



Australian Government  
Department of Industry,  
Innovation and Science

## National Measurement Institute

# Supplementary Certificate of Approval

## NMI S333A

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.

GWT Global Weighing PR 6201 and PR 6221 Series Load Cells

submitted by Minebea Intec GmbH  
(formerly Sartorius Mechatronics T&H GmbH)  
Meiendorfer Strasse 205A  
22145 Hamburg  
Germany

**NOTE:** This Certificate relates to the suitability of the pattern of the instrument for use as a legal measuring instrument 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 60, *Metrological Regulation for Load Cells*, dated July 2004.

This approval becomes subject to review on **1/09/22**, and then every 5 years thereafter.

### DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – interim certificate issued	17/08/01
1	Pattern approved – certificate issued	18/02/02
2	Pattern amended (submitter details) & reviewed – notification of change issued	1/02/07
3	Pattern amended (submitter details) & reviewed – notification of change issued	31/05/11
4	Pattern updated – variant 1 approved – certificate issued	22/10/12
5	Pattern & variant 1 <b>reviewed</b> , amended (pattern & submitter details) – certificate issued	21/07/17

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI (or NSC) S333A' and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI (or NSC) S333A' in addition to the approval number of the instrument, and only by persons authorised by the submitter.

It is the submitter'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 values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

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

A handwritten signature in black ink, appearing to read 'S. Horrocks', with a large, sweeping flourish at the end.

**Stephen Horrocks**

## TECHNICAL SCHEDULE No S333A

### 1. Description of Pattern

**approved on 17/08/01  
amended on 21/07/17**

The GWT Global Weighing PR 6201 and PR 6221 series of load cells of up to 30 000 kg maximum capacity (Tables 1 to 5) approved for use with up to 3000 verification intervals (C3 load cells) or with up to 4000 verification intervals (C4 load cells). May also be known as Sartorius or Minebea Intec instruments of the same models.

Figures 1 and 2 show examples of typical PR 6201 and PR 6221 series load cells.

#### 1.1 Method of Mounting

Mounting is to be in accordance with the manufacturer's instructions and as shown in Figures 3 and 4. (Note that there are different load cell profiles for different models of load cell.)

#### 1.2 Markings

Each load cell is marked with the following:

Manufacturer's mark, or name written in full	Minebea Intec, Germany
Model number	.....
Serial number	.....
Pattern approval mark	NMI or NSC S333A
Maximum capacity $E_{max}$	..... kg or t
Cable length	..... m

#### 1.3 Table of Specifications

Specifications for the patterns are given in Tables 1 to 5.

### 2. Description of Variant 1

**approved on 22/10/12  
amended on 21/07/17**

A Sartorius Mechatronics model PR6201/54 C3 load cell of 50 000 kg maximum capacity load cell (Table 6).

TABLE 1

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:	PR 6201/23 C3	PR 6201/33 C3	PR 6201/53 C3
Maximum capacity, $E_{max}$ kg	2000	3000	5000
Accuracy class	C	C	C
Maximum number of verification intervals	3000	3000	3000
Minimum value of verification interval, $V_{min}$ kg	0.29	0.33	0.35
Minimum dead load output return value (DR) kg	0.33	0.5	0.83
Output rating (nominal) mV/V	1	1	1
Input impedance (nominal) $\Omega$	650	650	650
Supply voltage (AC or DC) V	4 - 24	4 - 24	4 - 24
Cable length ( $\pm 0.1$ m) m	Manufactured in various lengths between 10 and 100 metres; the cable length is marked on the data plate.		
Number of leads (plus shield)	4 or 6	4 or 6	4 or 6

TABLE 2

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:	PR 6201/14 C3	PR 6201/24 C3	PR 6201/34 C3
Maximum capacity, $E_{max}$ kg	10 000	20 000	30 000
Accuracy class	C	C	C
Maximum number of verification intervals	3000	3000	3000
Minimum value of verification interval, $V_{min}$ kg	0.71	1.43	2.14
Minimum dead load output return value (DR) kg	1.67	1.67	2.5
Output rating (nominal) mV/V	1	1	1
Input impedance (nominal) $\Omega$	650	650	650
Supply voltage (AC or DC) V	4 - 24	4 - 24	4 - 24
Cable length ( $\pm 0.1$ m) m	Manufactured in various lengths between 10 and 100 metres; the cable length is marked on the data plate.		
Number of leads (plus shield)	4 or 6	4 or 6	4 or 6

