Australian Government

National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

NMI S602

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.

Wedderburn Model WSBB-C3-1.0t-6T Load Cell

submitted by   W W Wedderburn Pty Ltd
                      101 Williamson Road
                      Ingleburn   NSW   2565

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 60, *Metrological Regulation for Load Cells*, dated July 2004.

This approval becomes subject to review on 1/12/17, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern and variants 1&2 approved – certificate issued	16/11/12

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S602' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S602' in addition to the approval number of the instrument, 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.

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 his powers under Regulation 60 of the *National Measurement Regulations 1999.*

TECHNICAL SCHEDULE No S602

1.   Description of Pattern   **approved on 16/11/12**

A Wedderburn model WSBB-C3-1.0t-6T shear beam load cell of 1000 kg maximum capacity (Figure 1 and Table 1a).

1.1   Method of Mounting

Mounting is to be in accordance with the manufacturer's instructions and as shown in Figures 3 and 4.

1.2   Markings

Each load cell is marked with the following:

Manufacturer's mark, or name written in full	
Model number	……..
Maximum capacity, E_{max}	…….. kg
Serial number	……..
Pattern approval mark	NMI S602

1.3   Table of Specifications

Specifications for the pattern are given in Table 1a.

2.   Description of Variant 1   **approved on 16/11/12**

Certain other capacities and characteristics of the Wedderburn model WSBB shear beam load cells as listed in Tables 1a and 1b.

Type: WSBB-C3-#-6* series as listed below, where # in the model number represents the capacity ($Emax$) in kilograms and * represents the cable fitting, e.g. the pattern model **WSBB-C3-1.0t-6T** is of 1000 kg capacity having spring cable fitting.

3.   Description of Variant 2   **approved on 16/11/12**

Certain capacities and characteristics of the Wedderburn model WSBB bending beam load cells (Figure 2) as listed in Table 2.

Type: WSBB-C3-#-6* series as listed below, where # in the model number represents the capacity ($Emax$) in kilograms and * represents the cable fitting, e.g. the model WSBB-C3-150kg-6B is of 150 kg capacity having standard cable and cable fitting.

TABLE 1a – WSBB series shear beam load cells

Type: WSBB-C3-#-6* series as listed below, where # in the model number represents the capacity (*Emax)* in kilograms and * represents the cable fitting, e.g. the pattern model **WSBB-C3-1.0t-6T** is of 1000 kg capacity having spring cable fitting.

Model Number	#=0.5t	**#=1.0t**	#=1.5t	#=2.0t	#=2.5t
E_{max} (kg)	500	1000	1500	2000	2500
Class	C	C	C	C	C
nLC	3000	3000	3000	3000	3000
V_{min} (kg)	0.033	0.067	0.1	0.133	0.167
DR (kg)	0.083	0.167	0.25	0.333	0.417
mV/V	3				
Input imp (Ω)	350				
Voltage (V)	18				
Cable length (m)	6				
Number of leads (plus shield)	4 or 6				

TABLE 1b – Additional WSBB series shear beam load cells

Model Number	#=3.0t	#=5.0t	#=7.5t	#=10t
E_{max} (kg)	3000	5000	7500	10 000
Class	C	C	C	C
nLC	3000	3000	3000	3000
V_{min} (kg)	0.2	0.33	0.5	0.67
DR (kg)	0.50	0.83	1.25	1.67
mV/V	3			
Input imp (Ω)	350			
Voltage (V)	18			
Cable length (m)	6			
Number of leads (plus shield)	4 or 6			

Where:

E_{max}	=	Maximum capacity
nLC	=	Maximum number of verification intervals
V_{min}	=	Minimum value of verification interval
DR	=	Minimum dead load output return value
mV/V	=	Output rating (nominal)
Input imp.	=	Input impedance (nominal)
Voltage	=	Maximum supply voltage (AC/DC)

TABLE 2 – WSBB series bending beam load cells

Type: WSBB-C3-#-6* series as listed below, where # in the model number represents the capacity (*Emax)* in kilograms and * represents the cable fitting, e.g. the model WSBB-C3-150kg-6B is of 150 kg capacity having standard cable and cable fitting.

