GENERAL MEASURE


# Load Cell Selection Manual

# ENTERPRISE PROFILE

**30+** years
Industry Experience

**40+**
Country Sales

**200+**
R&D Patent

**2000+**
Application of the scene

General Measure established in 1993, as one of China's earliest industrial weighing company who is also a national high-tech enterprise, has over 50 people in the R&D team. For 28 years, we have been committed to improving the automatic process of industrial weighing and the precision of weighing control.

In 2003, we began to open the overseas market. Since 2006, General Measure dominated the high-end market and occupying more than 25% of the market in China. To expand the global business scale, we have been focusing on overseas markets since 2012. It has been seen that the average sales growth is above 30% every year.

We will continue to provide reliable industrial weighing indicators and equipment with excellent performance and weighing solutions with innovative value to our partners. Listening, Innovating, and growing together is our value, which guides us to achieve win-win cooperation by helping clients achieve their goals.

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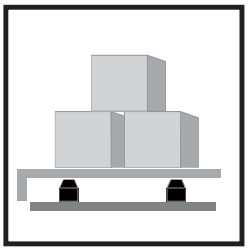
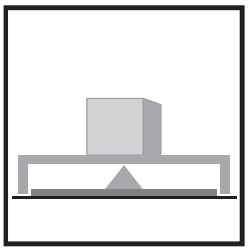
# A

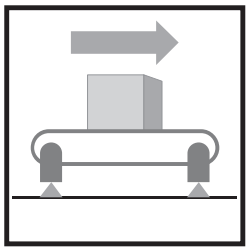
# Load Cell



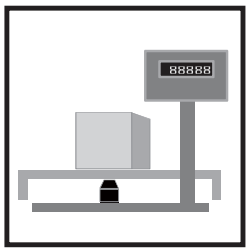
Platform Scale with mutiple load cell



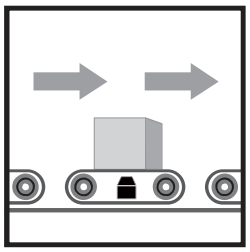
Platform Scale with single load cell



Belt scale

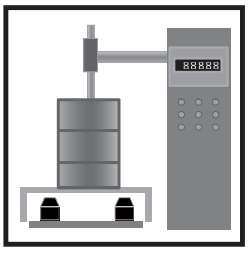


Commercial scale

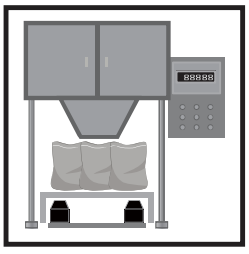


Check weigher

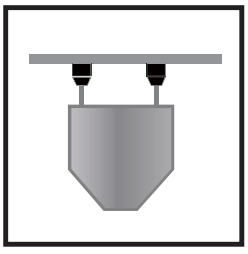
Loss-in-weight scale



Filling scale



Packing scale



Crane scale

www.gmweighing.com

# GML-DHH3C


## Features

Compact installation at minnimum installation height.

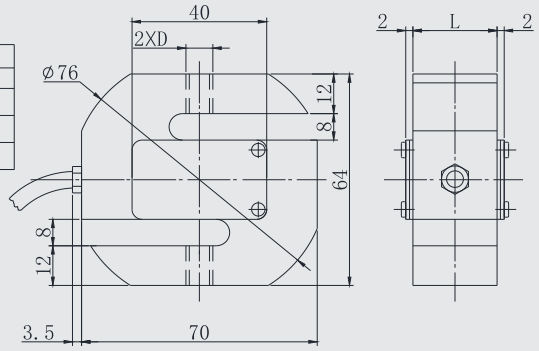
Easy installation.

