



### Floor Scales

Use the SLA515 load cell in platform and floor scales. Due to the hermetic welded design the SLA515 is ideal for harsh environments in process and food applications. The full set of approvals provides maximum applicability and safety in these applications.



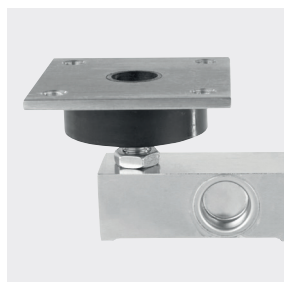
### Tank Weighing

The capacity range from 110kg to 4.4t allows the weighing of tanks and silos. The stainless steel design, hermetic sealing and IP68/IP69K protection provides the best reliability in tank and hopper weighing applications in harsh environments in process and food applications.



### Hermetically Sealed

SLA515 load cells are made from stainless steel and hermetically sealed by laser welding. This protects the load cell from damp for the best stability and measuring performance.



### Accessories

The optional accessories for proper load introduction guarantee the optimal performance in conjunction with thermal expansion and vibration.



### SLA515 Beam Load Cell Fully Approved

The SLA515 is approved for use in various applications in Europe, Asia, America and almost everywhere else in the world. If an approval is required, the SLA515 probably already complies. Even if needed for hazardous areas later, the SLA515 is already prepared.

SLA515 beam load cell features:

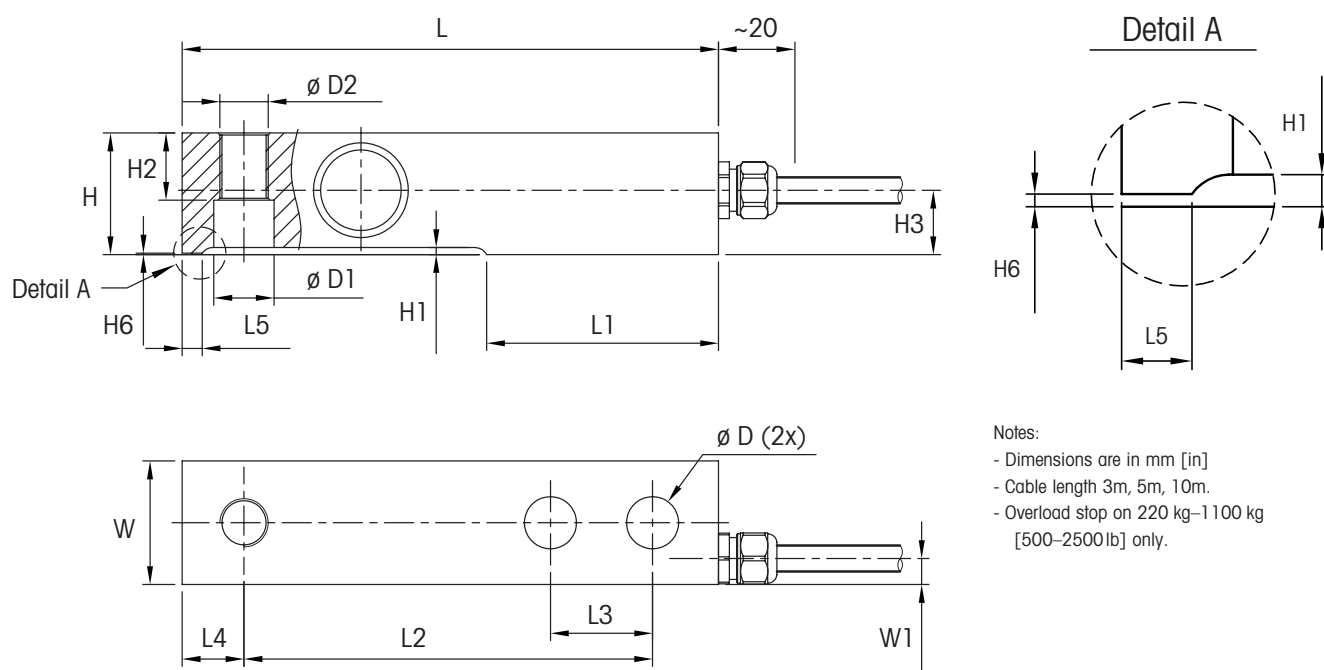
- Threaded load introduction
- OIML C3 and NTEP III M 5K approval
- ATEX Zone1/2 and 21/22 approvals
- IECEx approval
- FM Class I,II,III Div 1&2 approvals for USA & Canada
- Stainless steel
- Hermetically sealed design
- IP68, IP69K protection class

