Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

Supplementary Certificate of Approval

NMI S513

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.

Flintec Model SB14-500lb-BH-C3 Load Cell

submitted by Flintec GmbH
Bemannsbruch 9
74909 Meckesheim
Germany

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 **1/09/21**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern and variant 1 approved – certificate issued	19/08/08
1	Pattern and variant 1 updated & **reviewed** – certificate issued	3/11/16

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number ‘NMI S513’ and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked ‘NMI S513’ 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 their powers under Regulation 60 of the *National Measurement Regulations 1999*.

Dr A Rawlinson

TECHNICAL SCHEDULE No S513

1. Description of Pattern approved on 19/08/08

A Flintec model SB14-500lb-BH-C3 load cell of 227 kg maximum capacity (Figure 1 and Table 1) and approved for use with up to 3000 verification scale intervals. May also be known as 'Accuweigh' instruments of the same model.

1.1 Method of Mounting

Mounting is to be in accordance with the manufacturer's instructions and as shown in Figures 2 to 8. Note that the load cell profiles shown in these diagrams may not be for SB series cells – the correct profile is as shown in Figure 1.

1.2 Markings

Each load cell is marked with the following:

Manufacturer's mark, or name written in full	Flintec GmbH
Model number	……..
Maximum capacity, E_{max}	…….. kg (or t)
Serial number	……..
Pattern approval mark	NMI S513
Relative V_{min}	Y=23000 (only applicable to load cells listed in Table 2)

1.3 Tables of Specifications

Specifications for the pattern are given below and in Table 1.

2. Description of Variant 1 approved on 19/08/08

Certain other models of the SB14 series with characteristics and specifications as listed below and in Tables 1 and 2.

The load cell model number includes characters according to the particular load introduction method used (refer to Tables 1 and 2) e.g. the pattern, model SB14-500lb-**BH**-C3, is also available as models SB14-500lb-**CM**-C3, SB14-500lb-**CU**-C3 or SB14-500lb-**TH**-C3. May also be known as 'Accuweigh' instruments of the same models.

For all SB14 load cells:

Output rating (nominal)	2 mV/V
Input impedance (nominal)	1100 Ω
Maximum supply voltage (AC/DC)	5 to 15 V
Cable length (±0.1 m)	3 m except 4536 kg cells which have 4.5 m cables
Number of leads (plus shield)	4

TABLE 1

Flintec SB14 series load cells of Class C as listed below.

Model (refer to footnote)	E_{max} (kg)	Class	n_{LC}	V_{min} (kg)	DR (kg)	Cable Length
SB14-500lb-**-C1	227	C	1000	0.039	0.113	
SB14-1klb-**-C1	454	C	1000	0.078	0.227	
SB14-2.5klb-**-C1	1134	C	1000	0.196	0.567	
SB14-5klb-**-C1	2268	C	1000	0.391	1.134	
SB14-10klb-**-C1	4536	C	1000	0.782	2.268	##
SB14-500lb-**-C3	227	C	3000	0.020	0.038	
SB14-1klb-**-C3	454	C	3000	0.039	0.075	
SB14-2.5klb-**-C3	1134	C	3000	0.099	0.189	
SB14-5klb-**-C3	2268	C	3000	0.197	0.378	
SB14-10klb-**-C3	4536	C	3000	0.394	0.756	##
SB14-500lb-**-C3 MI6	227	C	3000	0.020	0.019	
SB14-1klb-**-C3 MI6	454	C	3000	0.039	0.038	
SB14-2.5klb-**-C3 MI6	1134	C	3000	0.099	0.095	
SB14-5klb-**-C3 MI6	2268	C	3000	0.197	0.189	
SB14-10klb-**-C3 MI6	4536	C	3000	0.394	0.378	##

Where:

E_{max} = Maximum capacity
n_{LC} = Maximum number of verification intervals
V_{min} = Minimum value of verification interval
DR = Minimum dead load output return

Notes:

** The characters below, which replace ** in the model numbers listed in Tables 1 and 2, indicate the particular load introduction method used, as below:

- BH - through a blind hole;
- CM - through a through hole with partial Metric Thread;
- CU - through a through hole with partial Unified Fine Thread; or
- TH - through a through hole.