Option: Alloy steel,Stainless steel.

| Material | Model |
|---|---|
| Alloy steel | GML-DHH3C |
| Stainless steel | GML-DSH3C |

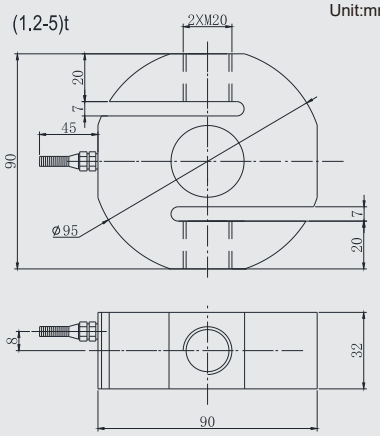
(20-1000)kg

| Emax[kg] | 尺寸(mm) | |
|---|---|---|
| | D | L |
| 20~150 | M8 | 12 |
| 200~500 | M12 | 20 |
| 700~1000 | M12 | 25 |




(1.2-5)t

Unit:mm




## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

| Item | Unit | Parameter | |
|---|---|---|---|
| Accuracy class | | C2 | C 3 |
| **Maximum capacity (Emax)** | **t** | **0.1,0.2,0.25,0.3,0.5,1,2,5** | |
| Minimum LC verification interval (Vmin) | % of Emax | 0.0200 | 0.0100 |
| Sensitivity (Cn) | mV/V | 2.0±0.002 | |
| Zero balance | mV/V | 0±0.03 / 0±0.02 | |
| Temperature effect on zero balance (TK0) | % of Cn/10K | ±0.02 | ±0.0170 |
| Temperature effect on sensitivity (TKc) | % of Cn/10K | ±0.02 | ±0.0170 |
| Hysteresis error ($d_{hy}$) | % of Cn | ±0.0270 | ±0.0180 |
| Non-linearity($d_{lin}$) | % of Cn | ±0.0250 | ±0.0167 |
| Creep(dcr) over 30 min. | % of Cn | ±0.030 | ±0.0167 |
| **Input ($R_{LC}$) &Output resistance ($R_0$)** | **Ω** | **400±10 & 352±3** | |
| **Nominal range of excitation voltage (Bu)** | **V** | **5~12** | |
| Insulation resistance (Ris) at50Vdc | MΩ | ≥5000 | |
| Service temperature range ($B_{tu}$) | ℃ | -30~70 | |
| Safe load limit ($E_L$) & Breaking load(Ed) | % of Emax | 120 & 200 | |
| **Protection class according to EN 60 529 (IEC 529)** | | **0.1t~1t:IP67;2t~5t:IP68** | |
| Material | | Option: Alloy steel,Stainless steel. | |

| Maximum capacity (Emax) | t | 0.1,0.2,0.25,0.3,0.5 | 1 | 2 | 3 | 5 |
|---|---|---|---|---|---|---|
| Deflection at Emax (snom) ,approx | mm | 0.15 | 0.25 | 0.45 | | |
| Weight(G),approx | kg | 0.6 | 0.8 | 1.5 | | |
| Cable：Diameter：ø5mm Length | m | 5 | | | | |

# GML-DHH3

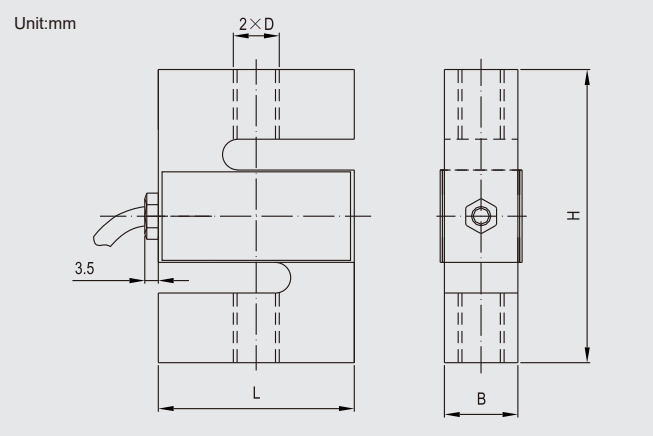

## Features

Compact installation at minnimum installation height.

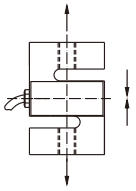
Easy installation.

