



# NATIONAL STANDARDS COMMISSION

## NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

### REGULATION 9

#### SUPPLEMENTARY CERTIFICATE OF APPROVAL No S136

This is to certify that an approval for use for trade has been granted in respect of the pattern and variants of the

HBM Model C3H2 Load Cell

submitted by      AWA Distribution (Instruments Group)  
                         (formerly Electrical Equipment Ltd)  
                         Unit 14, 112 Talavera Road  
                         NORTH RYDE    NSW    2113.

#### CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/4/88.  
This approval expires in respect of new instruments on 1/4/89.

Load cells purporting to comply with this approval shall be marked NSC No S136.

Instruments incorporating a load cell purporting to comply with this approval shall be marked NSC No S136 in addition to the approval number of the instrument.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating these load cells shall be within the limits specified in this approval or in any approval documentation for the other components.

This approval may be withdrawn if load cells are constructed other than in accordance with the drawings and specifications lodged with the Commission.

The load cells shall be subject to regular certification by the Commission.

Signed

Executive Director

#### Descriptive Advice

Pattern:              approved 18/2/83

-              HBM model C3H2 load cell of 50 t capacity.

Variant:              approved 18/2/83

1.              In various capacities as per Table 1.

Technical Schedule No S136 describes the pattern and variant 1.

Supplementary Certificate of Approval No S136 Page 2

Variant: approved 19/4/88

2. Of 24 t capacity.

Technical Schedule No S136 Variation No 1 describes variant 2.

Filing Advice

Supplementary Certificate of Approval No S136 dated 25/1/84 is superseded by this Certificate and may be destroyed. The documentation for this approval now comprises:

Supplementary Certificate of Approval No S136 dated 22/7/88  
Technical Schedule No S136 dated 25/1/84 (incl. Table 1)  
Technical Schedule No S136 Variation No 1 dated 22/7/88 (incl. Table 2)  
Figures 1 to 4 dated 25/1/84

-



# NATIONAL STANDARDS COMMISSION

## TECHNICAL SCHEDULE No S136

Pattern: HBM Model C3H2 Load Cell Of 50 t Capacity

Submittor: Electrical Equipment Ltd  
192 Princes Highway  
Arncliffe NSW 2205.

### 1. Description of Pattern

The pattern is an HBM model C3H2 load cell of 50 t capacity (see Figure 1 and Table 1) and is assembled in a Commission-approved basework.

#### 1.1 Method of Mounting

Mounting is to be in accordance with the manufacturer's instructions and as shown in one of the methods illustrated in Figures 2 to 4.

#### 1.2 Marking

The following is the minimum data required to be marked on the load cell:

Manufacturer's name or mark	
Model number	C3H2
Serial number	....
Maximum rated capacity	....
Approval number	NSC No S136

### 2. Description of Variant 1

HBM model C3H2 load cell of various capacities as specified in Table 1.

TABLE 1

Type:	HBM C3H2			
Maximum capacity	10 t	20 t	30 t	50 t
Maximum number of verification scale intervals	3000	3000	3000	3000
Minimum dead load	0.5 t	1 t	1.5 t	1.6 t
Minimum value of verification scale interval	1 kg	2 kg	5 kg	5 kg
Input impedance (nominal)	350 $\Omega$	350 $\Omega$	350 $\Omega$	350 $\Omega$
Supply voltage (AC or DC)	0.5 to 18V	0.5 to 18V	0.5 to 18V	0.5 to 18V
Output rating (nominal)	2 mV/V	2 mV/V	2 mV/V	2 mV/V
Cable length ( $\pm$ 0.1 m)	3 m	3 m	3 m	3 m
Number of leads	4*	4*	4*	4*

\*There is also a shield cable.



# NATIONAL STANDARDS COMMISSION

## TECHNICAL SCHEDULE No S136

### VARIATION No 1

**Pattern:** HBM Model C3H2 Load Cell.

**Submitter:** AWA Distribution (Instruments Group)  
Unit 14, 112 Talavera Road  
North Ryde NSW 2113.

#### 1. Description of Variant 2

HBM model C3H2 load cell of 24 t capacity (refer to Table 2).