# SLA515 Load Cell Specifications

| Parameter   |                             | Unit of Measure   | Specification   |                      |                   |             |                   |              |
|---|-----------------------------|---|---|----------------------|-------------------|-------------|-------------------|--------------|
| Model No.   |                             |   | SLA515  |                      |                   |             |                   |              |
| Rated capacity (R.C.)                                   |                             | kg (lb)   | 110 (250)   | 220 (500)            | 550 (1250)        | 1100 (2500) | 2200 (5000)       | 4400 (10000) |
| Rated output  |                             | mVV @R.C.-kg  | 0.970 ± 0.2%  |                      | 1.940 ± 0.1%      |             |                   |              |
|   |                             | mVV @R.C.-lb  | 1.000 ± 0.2%  |                      | 2.000 ± 0.1%      |             |                   |              |
| Zero load output  |                             | %R.C.   | ≤ 2   |                      | ≤ 1               |             |                   |              |
| Combined error <sup>1)2)</sup>                          |                             | %R.C.   | ≤ 0.03  |                      | ≤ 0.018           |             | ≤ 0.026           |              |
| Repeatability error                                     |                             | %A.L. <sup>3)</sup>   |   |                      | ≤ 0.01            |             | ≤ 0.02            |              |
| Creep, 30 minute  |                             | %A.L.   |   |                      | ≤ 0.017           |             |                   |              |
| Min. dead load output return (DR), 30 min               |                             | %A.L.   |   |                      | ≤ 0.017           |             |                   |              |
| Temperature effect on                                   | Min. dead load output       | %R.C./°C (./°F)   | ≤ 0.0032<br>(0.0018)  | ≤ 0.0016<br>(0.0009) | ≤ 0.0013 (0.0007) |             | ≤ 0.0016 (0.0009) |              |
|   | Sensitivity <sup>2)</sup>   | %A.L./°C (./°F)   |   |                      | ≤ 0.001 (0.0006)  |             | ≤ 0.002 (0.0001)  |              |
| Temperature range                                       | Compensated                 |   | -10 to +40 (+14 to +104)  |                      |                   |             |                   |              |
|   | Operating                   | °C (°F)   | -40 to +65 (-40 to +150)  |                      |                   |             |                   |              |
|   | Safe storage                |   | -40 to +80 (-40 to +176)  |                      |                   |             |                   |              |
| OIML / European approval <sup>4)</sup>                  | Number, OIML Cert. No.      |   | TBD / TC8758  |                      |                   |             |                   |              |
|   | Class                       |   | C3  |                      | C1                |             |                   |              |
|   | nmax                        |   | 3000  |                      | 1000              |             |                   |              |
|   | Vmin                        | g   | 25  | 50                   | 100               | 250         | 500               |              |
|   | PLC                         |   | 0.7   |                      |                   |             |                   |              |
|   | Humidity symbol             |   | CH  |                      |                   |             |                   |              |
|   | Min. dead load              |   | kg  | 0                    |                   |             |                   |              |
|   | Z                           |   |   | 3000                 |                   | 1000        |                   |              |
|   | Barometric Pressure Effect  |   |   | none                 |                   |             |                   |              |
|   | NTEP approval <sup>4)</sup> | Number  |   | 15-052               |                   |             |                   |              |
| Class   |                             | III M   |   |                      |                   |             |                   |              |
| nmax  |                             | 5000  |   | 1600                 |                   |             |                   |              |
| Vmin  |                             | lb  | 0.05  | 0.1                  | 0.25              | 0.5         | 1                 |              |
| Min. dead load  |                             | lb  | 0   |                      |                   |             |                   |              |
| ATEX approval <sup>4)</sup>                             | Number, cat. 2 / cat. 3     |   | DEKRA 13ATEX0081 / DEKRA 13ATEX0082   |                      |                   |             |                   |              |
|   | Rating, cat. 2              |   | II 2 G Ex ia IIC T4 Gb / II 2 D Ex ib IIIC T100 °C Db   |                      |                   |             |                   |              |
|   | Rating, cat. 3              |   | II 3 G Ex ic IIC T4 Gc / II 3 G Ex nA IIC T4 Gc / II 3 D Ex tc IIIC T100 °C Dc                        |                      |                   |             |                   |              |
| Entity parameters                                       |                             | Ui/Un = 20V, Ii = 600mA, Pi = 1.25W, Ci = 0.2nF/m (5), Li = 1µH/m (5) |   |                      |                   |             |                   |              |