Option: Alloy steel,Stainless steel.

| Material | Model |
|---|---|
| Alloy steel | GML-DHH3 |
| Stainless steel | GML-DSH3 |




| Emax[t] | H | L | B | D |
|---|---|---|---|---|
| 0.1,0.2,0.25,0.3,0.5 | 76.2 | 51 | 19.1 | M12 |
| 1 | 76.2 | 51 | 25.4 | M12 |
| 2,3,5 | 100.4 | 76.2 | 31.8 | M20×1.5 |



crane scale,belt scale,blending system

## Specifications

**Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)**

| Item | Unit | Parameter | |
|---|---|---|---|
| Accuracy class | | C2 | C 3 |
| **Maximum capacity (Emax)** | **t** | **0.1,0.2,0.25,0.3,0.5,1,2,5** | |
| Minimum LC verification interval (Vmin) | % of Emax | 0.0200 | 0.0100 |
| Sensitivity (Cn) | mV/V | TCA:2.0±0.002/TCAB:3.0±0.003 | |
| Zero balance | mV/V | TCA:0±0.02/TCAB:0±0.03 | |
| Temperature effect on zero balance ($TK_0$) | % of Cn/10K | ±0.02 | ±0.0170 |
| Temperature effect on sensitivity (TKc) | % of Cn/10K | ±0.02 | ±0.0170 |
| Hysteresis error ($d_{hy}$) | % of Cn | ±0.0270 | ±0.0180 |
| Non-linearity($d_{lin}$) | % of Cn | ±0.0250 | ±0.0167 |
| Creep(dcr) over 30 min. | % of Cn | ±0.030 | ±0.0167 |
| **Input ($R_{LC}$) &Output resistance ($R_0$)** | **Ω** | **400±10 & 352±3** | |
| **Nominal range of excitation voltage (Bu)** | **V** | **5~12** | |
| Insulation resistance (Ris) at50Vdc | MΩ | ⩾5000 | |
| Service temperature range ($B_{tu}$) | ℃ | -30~70 | |
| Safe load limit ($E_L$) & Breaking load(Ed) | % of Emax | 120 & 200 | |
| **Protection class according to EN 60 529 (IEC 529)** | | **0.1t～1t:IP67;2t~5t:IP68** | |
| Material | | Option: Alloy steel,Stainless steel. | |

| Maximum capacity (Emax) | t | 0.1,0.2,0.25,0.3,0.5 | 1 | 2 | 3 | 5 |
|---|---|---|---|---|---|---|
| Deflection at Emax (snom) ,approx | mm | 0.15 | 0.25 | 0.45 | | |
| Weight(G),approx | kg | 0.6 | 0.8 | 2.5 | | |
| Cable： Diameter：⌀5mm Length | m | 5 | | | | |

# GML-DHH8SB

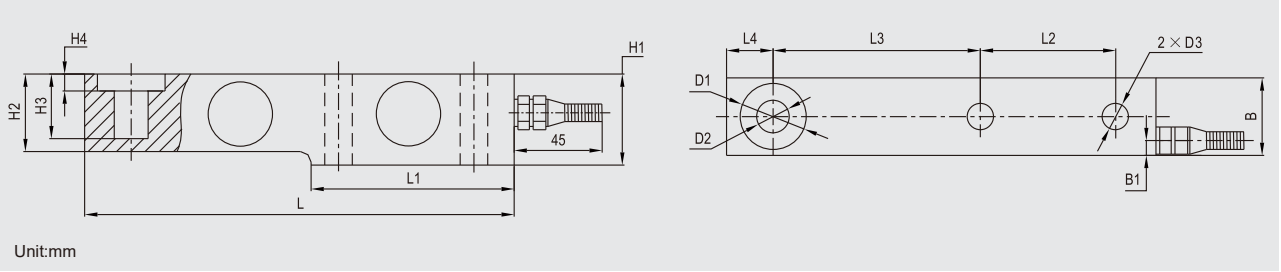
## Features

Compact installation at minnimum installation height.

Easy installation.