TABLE 3

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:	PR 6201/24 C4	PR 6201/34 C4
Maximum capacity, $E_{max}$ kg	20 000	30 000
Accuracy class	C	C
Maximum number of verification intervals	4000	4000
Minimum value of verification interval, $V_{min}$ kg	1.0	1.5
Minimum dead load output return value (DR) kg	1.25	1.88
Output rating (nominal) mV/V	1	1
Input impedance (nominal) $\Omega$	650	650
Supply voltage (AC or DC) V	4 - 24	4 - 24
Cable length ( $\pm 0.1$ m) m	Manufactured in various lengths between 12 and 100 metres; the cable length is marked on the data plate.	
Number of leads (plus shield)	4 or 6	4 or 6

TABLE 4

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:	PR6221/20t C3	PR6221/30t C3
Maximum capacity, $E_{max}$ kg	20 000	30 000
Accuracy class	C	C
Maximum number of verification intervals	3000	3000
Minimum value of verification interval, $V_{min}$ kg	1.43	2.14
Minimum dead load output return value (DR) kg	1.67	2.5
Output rating (nominal) mV/V	1	1
Input impedance (nominal) $\Omega$	1080	1080
Supply voltage (AC or DC) V	4 - 24	4 - 24
Cable length ( $\pm 0.1$ m) m	Manufactured in various lengths between 16 and 100 metres; the cable length is marked on the data plate.	
Number of leads (plus shield)	4 or 6	4 or 6

TABLE 5

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:	PR6221/20t C4	PR6221/30t C4
Maximum capacity, $E_{max}$ kg	20 000	30 000
Accuracy class	C	C
Maximum number of verification intervals	4000	4000
Minimum value of verification interval, $V_{min}$ kg	1.0	1.5
Minimum dead load output return value (DR) kg	1.25	1.88
Output rating (nominal) mV/V	1	1
Input impedance (nominal) $\Omega$	1080	1080
Supply voltage (AC or DC) V	4 - 24	4 - 24
Cable length ( $\pm 0.1$ m) m	Manufactured in various lengths between 16 and 100 metres; the cable length is marked on the data plate.	
Number of leads (plus shield)	4 or 6	4 or 6

TABLE 6

Manufacturer: GWT Global Weighing (aka Sartorius or Minebea Intec)

Type:	PR 6201/54 C3
Maximum capacity, $E_{max}$ kg	50 000
Accuracy class	C
Maximum number of verification intervals	3000
Minimum value of verification interval, $V_{min}$ kg	3.57
Minimum dead load output return value (DR) kg	4.17
Output rating (nominal) mV/V	2
Input impedance (nominal) $\Omega$	650
Supply voltage (AC or DC) V	4 - 24
Cable length ( $\pm 0.1$ m) m	Manufactured in various lengths between 12 and 100 metres; the cable length is marked on the data plate.
Number of leads (plus shield)	4 or 6