Model Number	#=150kg	#=300kg
E_{max} (kg)	150	300
Class	C	C
nLC	3000	3000
V_{min} (kg)	0.01	0.02
DR (kg)	0.025	0.05
mV/V	2	
Input imp (Ω)	350	
Voltage (V)	18	
Cable length (m)	6	
Number of leads (plus shield)	4 or 6	

Where:

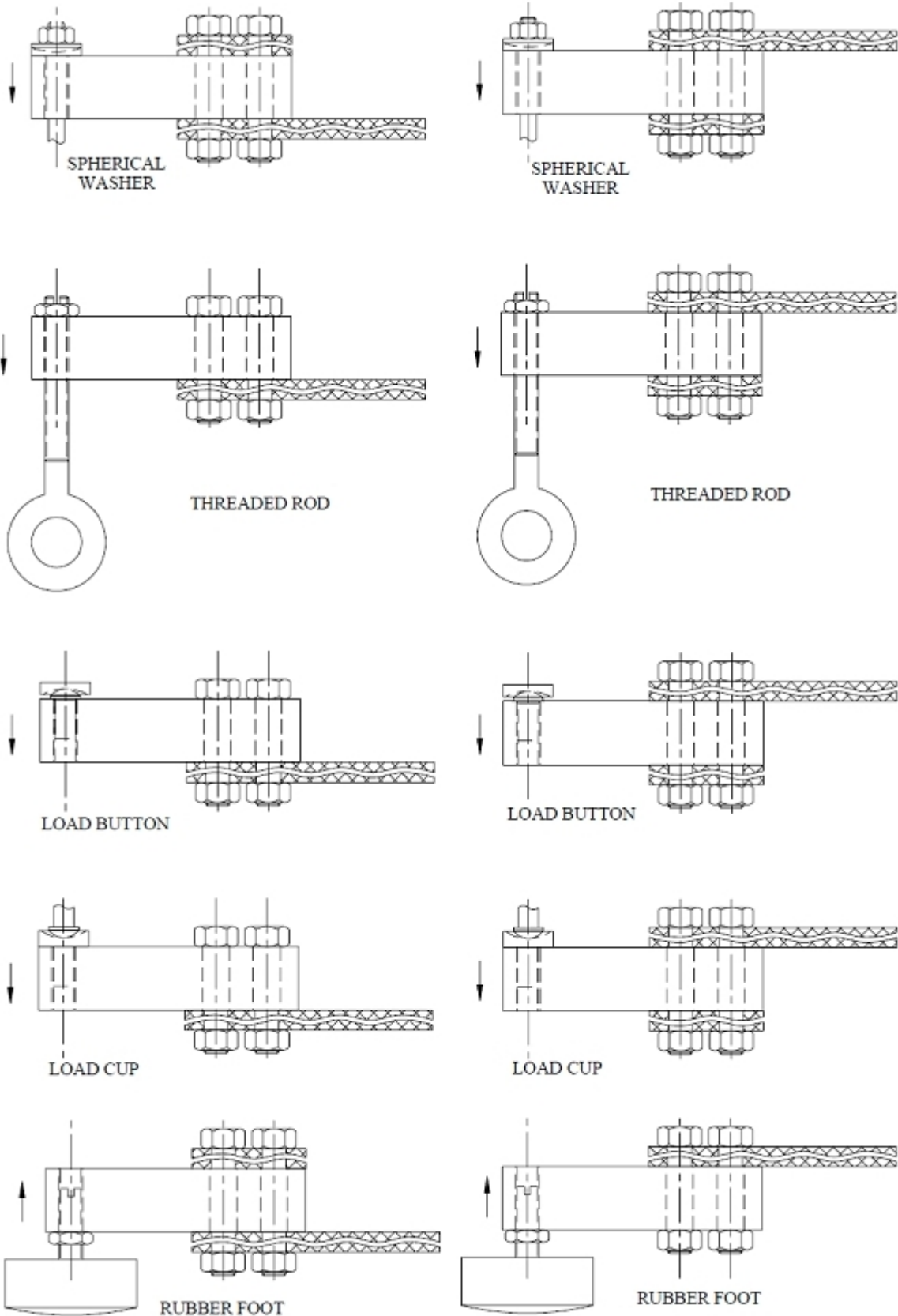|		
E_{max}	=	Maximum capacity
nLC	=	Maximum number of verification intervals
V_{min}	=	Minimum value of verification interval
DR	=	Minimum dead load output return value
mV/V	=	Output rating (nominal)
Input imp.	=	Input impedance (nominal)
Voltage	=	Maximum supply voltage (AC/DC)