| IECEx Approval <sup>4)</sup>                            | Number                      |   | IECEx DEK 20.0086X  |                      |                   |             |                   |              |
|   | Rating                      |   | Ex ia IIC T4 Gb; Ex ic IIC T4 Gc; Ex ec IIC T4 Gc<br>Ex ib IIIC T100 °C Db; Ex tc IIIC T100 °C Dc     |                      |                   |             |                   |              |
|   | Entity Parameters           |   | Ui=20V, Ii=600mA, Pi=1.25W, Ci=1.2nF, Li=6µH; Urated = 20V, Irated = 55mA                             |                      |                   |             |                   |              |
| Factory Mutual App-approval, USA / Canada <sup>4)</sup> | Number, USA/Canada          |   | FM18US0025 / FM18CA0032   |                      |                   |             |                   |              |
|   | Rating, USA                 |   | IS / I, II, III / 1 / ABCDEFG / T4 Entity<br>NI / I / 2 / ABCD / T6 NIFW; S / II, III / 2 / FG / T6   |                      |                   |             |                   |              |
|   | Rating, Canada              |   | IS / I, II, III / 1 / ABCDEFG / T4 Entity<br>NI / I / 2 / ABCD / T6 NIFW; DIP / II, III / 2 / FG / T6 |                      |                   |             |                   |              |
|   | Entity parameters           |   | Vmax=20V, Imax=600mA, Pi=1.25W, Ci=0, Li=0; NIFW: Vmax=20V, Imax=600mA, Ci= 0, Li=0                   |                      |                   |             |                   |              |
|   | System drawing No, USA      |   | 30136756  |                      |                   |             |                   |              |
| Excitation voltage                                      | Recommended                 | V AC/DC   | 5 ~ 15  |                      |                   |             |                   |              |
|   | Max.                        |   | 20  |                      |                   |             |                   |              |
| Terminal resistance                                     | Excitation                  | Ω   | 382 ± 4   |                      |                   |             |                   |              |
|   | Output                      |   | 350 ± 1   |                      |                   |             |                   |              |
| Insulation resistance @50VDC                            | MΩ                          | > 5000  |   |                      |                   |             |                   |              |
| Breakdown voltage                                       | V AC                        | > 500   |   |                      |                   |             |                   |              |
| Material  | Spring element              |   | Stainless steel   |                      |                   |             |                   |              |
|   | Enclosure                   |   | 304 Stainless steel   |                      |                   |             |                   |              |
|   | Cable entry fitting         |   | 304 Stainless steel   |                      |                   |             |                   |              |
|   | Cable                       |   | Polyurethane (PU)   |                      |                   |             |                   |              |
| Protection  | Type                        |   | Welded  |                      |                   |             |                   |              |
|   | IP Rating                   |   | IP68, IP69K   |                      |                   |             |                   |              |
|   | NEMA rating                 |   | NEMA 6/6P   |                      |                   |             |                   |              |
| Overload protection                                     |                             |   | Yes   |                      |                   | No          |                   |              |
| Load limit  | Safe                        | %R.C.   | 150   |                      |                   |             |                   |              |
|   | Ultimate                    |   | 300   |                      |                   |             |                   |              |
| Safe side load  | %R.C.                       | 100   |   |                      |                   |             |                   |              |
| Safe dynamic load                                       | %R.C.                       | 70  |   |                      |                   |             |                   |              |
| Fatigue life  | cycles @R.C.                | >1,000,000  |   |                      |                   |             |                   |              |
| Direction of loading                                    |                             |   | Beam  |                      |                   |             |                   |              |
| Deflection @ R.C., nominal                              | mm (in)                     | 0.14 (0.005)  | 0.23 (0.009)  | 0.26 (0.01)          | 0.37 (0.015)      | 0.6 (0.024) |                   |              |
| Weight, nominal   | kg (lb)                     | 1 (2.2)   |   | 1.4 (3.1)            |                   | 2.4 (5.3)   |                   |              |
| Cable   | Length                      | m (ft)  | 3 (9.8), 5 (16.4), 10 (32.8)  |                      |                   |             |                   |              |
|   | Diameter                    | mm (in)   | 5.2 (0.20)  |                      |                   |             |                   |              |