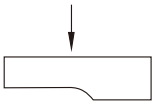
Option: Alloy steel,Stainless steel.

| Material | Model |
|---|---|
| Alloy steel | GML-DHH8SB |
| Stainless steel | GML-DSH8SB |




Unit:mm

| Emax[t] | L | L1 | L2 | L3 | L4 | H1 | H2/B | B1 | H3 | H4 | D1 | D2 | D3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5,1,2,3 | 203 | 95 | 64 | 98 | 22 | 43 | 36.6 | 7 | 30.5 | 8 | ø32 | ø16 | ø13 |
| 5,7.5,8 | 235 | 110 | 66 | 124 | 22 | 52 | 48 | 7 | 30 | 12 | ø38 | ø22 | ø21 |
| 10,15 | 279 | 133 | 82 | 140 | 32 | 67 | 60 | 8.5 | 20 | 8.5 | ø48 | ø32 | ø28 |
| 20,25 | 318 | 153 | 89 | 159 | 38 | 82.5 | 70 | 9.5 | 24 | 9.5 | ø54 | ø38 | ø34 |



Floor scale, blending scale, hopper scale, platform scale

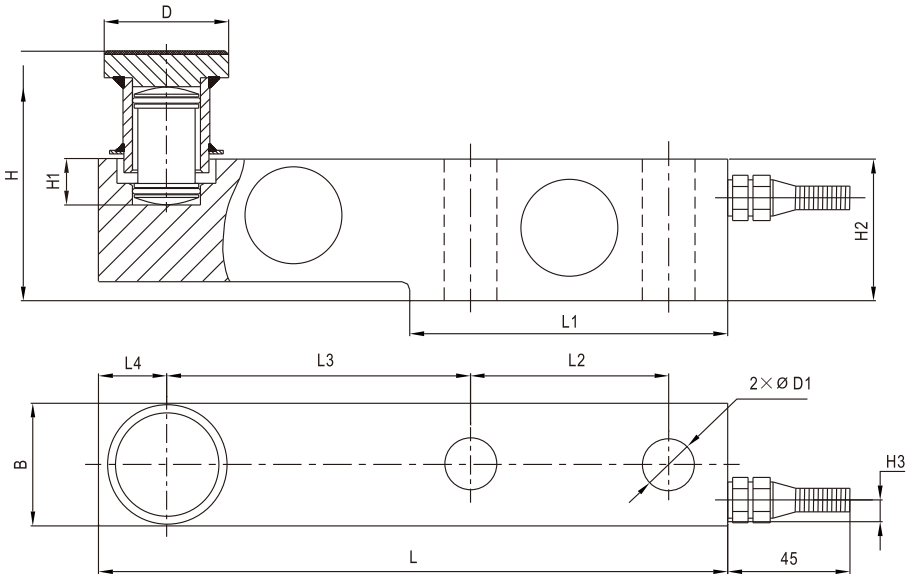
## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

| Item | Unit | Parameter | |
|---|---|---|---|
| Accuracy class | | C2 | C 3 |
| **Maximum capacity (Emax)** | **t** | **0.5,1,2,3,5,7.5,8,10,15,20,25** | |
| Minimum LC verification interval (Vmin) | % of Emax | 0.0200 | 0.0100 |
| **Sensitivity (Cn) / Zero balance** | **mV/V** | **2.0 ± 0.002 / 0 ± 0.02** | |
| Temperature effect on zero balance (TK0) | % of Cn/10K | ±0.02 | ±0.0170 |
| Temperature effect on sensitivity (TKc) | % of Cn/10K | ±0.02 | ±0.0170 |
| Hysteresis error ($d_{hy}$) | % of Cn | ±0.0270 | ±0.0180 |
| Non-linearity($d_{lin}$) | % of Cn | ±0.0250 | ±0.0167 |
| Creep(dcr) over 30 min. | % of Cn | ±0.0233 | ±0.0167 |
| **Input (RLC) &Output resistance (R0)** | **Ω** | **400±10 & 352±3** | |
| **Nominal range of excitation voltage (Bu)** | **V** | **5~12** | |
| Insulation resistance (Ris) at50Vdc | MΩ | ＞5000 | |
| Service temperature range ($B_{tu}$) | ℃ | -30~70 | |
| Safe load limit (EL) & Breaking load(Ed) | % of Emax | 150 & 300(0.5t~5t);120&200(8t~25t) | |
| **Protection class according to EN 60 529 (IEC 529)** | | **500kg:IP67;1t~25t:IP68** | |
| Material | | Option: Alloy steel,Stainless steel. | |