FIGURE S333A – 1



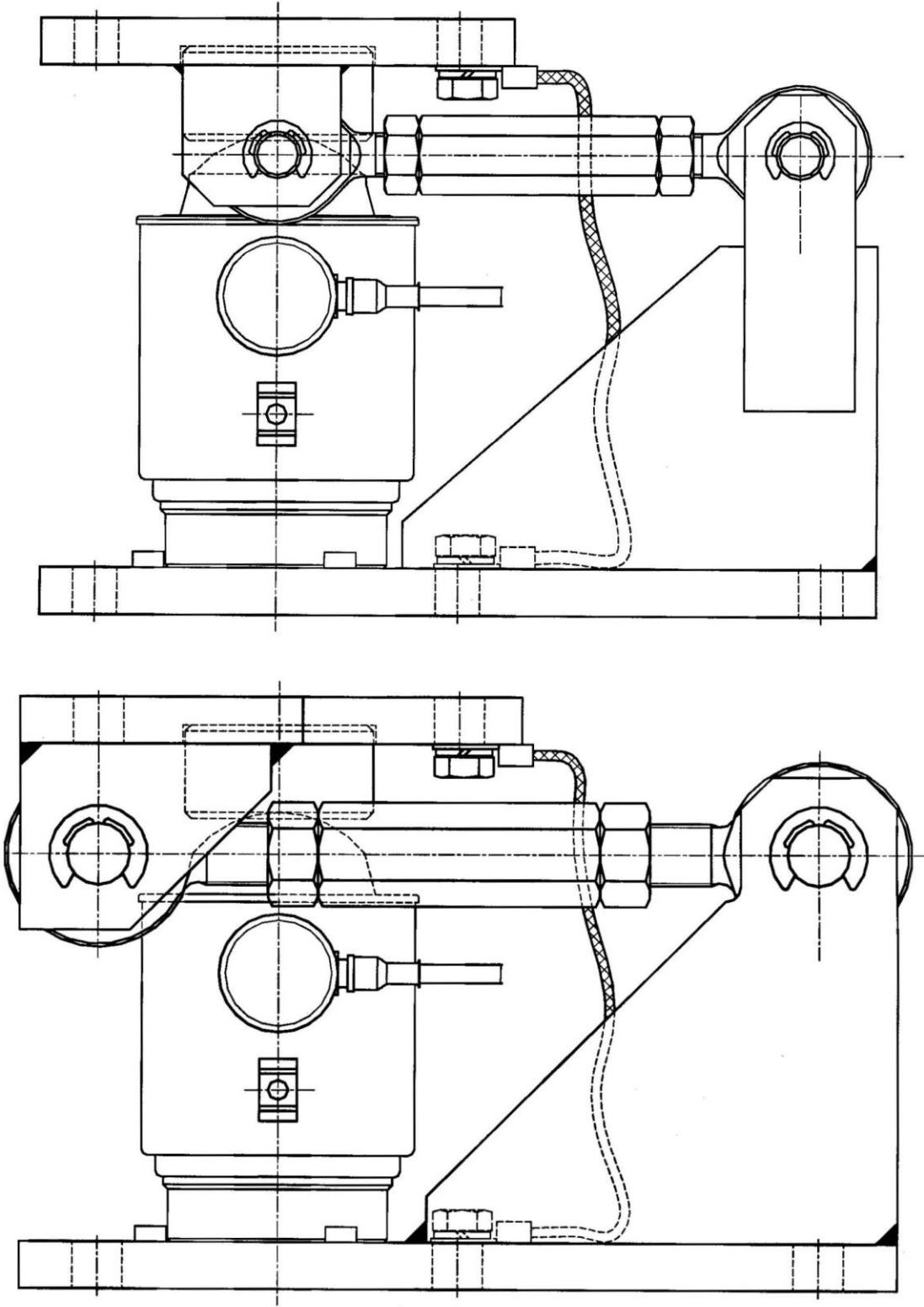
GWT Global Weighing Model PR 6201/23 C3 Load Cell