| Parameter      | Unit of Measure |            | Specification    |                  |
|----------------|-----------------|------------|------------------|------------------|
| Mounting screw | Grade           |            | 10.9 (Grade 8)   |                  |
|                | Size/thread     | mm (in)    | M12 (1/2-13 UNC) | M20 (3/4-10 UNC) |
|                | Torque, nominal | Nm (ft-lb) | 98 (81)          | 330 (190)        |
| Drawing No.    | Dimensions      |            | 30136761         |                  |
|                | To-Scale        |            | 30136762         |                  |

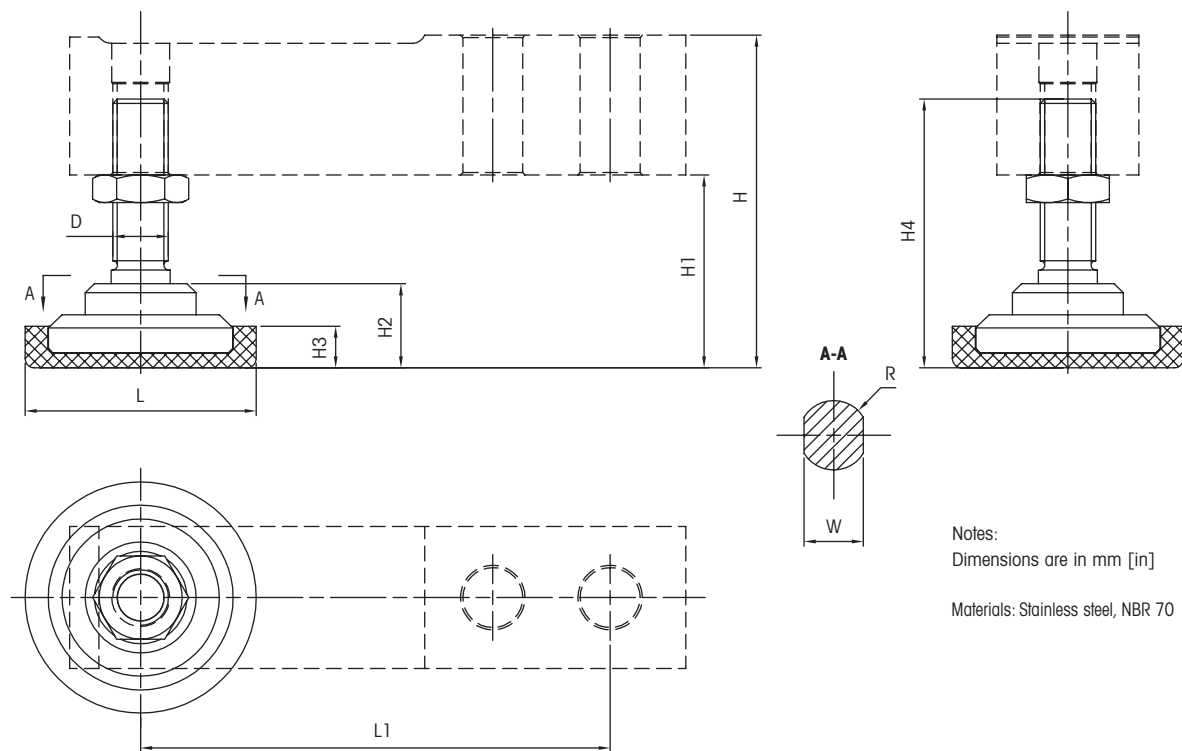
### SLA515 Load Cell Dimensional Drawings mm [in]



- Notes:
- Dimensions are in mm [in]
  - Cable length 3m, 5m, 10m.
  - Overload stop on 220 kg-1100 kg [500-2500lb] only.

