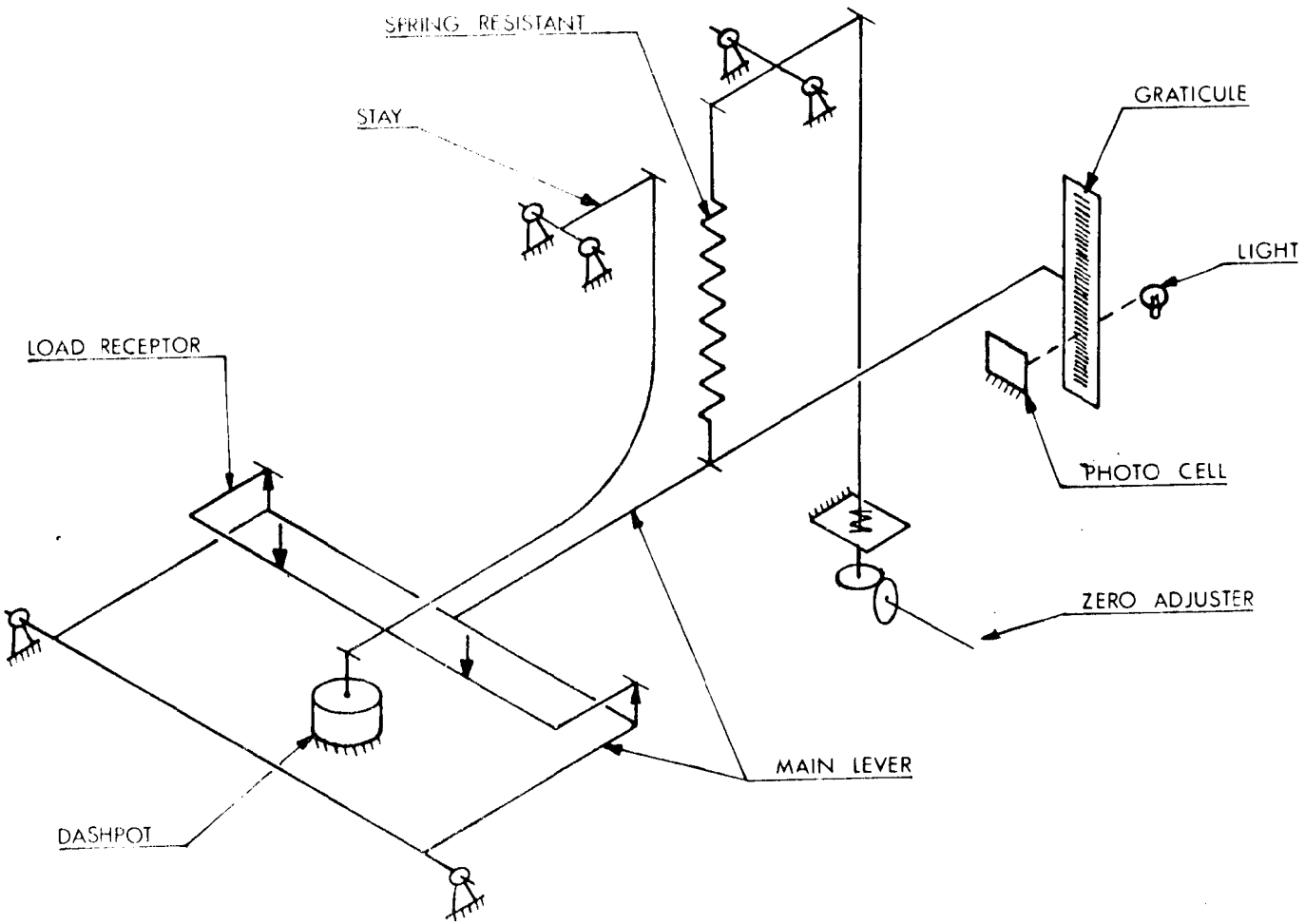
Ishida Model 81 — Vendor's Side

FIGURE 6/4D/55 - 2



Ishida Model 81 — Purchaser's Side

FIGURE 6/4D/55 - 3



Ishida Model 81 — Schematic Diagram

FIGURE 6/4D/55 - 4

Ishida Model 81