FIGURE S333A – 2



GWT Global Weighing Model 6221/20t Load Cell

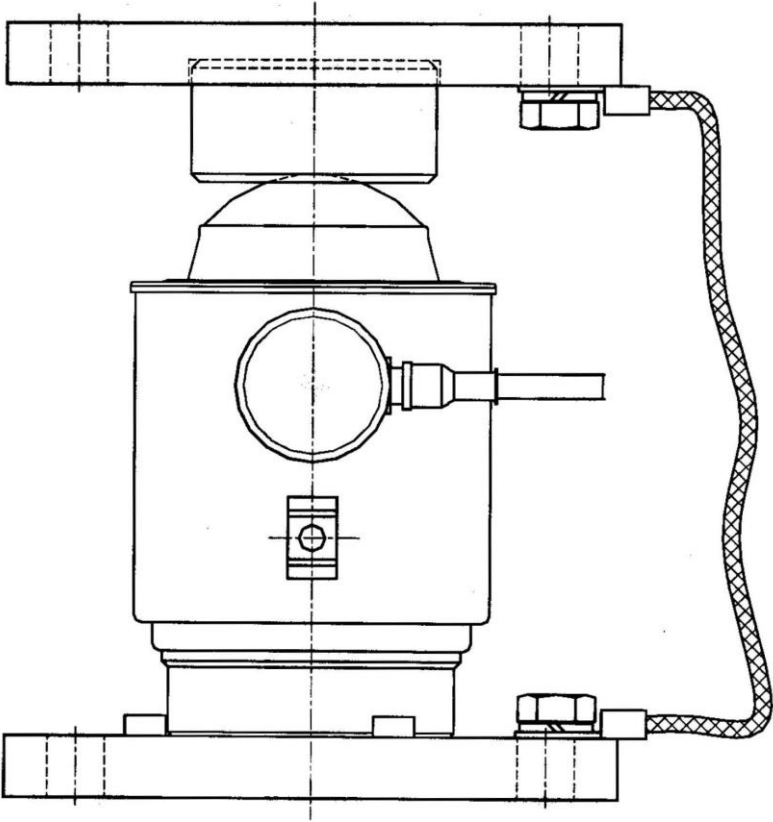
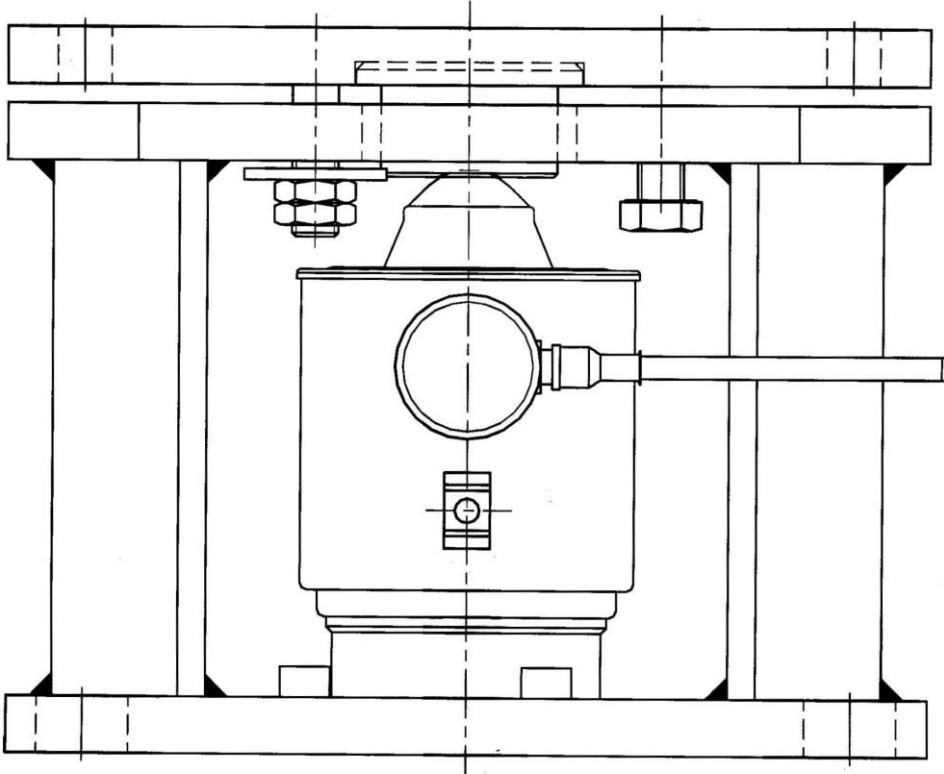
FIGURE S333A – 3



Typical Mounting Methods With Horizontal Constrainters



FIGURE S333A – 4



Typical Mounting Methods Without Horizontal Constrainers