| Model  | Capacity                     | Dimensions and locations |                |     |                |               |              |                |                |                 |                |                 |                |                |               |                |               |
|--------|------------------------------|--------------------------|----------------|-----|----------------|---------------|--------------|----------------|----------------|-----------------|----------------|-----------------|----------------|----------------|---------------|----------------|---------------|
|        |                              | D (2x)                   | D1             | D2  | H              | H1            | H2           | H3             | H6             | L               | L1             | L2              | L3             | L4             | L5            | W              | W1            |
| SLA515 | 220-1100 kg<br>[500-2500 lb] | 13.0<br>[0.51]           | 12.5<br>[0.49] | M12 | 30.2<br>[1.19] | 1.8<br>[0.07] | 20<br>[0.79] | 16.0<br>[0.63] | 0.48<br>[0.02] | 133.4<br>[5.25] | 56.5<br>[2.22] | 101.6<br>[4.00] | 25.4<br>[1.00] | 15.4<br>[0.61] | 6.4<br>[0.25] | 30.7<br>[1.21] | 6.5<br>[0.26] |
|        | 2200 kg<br>[5000 lb]         | 13.0<br>[0.51]           | 12.5<br>[0.49] | M12 | 36.6<br>[1.44] | 2.6<br>[0.10] | 20<br>[0.79] | 19.6<br>[0.77] | 2.6<br>[0.10]  | 136.7<br>[5.38] | 55.6<br>[2.19] | 101.6<br>[4.00] | 25.4<br>[1.00] | 18.4<br>[0.72] | -             | 36.8<br>[1.45] | 6.0<br>[0.24] |
|        | 4400 kg<br>[10000 lb]        | 20.5<br>[0.81]           | 22.2<br>[0.87] | M20 | 42.9<br>[1.69] | 2.5<br>[0.10] | 20<br>[0.79] | 22.7<br>[0.89] | 2.5<br>[0.10]  | 171.5<br>[6.75] | 73.8<br>[2.91] | 133.4<br>[5.25] | 38.1<br>[1.50] | 21.4<br>[0.84] | -             | 42.9<br>[1.69] | 6.0<br>[0.24] |

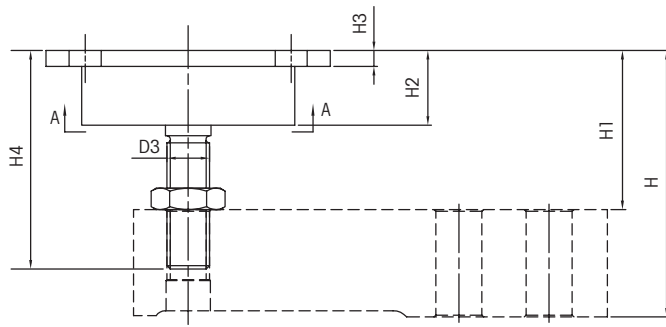
# SLA515 Foot Kit FTK mm [in]



Notes:  
 Dimensions are in mm [in]  
 Materials: Stainless steel, NBR 70

| Model | Capacity      | Dimensions and locations |        |     |        |        |        |        |        |        |        |        |        |
|-------|---------------|--------------------------|--------|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|       |               | L                        | L1     | D   | H      |        | H1     |        | H2     | H3     | H4     | R      | W      |
|       |               |                          |        |     | min    | max    | min    | max    |        |        |        |        |        |
| FTKT  | 220–1100 kg   | Ø50                      | 101.6  | M12 | 60     | 72     | 29.8   | 41.8   | 18.2   | 9      | 58.2   | 7.5    | 12.8   |
|       | [500–2500 lb] | [Ø1.97]                  | [4.00] |     | [2.36] | [2.84] | [1.17] | [1.65] | [0.72] | [0.35] | [2.29] | [0.30] | [0.50] |
| FTKT  | 2200 kg       | Ø50                      | 101.6  | M12 | 66.4   | 78.4   | 29.8   | 41.8   | 18.2   | 9      | 58.2   | 7.5    | 12.8   |
|       | [5000 lb]     | [Ø1.97]                  | [4.00] |     | [2.61] | [3.09] | [1.17] | [1.65] | [0.72] | [0.35] | [2.29] | [0.30] | [0.50] |
| FTKT  | 4400 kg       | Ø70                      | 133.4  | M20 | 91     | 110    | 48.1   | 67.1   | 29.5   | 17     | 87.5   | 10     | 20.8   |
|       | [10 000 lb]   | [Ø2.76]                  | [5.25] |     | [3.58] | [4.33] | [1.89] | [2.64] | [1.16] | [0.67] | [3.44] | [0.39] | [0.82] |