TABLE 2

Type:	HBM	C3H2
Maximum capacity		24 t
Maximum number of verification scale intervals	(a)	3000
	(b)	3000
	(c)	3000
	(d)	3000
Minimum value of verification scale interval	(a)	2.4 kg
	(b)	5.0 kg
	(c)	2.4 kg
	(d)	5.0 kg
Output rating (nominal)		2 mV/V
Input impedance (nominal)		350 ohms
Supply voltage (AC or DC) (nominal)		0.5 - 12 V (18 V max.)
Cable length ( $\pm 0.1$ m)		3 m
Number of leads		4 (excluding shield)
(a)	Instruments with automatic zero track - multi cell applications	
(b)	Instruments with automatic zero track - single cell applications	
(c)	Instruments without automatic zero track - multi cell applications	
(d)	Instruments without automatic zero track - single cell applications	



# NATIONAL STANDARDS COMMISSION

## NOTIFICATION OF CHANGE

### SUPPLEMENTARY CERTIFICATE OF APPROVAL No S136

#### CHANGE No 1

The following change is made to the approval documentation for the

HBM Model C3H2 Load Cell

submitted by Electrical Equipment Ltd  
192 Princes Highway  
ARNcliffe NSW 2205.

Certificate of Approval No S136 dated 16/3/83 and its Technical Schedule are replaced by the attached documentation (in which paragraph 1.2 Marking and Table 1 of the Technical Schedule have been amended) and may be destroyed.

Figures 1 to 4 dated 16/3/83 should be retained.

Note: Refer to the Filing Advice in the attached Certificate.

Signed

Executive Director

25/1/84

## National Standards Commission

### NOTIFICATION OF CHANGE

#### SUPPLEMENTARY CERTIFICATE OF APPROVAL No S136

#### CHANGE No 2

The changes listed over are made to the approval documentation for the

HBM Model C3H2 Load Cell

submitted by   AWA Distribution  
                  112 Talavera Road  
                  North Ryde NSW 2113.

Signed and sealed by a person authorised  
under Regulation 9 of the National  
Measurement (Patterns of Instruments)  
Regulations to exercise the powers and  
functions of the Commission under this  
Regulation.

1. In Supplementary Certificate of Approval No S136 dated 22/7/88, the following Special Conditions of Approval are added:

"Load cells listed in Table 1 may be used to replace load cells of the same model and capacity in existing instruments but shall not be used in new instruments after 1/4/89.

The submitter shall notify the Commission of the serial numbers of all load cells installed as replacements as described above, in accordance with the requirements of the Commission's Circular No 320."

2. In Supplementary Certificate of Approval No S136 dated 22/7/88, the Conditions of Approval referring to review and expiry of the approval are replaced by the following:

"The approval of the pattern and variants expired in respect of new instruments on 1/4/89, with the exception of 40 load cells of 24 t capacity complying with variant 2 (and whose serial numbers appear below) for which the approval expires on 1/4/93."

D44	D506	D520	D542
D441	D508	D521	D543
D442	D509	D522	D5445
D495	D510	D526	D5446
D496	D511	D534	D5448
D498	D512	D535	D5449
D499	D513	D537	D5451
D501	D515	D538	D13553
D504	D516	D540	D13557
D505	D518	D541	D13564

# National Standards Commission



## NOTIFICATION OF CHANGE

### VARIOUS CERTIFICATES OF APPROVAL

The following change is made to the approval documentation for various approvals as listed below.