FIGURE S602 – 1

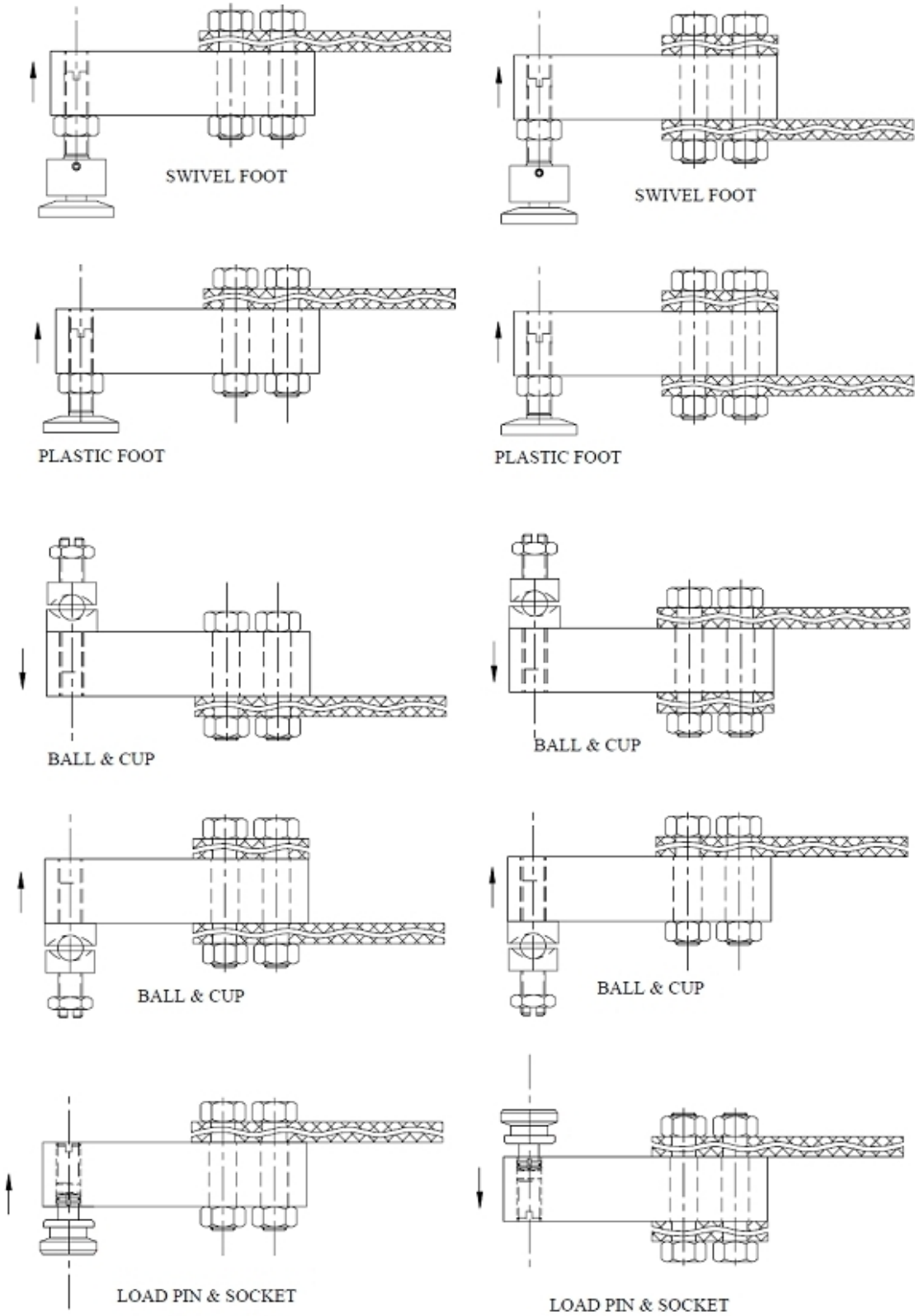Wedderburn WSBB Series Shear Beam Load Cell

FIGURE S602 – 2

Wedderburn WSBB Series Bending Beam Load Cell

FIGURE S602 – 3

SPHERICAL WASHER

SPHERICAL WASHER

THREADED ROD

THREADED ROD

LOAD BUTTON

LOAD BUTTON

LOAD CUP

LOAD CUP

RUBBER FOOT

RUBBER FOOT

Some Mounting Arrangements (load cell profile is not accurate)

FIGURE S602 – 4

SWIVEL FOOT

SWIVEL FOOT

PLASTIC FOOT

PLASTIC FOOT

BALL & CUP

BALL & CUP

BALL & CUP

BALL & CUP

LOAD PIN & SOCKET

LOAD PIN & SOCKET

Alternative Mounting Arrangements (load cell profile is not accurate)

~ End of Document ~