All models have 3 m long cables except the 4536 kg capacity cells which have 4.5 m cables.

TABLE 2

Additional Flintec SB14 series load cells of Class C as listed below.

These models are marked “Y = 23000” which represents a ‘relative V_{min}’ value.

V_{min} may be calculated as $V_{min} = E_{max}/23000$, or alternatively the values listed below (which have been rounded) may be used.

Model (refer to footnote)	E_{max} (kg)	Class	n_{LC}	V_{min} (kg)	DR (kg)	Cable Length
SB14-500lb-**-C3	227	C	3000	0.010	0.038	
SB14-1klb-**-C3	454	C	3000	0.020	0.075	
SB14-2.5klb-**-C3	1134	C	3000	0.049	0.189	
SB14-5klb-**-C3	2268	C	3000	0.099	0.378	
SB14-10klb-**-C3	4536	C	3000	0.197	0.756	##
SB14-500lb-**-C3 MI6	227	C	3000	0.010	0.019	
SB14-1klb-**-C3 MI6	454	C	3000	0.020	0.038	
SB14-2.5klb-**-C3 MI6	1134	C	3000	0.049	0.095	
SB14-5klb-**-C3 MI6	2268	C	3000	0.099	0.189	
SB14-10klb-**-C3 MI6	4536	C	3000	0.197	0.378	##

Where:

E_{max} = Maximum capacity
n_{LC} = Maximum number of verification intervals
V_{min} = Minimum value of verification interval
DR = Minimum dead load output return

Notes:

** The characters below, which replace ** in the model numbers listed in Tables 1 and 2, indicate the particular load introduction method used, as below:

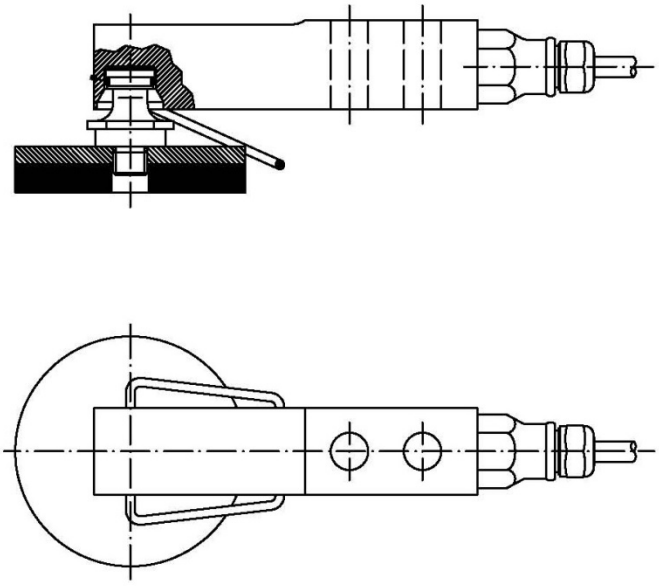
- BH - through a blind hole;
- CM - through a through hole with partial Metric Thread;
- CU - through a through hole with partial Unified Fine Thread; or
- TH - through a through hole.

All models have 3 m long cables except the 4536 kg capacity cells which have 4.5 m cables.