In the Certificates and Technical Schedules of the approvals listed below, all references to the submitter are changed to read:

Hottinger Baldwin Messtechnik GmbH  
Im Tiefen See 45  
D-64293 Darmstadt  
Germany

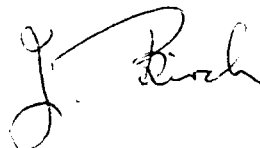
#### APPROVAL NUMBER

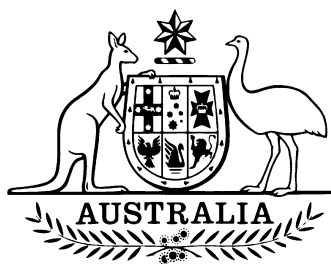
#### PATTERN (#)

PS134	HBM Model Z6H3 Load Cell of 200 kg Capacity
S135	HBM Model Z6H2 Load Cell of 500 kg Capacity
x S136	HBM Model C3H2 Load Cell of 50 t Capacity
S137	HBM Model Z3H2 Load Cell of 1000 kg Capacity
S282	HBM Model C3H2 Load Cell of 100 000 kg Capacity
S310	HBM Model C3H2 Load Cell of 30 000 kg Capacity

(#) Some approvals have other capacities as variants.

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.





## National Standards Commission

12 Lyonpark Road, North Ryde NSW

### Notification of Change

### Certificate of Approval No S136

### Change No 3

The following changes are made to the approval documentation for the

HBM Model C3H2 Load Cell

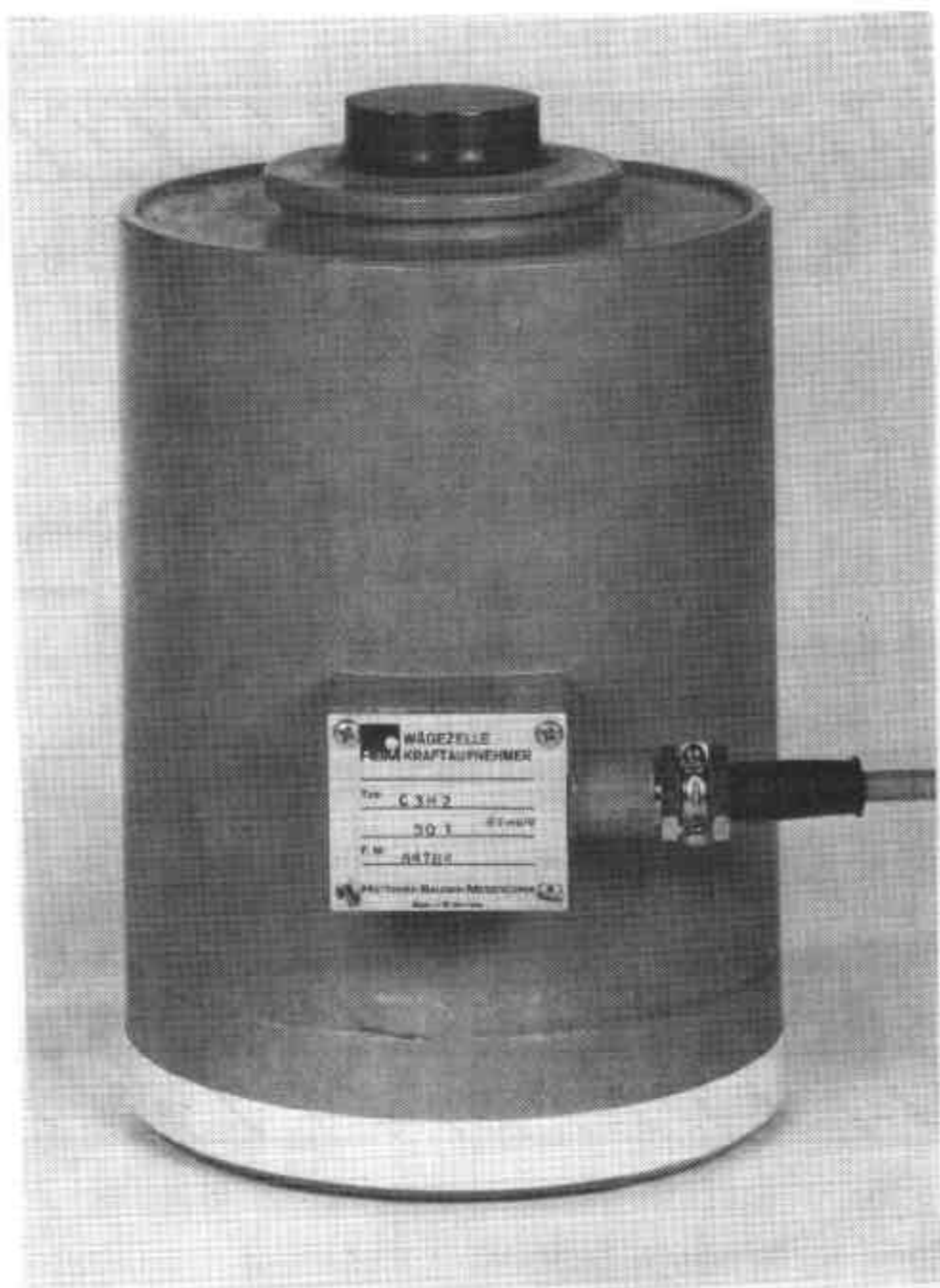
submitted by Hottinger Baldwin Messtechnik GmbH  
Im Tiefen See 45  
D-64293 Darmstadt  
Germany.