## SLA515 Expansion and Vibration Kit EVK mm [in]

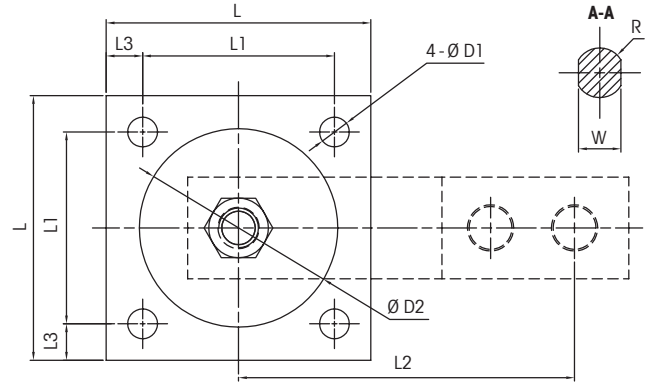


Notes:

Dimensions are in mm [in]

Notes:

Materials: Stainless steel, NBR 70



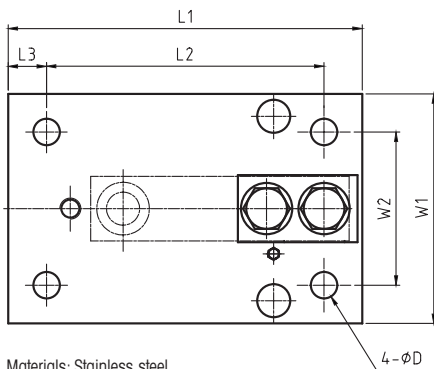
Dimensions and locations

| Model | Capacity                     | D1             | D2             | D3  | H              |                | H1             |                | H2             | H3            | H4             | L             | L1           | L2              | L3           | R             | W              | SH <sub>max</sub> * | SV <sub>max</sub> ** | Max. side load ratings |
|-------|------------------------------|----------------|----------------|-----|----------------|----------------|----------------|----------------|----------------|---------------|----------------|---------------|--------------|-----------------|--------------|---------------|----------------|---------------------|----------------------|------------------------|
|       |                              |                |                |     | min            | max            | min            | max            |                |               |                |               |              |                 |              |               |                |                     |                      |                        |
| EVKT  | 220–1100 kg<br>[500–2500 lb] | Ø9<br>[Ø0.35]  | Ø60<br>[Ø2.36] | M12 | 63<br>[2.48]   | 75<br>[2.95]   | 32.8<br>[1.29] | 44.8<br>[1.76] | 21.5<br>[0.85] | 4.5<br>[0.18] | 61.5<br>[2.42] | 80<br>[3.15]  | 58<br>[2.28] | 101.6<br>[4.00] | 11<br>[0.43] | 7.5<br>[0.30] | 12.8<br>[0.50] | ±3<br>[±0.12]       | 1<br>[0.04]          | 2100N                  |
| EVKT  | 2200 kg<br>[5000 lb]         | Ø9<br>[Ø0.35]  | Ø60<br>[Ø2.36] | M12 | 69.4<br>[2.73] | 81.4<br>[3.21] | 32.8<br>[1.29] | 44.8<br>[1.76] | 21.5<br>[0.85] | 4.5<br>[0.18] | 61.5<br>[2.42] | 80<br>[3.15]  | 58<br>[2.28] | 101.6<br>[4.00] | 11<br>[0.43] | 7.5<br>[0.30] | 12.8<br>[0.50] | ±3<br>[±0.12]       | 1.6<br>[0.07]        | 2400N                  |
| EVKT  | 4400 kg<br>[10 000 lb]       | Ø11<br>[Ø0.43] | Ø72<br>[Ø2.83] | M20 | 91<br>[3.58]   | 110<br>[4.33]  | 48.1<br>[1.89] | 67.1<br>[2.64] | 29.5<br>[1.16] | 9.5<br>[0.37] | 87.5<br>[3.44] | 100<br>[3.94] | 76<br>[2.99] | 133.4<br>[5.25] | 12<br>[0.47] | 10<br>[0.39]  | 20.8<br>[0.82] | ±3<br>[±0.12]       | 2.2<br>[0.09]        | 2800N                  |