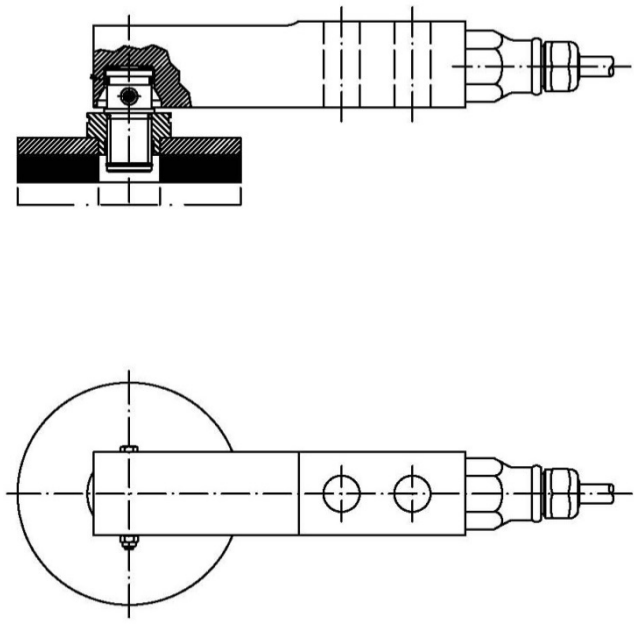
FIGURE S513 – 1

Typical Flintec SB14 Series Load Cells (pattern & variant 1)