| Maximum capacity (Emax) | t | 0.5,1,2 | 3 | 5 | 7.5/8 | 10 | 15 | 20 | 25 |
|---|---|---|---|---|---|---|---|---|---|
| Deflection at Emax (snom) ,approx | mm | ＜1 | | ＜1.2 | ＜1.5 | ＜1.2 | | ＜1.5 | |
| Weight(G),approx | kg | 2.2 | | 4.2 | | 8.0 | | 11.5 | |
| Cable： Diameter：ø6mm Length | m | 2.6 | 3.5 | 5.2 | | 7 | 12 | 12 | |

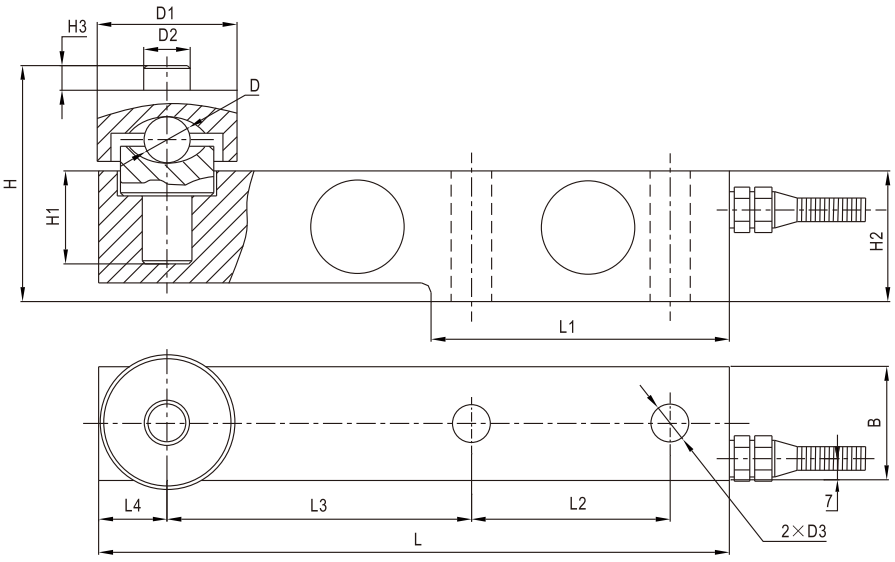
# GML-DHH8SB Struture

## A




| Emax[t] | L | L1 | L2 | L3 | L4 | B | H | H1 | H2 | H3 | D | D1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5,1,2,3 | 203 | 95 | 64 | 98 | 22 | 36.6 | 58 | 30.5 | 43 | 7 | ø35 | ø13 |
| 5,7.5,8 | 235 | 110 | 66 | 124 | 22 | 48 | 81 | 30 | 52 | 7 | ø42 | ø21 |
| 10,15 | 279 | 133 | 82 | 140 | 32 | 60 | 128 | 20 | 67 | 8.5 | ø57 | ø28 |
| 20,25 | 318 | 153 | 89 | 159 | 38 | 70 | 144 | 24 | 82.5 | 9.5 | ø70 | ø34 |

## B




| Emax[t] | L | L1 | L2 | L3 | L4 | B | H | H1 | H2 | H3 | D | D1 | D2 | D3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5,1,2,3 | 203 | 95 | 64 | 98 | 22 | 36.6 | 79 | 30.5 | 43 | 9 | ø16 | ø45 | ø15 | ø13 |
| 5,7.5,8 | 235 | 110 | 66 | 124 | 22 | 48 | 104 | 30 | 52 | 10 | ø25 | ø52 | ø21 | ø21 |

# GML-DHH8Q

## Features

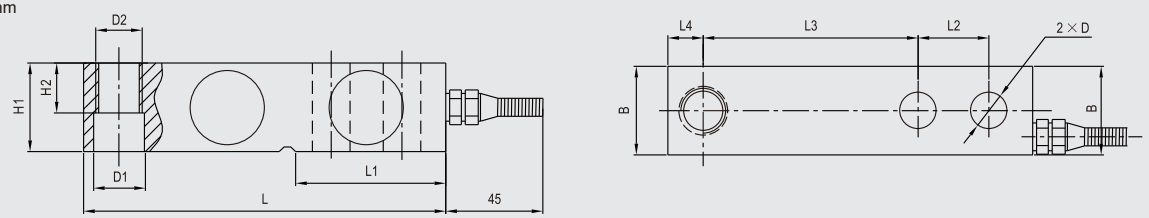
Compact installation at minnimum installation height
Easy installation.