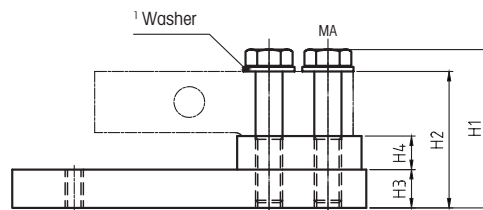
\* Max Lateral displacement

\*\* Max vertical displacement incl. load cell

## SLA515 Base Plate Kit BPK mm [in]



Materials: Stainless steel



| Capacity                      | Dimensions and locations |                 |                |                 |                 |                 |                |                |                  |                |                     |                     | D | ²MA <sub>cs</sub> | ³MA <sub>ss</sub> |
|-------------------------------|--------------------------|-----------------|----------------|-----------------|-----------------|-----------------|----------------|----------------|------------------|----------------|---------------------|---------------------|---|-------------------|-------------------|
|                               | L1                       | L2              | L3             | W1              | W2              | H1              | H2             | H3             | H4               | D              | ²MA <sub>cs</sub>   | ³MA <sub>ss</sub>   |   |                   |                   |
| 110 kg–1.1 t<br>[250–2500 lb] | 177.9<br>[7.00]          | 152.4<br>[6.00] | 12.7<br>[0.50] | 114.4<br>[4.50] | 89.0<br>[3.50]  | 72.6<br>[2.86]  | 65.1<br>[2.56] | 19.1<br>[0.75] | 15.88<br>[0.625] | 11.2<br>[0.44] | 98Nm<br>[72lb–ft]   | 98Nm<br>[72lb–ft]   |   |                   |                   |
| 2.2 t<br>[5000 lb]            | 235.0<br>[9.25]          | 184.2<br>[7.25] | 25.4<br>[1.00] | 152.4<br>[6.00] | 101.6<br>[4.00] | 105.0<br>[4.13] | 90.5<br>[3.56] | 25.4<br>[1.00] | 12.7<br>[0.5]    | 17.5<br>[0.69] | 270Nm<br>[200lb–ft] | 270Nm<br>[200lb–ft] |   |                   |                   |
| 4.4 t<br>[10,000 lb]          | 235.0<br>[9.25]          | 184.2<br>[7.25] | 25.4<br>[1.00] | 152.4<br>[6.00] | 101.6<br>[4.00] | 105.0<br>[4.13] | 90.5<br>[3.56] | 25.4<br>[1.00] | 22.2<br>[0.87]   | 17.5<br>[0.69] | 270Nm<br>[200lb–ft] | 270Nm<br>[200lb–ft] |   |                   |                   |

¹ Two washers only for 4.4t

² Torque carbon steel version

³ Torque stainless steel version

## SLA515 Load Cell Order Information

| Order information |                | Item No., load cell      |                    |                    | Item No., options          |                             |               |
|-------------------|----------------|--------------------------|--------------------|--------------------|----------------------------|-----------------------------|---------------|
| Rated capacity    | Class          | Cable, material / length |                    |                    | Base Plate Kit BPK,<br>304 | Expansion+<br>Vibr Kit EVKT | Foot Kit FTKT |
|                   |                | PU / 3 m (9.8 ft)        | PU / 5 m (16.4 ft) | PU / 10 m 32.8 ft) |                            |                             |               |
| 110kg / 250lb     | 0.03%          | 30101610                 | 30101611           | 30101612           | 30265370                   | 30076302                    | 30076304      |
| 220kg / 500lb     | C3/III M n:5   | 30101616                 | 30101617           | 30101618           |                            |                             |               |
| 550kg / 1250lb    | C3/III M n:5   | 30101622                 | 30101623           | 30101624           |                            |                             |               |
| 1100kg / 2500lb   | C3/III M n:5   | 30101628                 | 30101629           | 30101630           |                            |                             |               |
| 2200kg / 5000lb   | C3/III M n:5   | 30101634                 | 30101635           | 30101636           | 30265372                   | 30076303                    | 30076305      |
| 4400kg / 10000lb  | C1/III M n:1.6 | 30101640                 | 30101641           | 30101642           | 30265374                   |                             |               |

## SLA515 Load Cell Cable Colours

| Colour | Function     |
|--------|--------------|
| Green  | + Excitation |
| Black  | - Excitation |
| White  | + Signal     |
| Red    | - Signal     |
| Yellow | Shield*      |

\*Connected to spring element