FIGURE S513 – 2



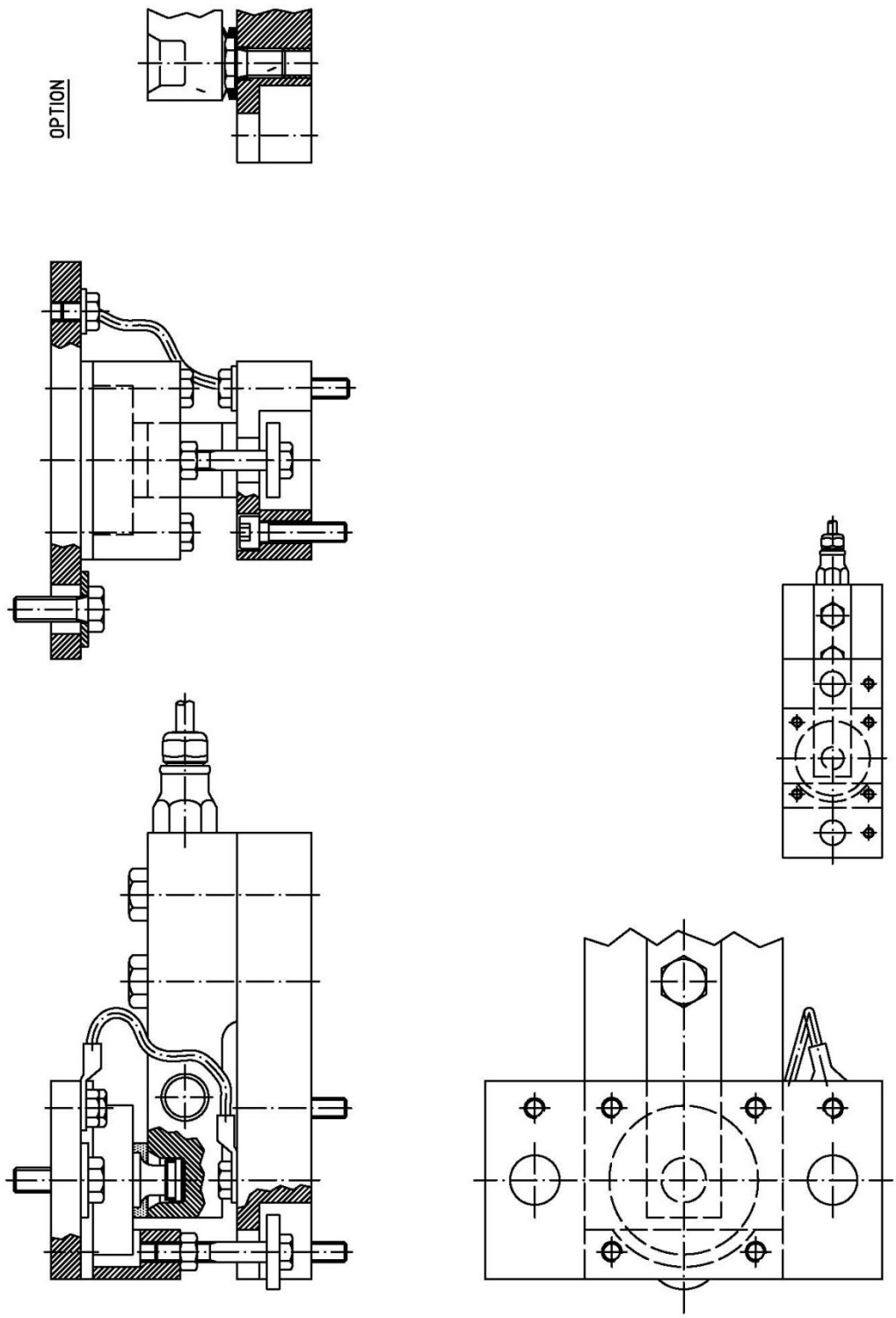
(a) Rubber foot



(b) Adjustable rubber foot

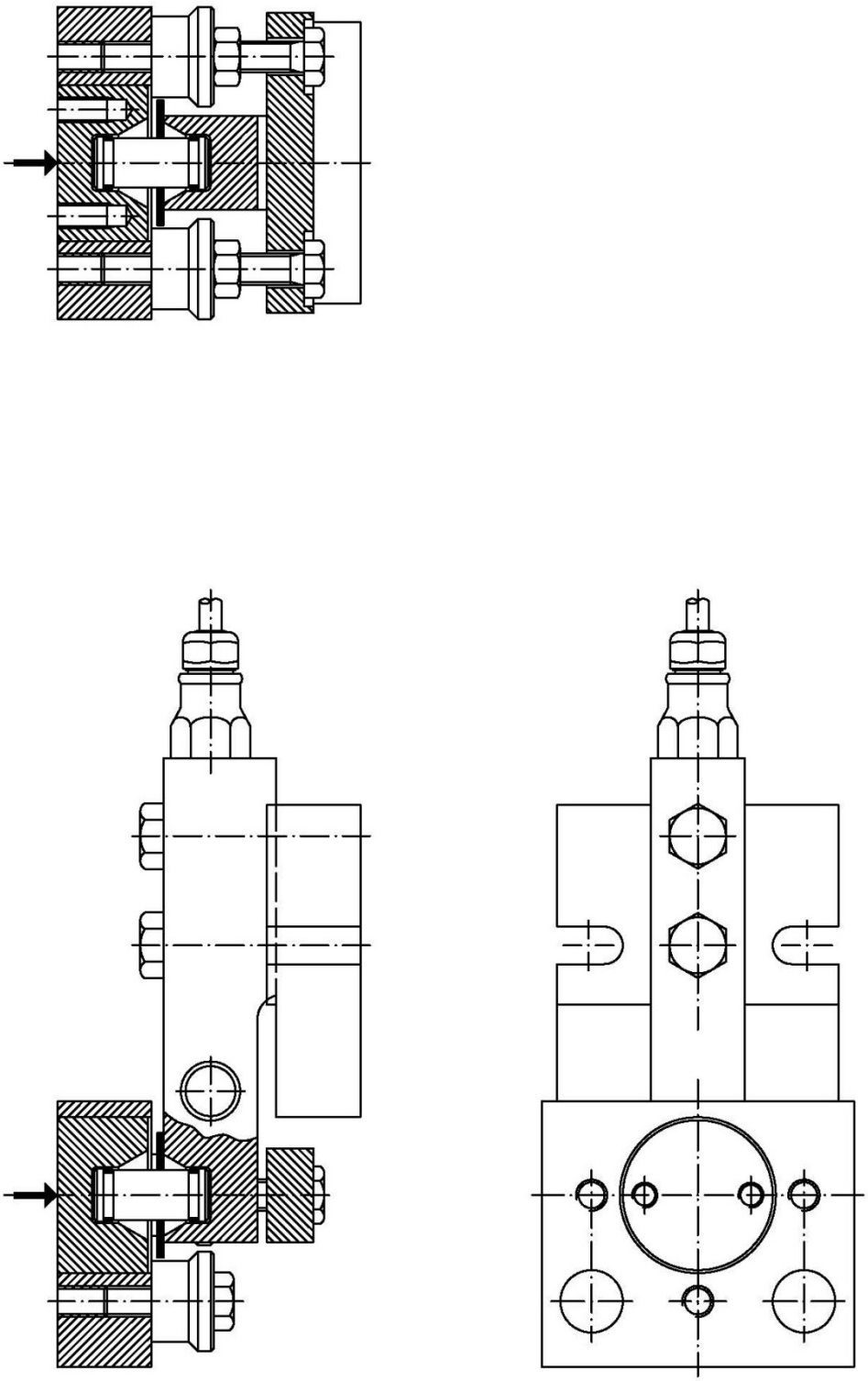