With overload stop and stay rod,
Self-restoring due to pendulum bearing.

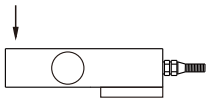
Option: Alloy steel,Stainless steel.

| Material | Model |
|---|---|
| Alloy steel | GML-DHH8Q |
| Stainless steel | GML-DSH8Q |

Unit:mm




| Emax[t] | L | L1 | L2 | L3 | L4 | B | H1 | H2 | D | D1 | D2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5～2.5 | 130 | 53.5 | 25.4 | 76.2 | 12.7 | 31.8 | 31.8 | 20 | ø13 | ø17.5 | M16×1.5 |
| 3～5 | 171.5 | 72.5 | 38.1 | 95.3 | 19 | 38.1 | 38.1 | 26 | ø20 | ø20 | M18×1.5 |
| 10 | 225.5 | 102 | 50.8 | 124 | 25.3 | 50.8 | 50.8 | 25.4 | ø27 | ø27 | M24×2 |



Floor scale, blending control system, platform scale

## Specifications

**Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)**

| Item | Unit | Parameter | |
|---|---|---|---|
| Accuracy class | | C1 | C 3 |
| **Maximum capacity (Emax)** | **t** | **0.5,1,2,2.5,3,5,7.5,10** | |
| Minimum LC verification interval (Vmin) | % of Emax | 0.0200 | 0.0100 |
| **Sensitivity (Cn) / Zero balance** | **mV/V** | **3.0 ± 0.003 / 0 ± 0.03** | |
| Temperature effect on zero balance ($TK_0$) | % of Cn/10K | ±0.02 | ±0.0170 |
| Temperature effect on sensitivity (TKc) | % of Cn/10K | ±0.02 | ±0.0170 |
| Hysteresis error ($d_{hy}$) | % of Cn | ±0.0270 | ±0.0180 |
| Non-linearity($d_{lin}$) | % of Cn | ±0.0250 | ±0.0167 |
| Creep(dcr) over 30 min. | % of Cn | ±0.030 | ±0.0167 |
| **Input ($R_{LC}$)&Output resistance ($R_0$)** | **Ω** | **400±10 & 352±3** | |
| **Nominal range of excitation voltage (Bu)** | **V** | **5~12** | |
| Insulation resistance(Ris)at 50Vdc | MΩ | ⩾5000 | |
| Service temperature range ($B_{tu}$) | ℃ | -30~70 | |
| Safe load limit ($E_L$)&Breaking load(Ed) | % of Emax | 120 & 200 | |
| **Protection class according to EN 60 529 (IEC 529)** | | **0.5t:IP67;1t~10t:IP68** | |
| Material | | Option: Alloy steel,Stainless steel. | |

| Maximum capacity (Emax) | t | 0.5 | 1 | 2 | 2.5 | 3 | 5 | 7.5 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| Deflection at Emax (snom) ,approx | mm | <0.65 | | | | <0.75 | | <0.85 | |
| Weight(G),approx | kg | 1.0 | | | | 2.1 | | 4.2 | |
| Cable： Diameter：ø6mm Length | m | 3 | | | | 4.2 | | 5 | |

# GML-DHH5

## Features

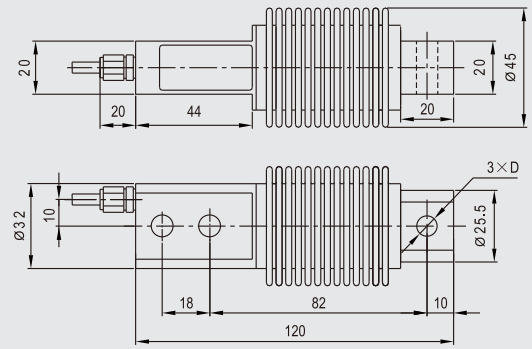
Compact installation at minnimum installation height
Easy installation.