In Technical Schedule No S136 dated 25 January 1984, clause **2. Description of Variant 1** is amended by adding the following;

“In addition to the model load cells listed in Table 1, load cells of the type HBM C3H3 may be used (with the same parameters as given in Table 1) to replace HBM C3H2 load cells of the same capacity in existing instruments. Note that where all the load cells in an existing instrument are to be replaced, alternative load cells with a current Commission approval shall be used.”

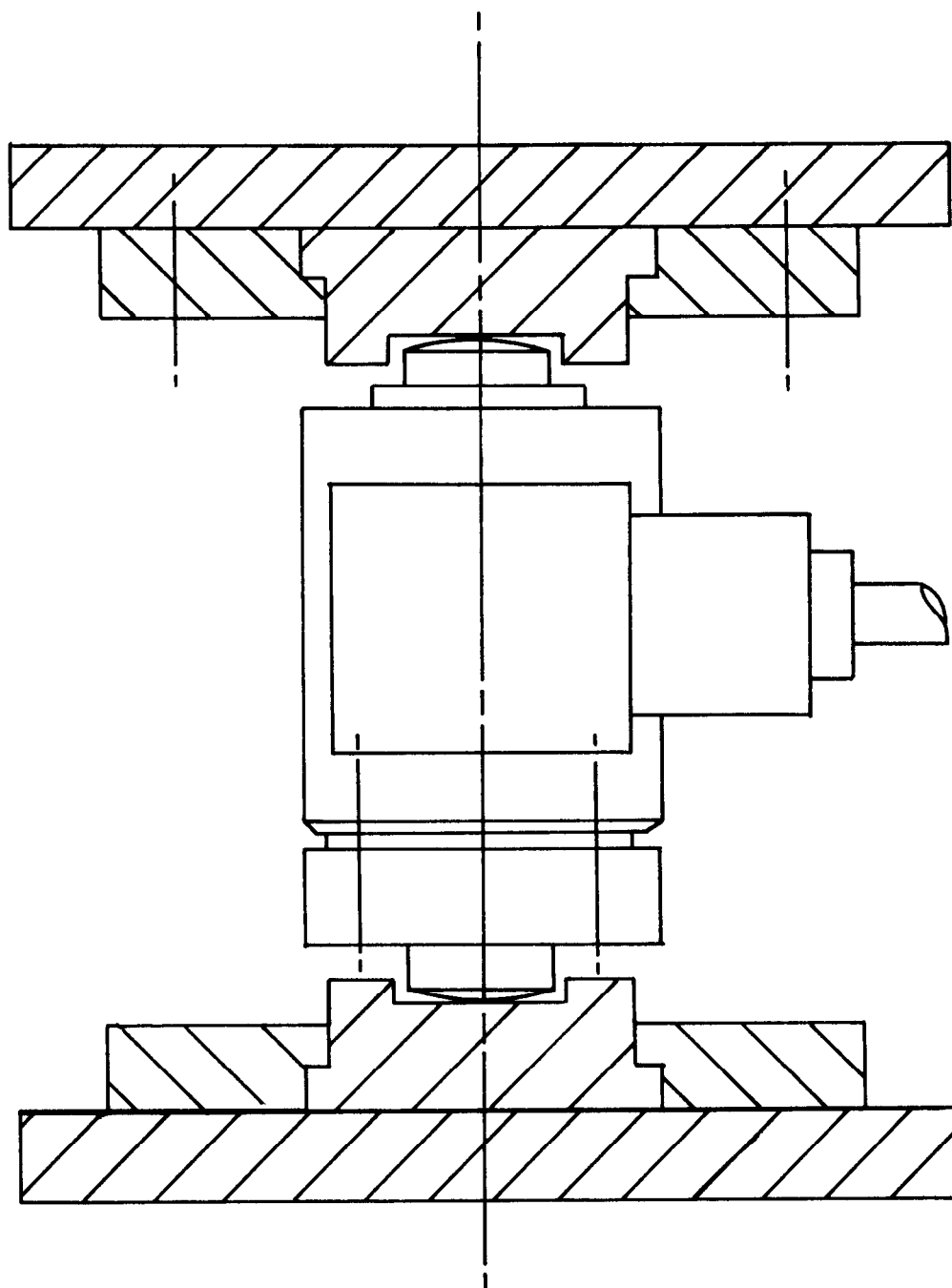
Signed by a person authorised under Regulation 63 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