Some Typical Mounting Arrangements

FIGURE S513 – 3



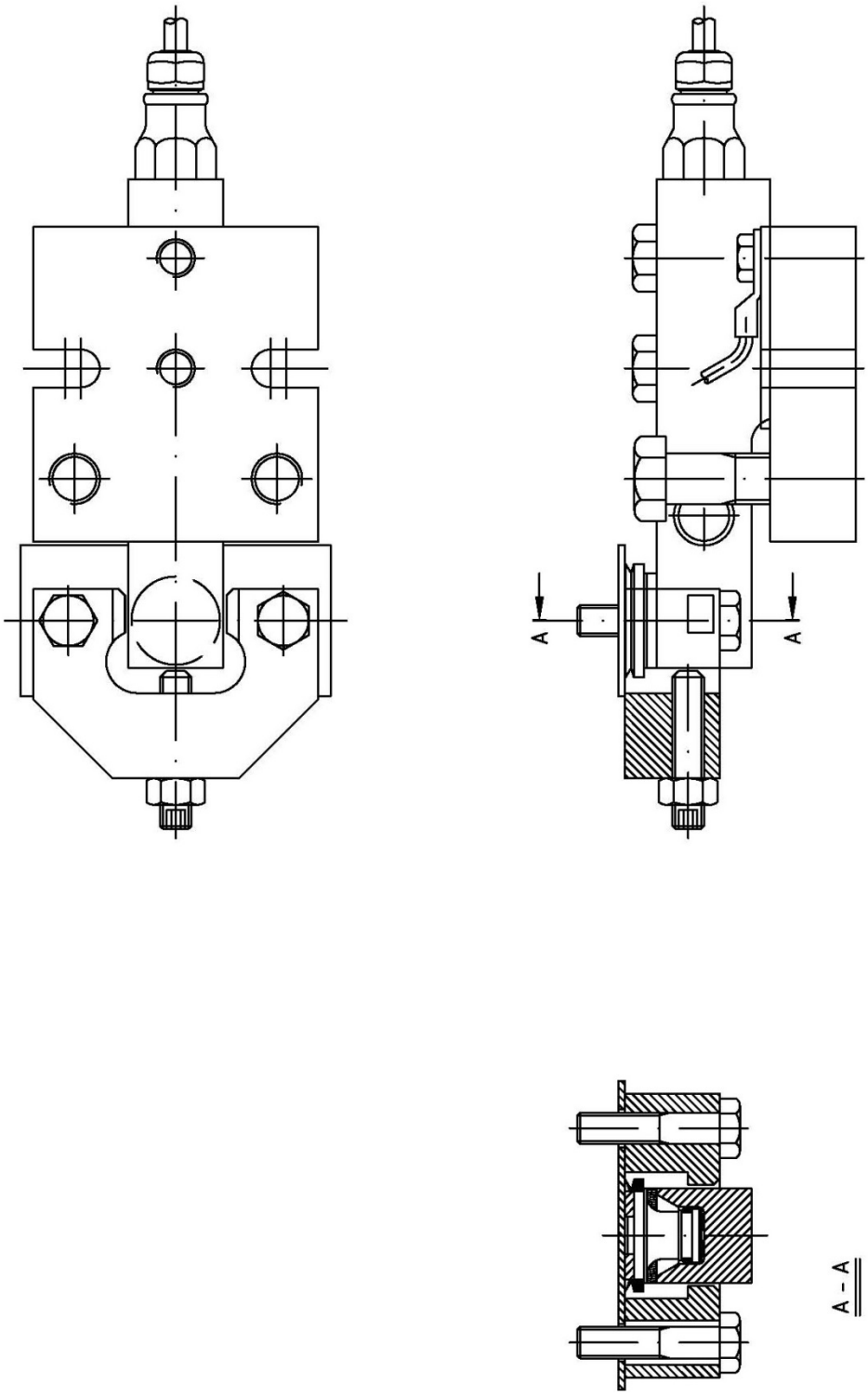
Weigh Module With Rubber Element Mounting Arrangement