With overload stop and stay rod,
Self-restoring due to pendulum bearing.

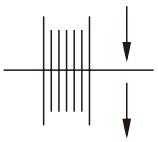
Option: Alloy steel,Stainless steel.

| Material | Model |
|---|---|
| Alloy steel | GML-DHH5 |
| Stainless steel | GML-DSH5 |

Unit:mm




| Emax[kg] | D |
|---|---|
| 10,20,50,75,100,200,250 | Ø8.2 |
| 300,500 | Ø10.2 |



hopper scale,belt scale,blending system

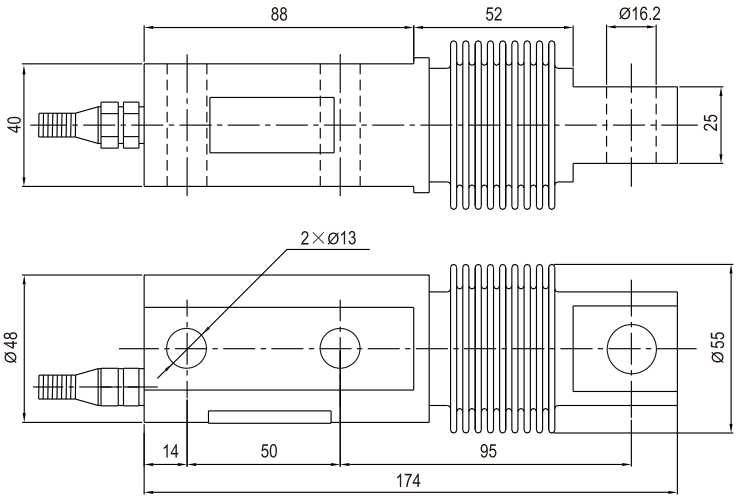
## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

| Item | Unit | Parameter | |
|---|---|---|---|
| Accuracy class | | C2 | C 3 |
| **Maximum capacity (Emax)** | **kg** | **10,20,50,75,100,200,250,300,500,1000** | |
| Minimum LC verification interval (Vmin) | % of Emax | 0.0200 | 0.0100 |
| **Sensitivity (Cn) / Zero balance** | **mV/V** | **2.0 ± 0.002 / 0 ± 0.02** | |
| Temperature effect on zero balance (TK0) | % of Cn/10K | ±0.02 | ±0.0170 |
| Temperature effect on sensitivity (TKc) | % of Cn/10K | ±0.02 | ±0.0170 |
| Hysteresis error ($d_{hy}$) | % of Cn | ±0.0270 | ±0.0180 |
| Non-linearity($d_{lin}$) | % of Cn | ±0.0250 | ±0.0167 |
| Creep(dcr) over 30 min. | % of Cn | ±0.0233 | ±0.0167 |
| **Input ($R_{LC}$) & Output resistance ($R_0$)** | **Ω** | **400±10 & 352±3** | |
| **Nominal range of excitation voltage (Bu)** | **V** | **5~12** | |
| Insulation resistance (Ris) at50Vdc | MΩ | ⩾5000 | |
| Service temperature range ($B_{tu}$) | ℃ | -30~70 | |
| Safe load limit ($E_L$) & Breaking load(Ed) | % of Emax | 120 & 200 | |
| **Protection class according to EN 60 529 (IEC 529)** | | **IP68** | |
| Material | | Option: Alloy steel,Stainless steel. | |

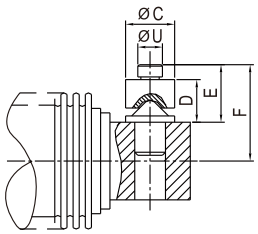
| Maximum capacity (Emax) | kg | 10 | 20 | 50 | 75 | 100 | 200 | 250 | 300 | 500 | 1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Deflection at Emax (snom) ,approx | mm | 0.31 | | | | | | | 0.39 | | 0.55 |
| Weight(G),approx | kg | 0.5 | | | | | | | | | 1.9 |
| Cable： Diameter：Ø5mm Length | m | 3 | | | | | | | | | 5 |