FIGURE S136 - 1



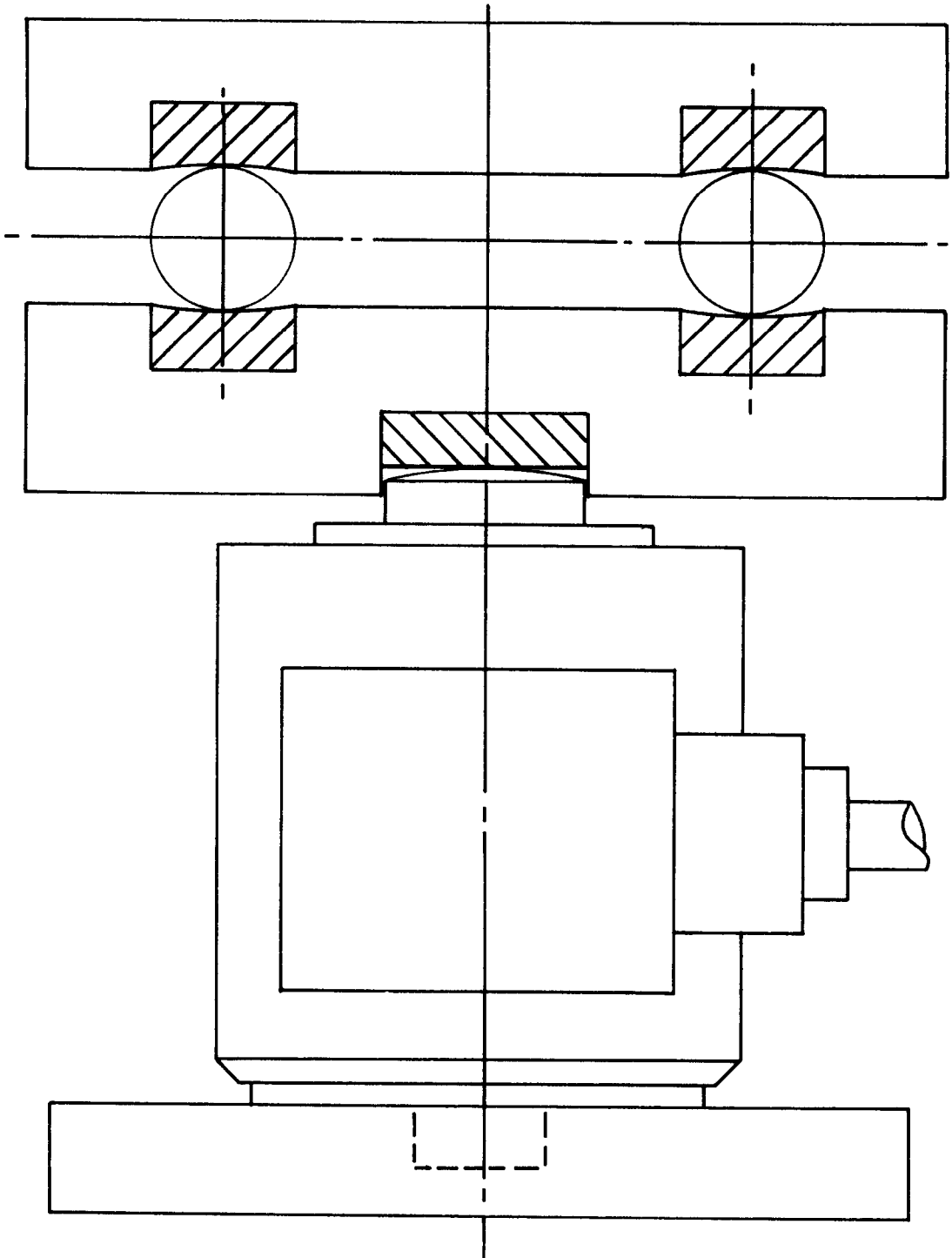
HBM Model C3H2 Load Cell

FIGURE S136 - 2



Mounting Method (A)

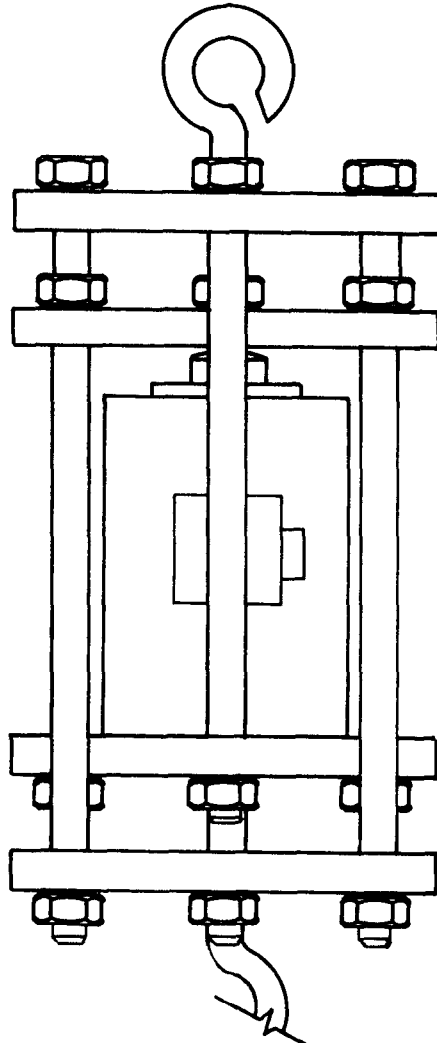
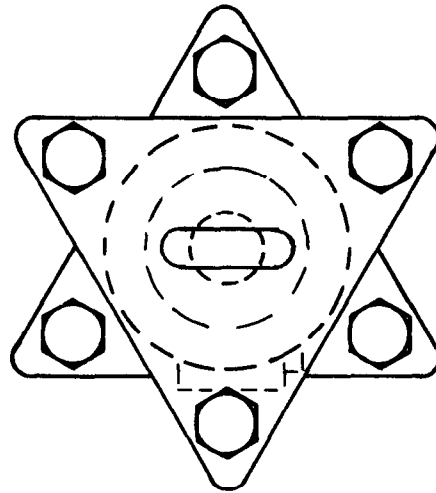
FIGURE S136 - 3



Mounting Method (B)

16/3/83

FIGURE S136 - 4



Mounting Method For Tension Applications