FIGURE S513 – 4



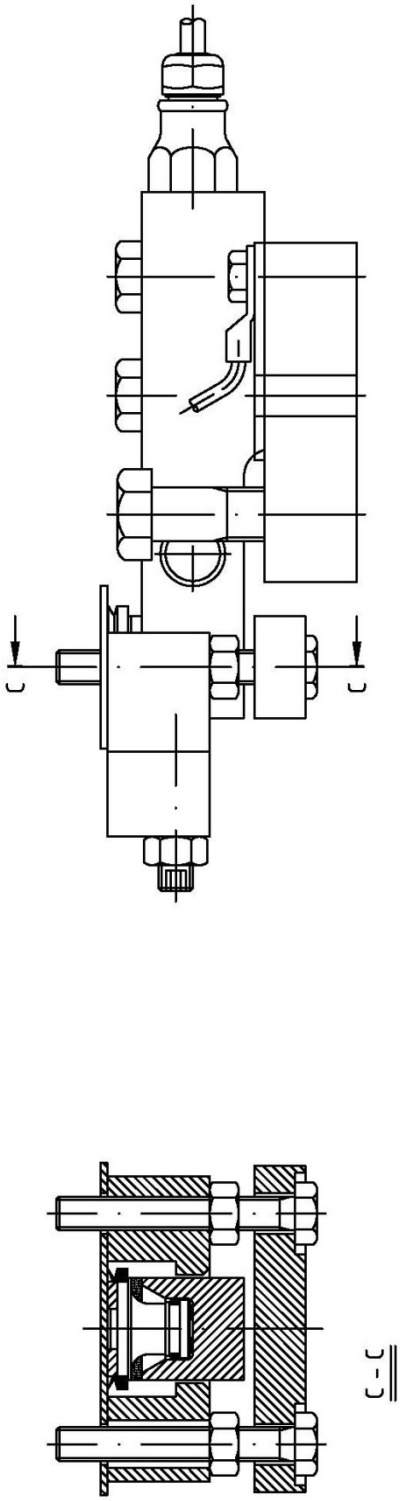
Weigh Module With Rocker Pin and Base Plate Mounting Arrangement

FIGURE S513 – 5



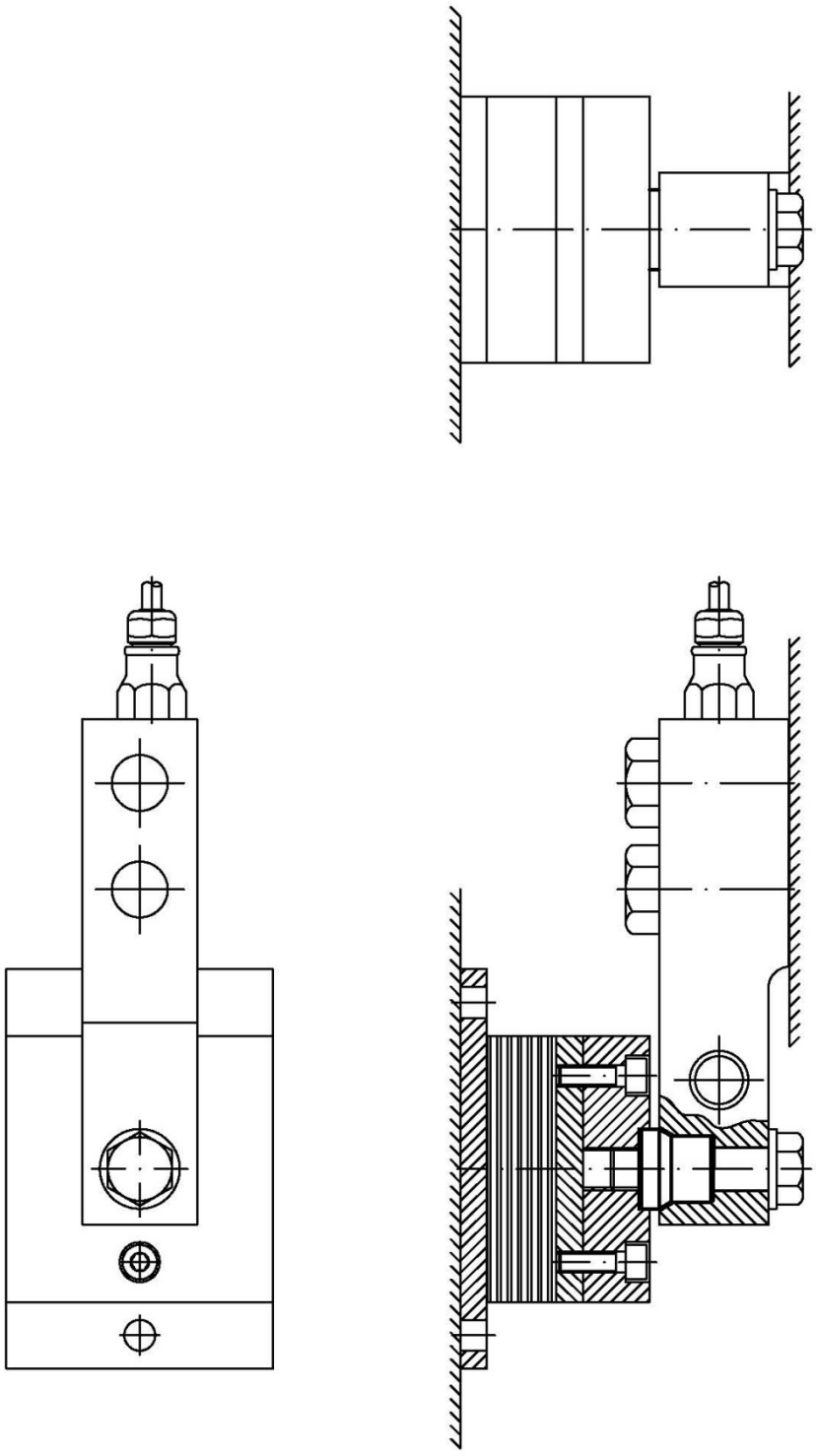
Weigh Module With Sliding System and
Three-directional Bumper Mounting Arrangement

FIGURE S513 – 6



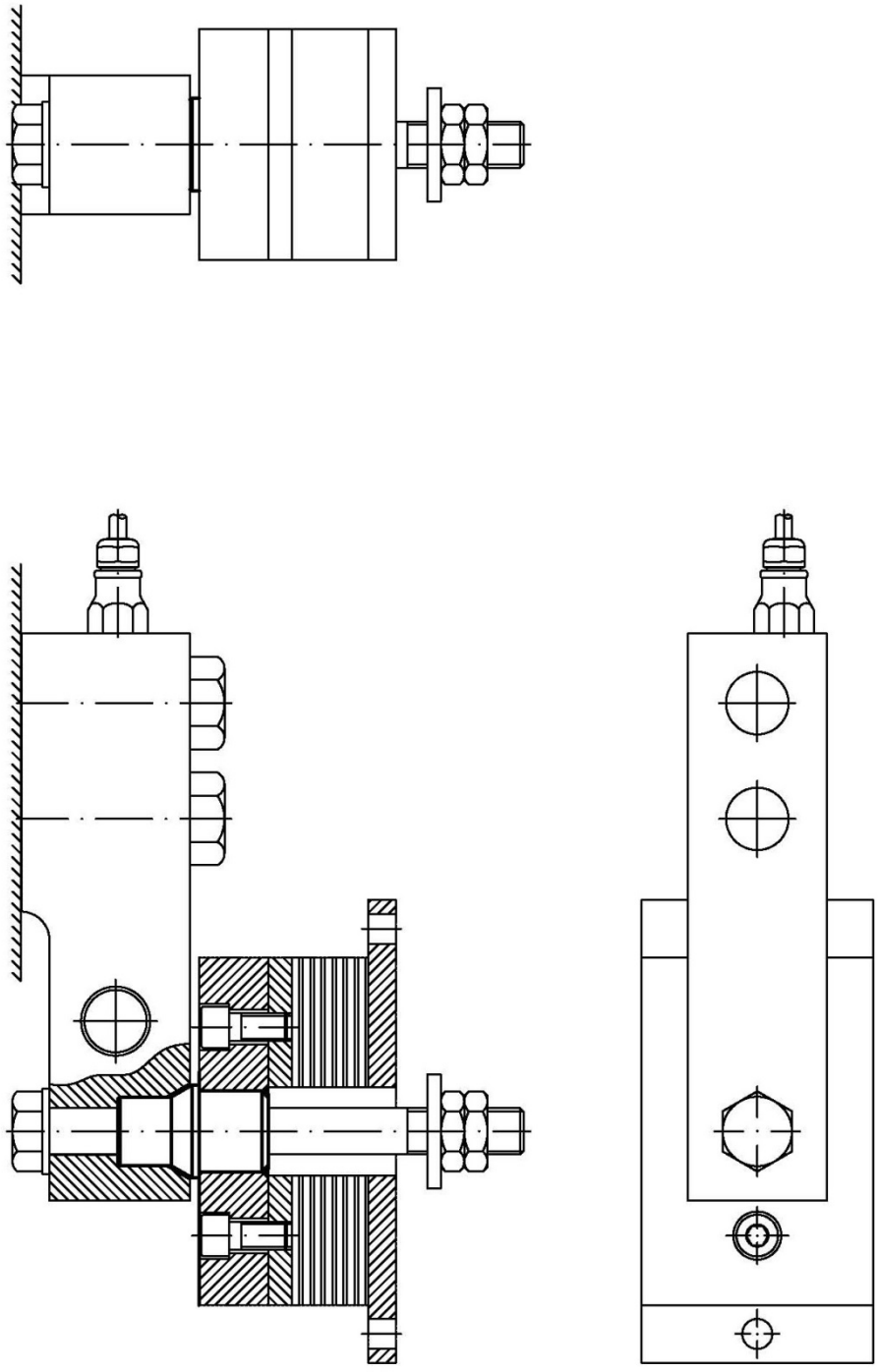
Weigh Module With Sliding System, Three-directional Bumper and Lift-off Protection Mounting Arrangement

FIGURE S513 – 7



Typical Bolted Rubber Element Mounting Arrangement

FIGURE S513 – 8



Typical Rubber Element With Lift-off Protection Mounting Arrangement

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