# GML-DHH5 Structure

## 1000kg

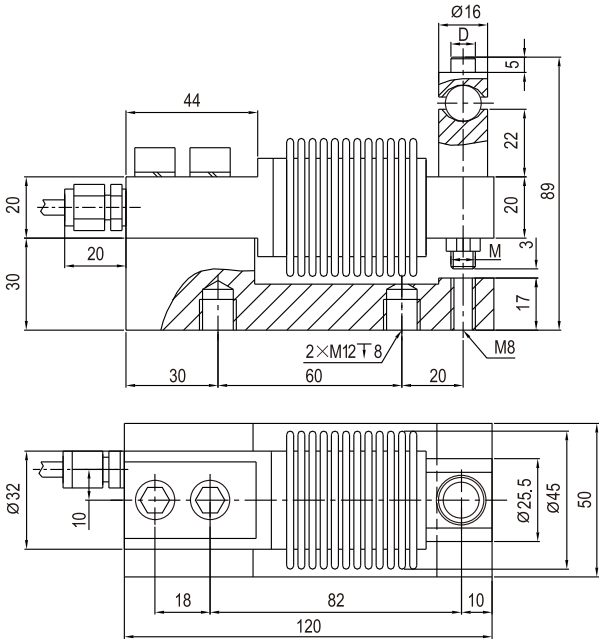



Cone and conical pan for Emax 10kg...1t.



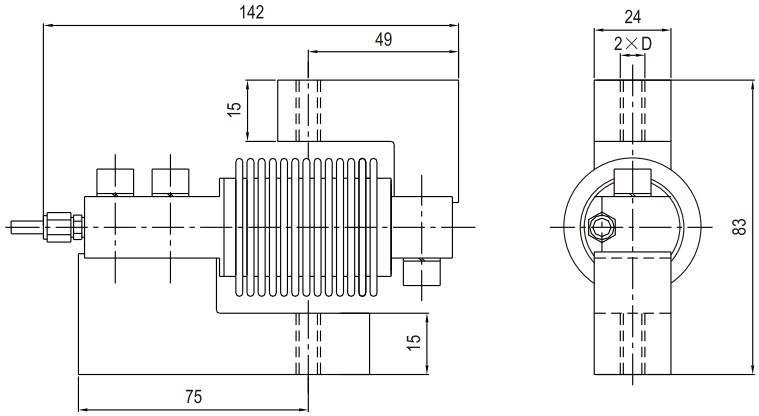

| Emax | C | D | E | U | X |
|---|---|---|---|---|---|
| 10~200kg | 15 | 16 | 21 | $8.1^{0}_{-0.05}$ | 26 |
| 300,500kg | 18 | 24 | 32 | $11^{0}_{-0.05}$ | 34 |
| 1t | 18 | 24 | 32 | $11^{0}_{-0.05}$ | 36.5 |

(10kg~500kg )




| Emax[kg] | D | M |
|---|---|---|
| 10,20,30,50,75 100,200,250 | ø8 | M8 |
| 300,500 | ø10 | M10 |

(10kg~500kg )




| Emax[kg] | D |
|---|---|
| 10,20,30,50,75 100,200,250 | M8 |
| 300,500 | M10 |

# GML-DHH6

## Features

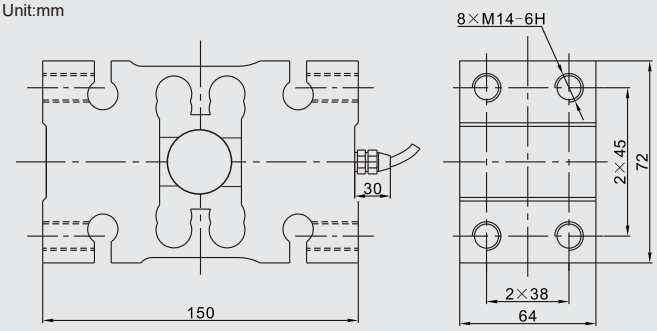
Equipped with load cell ,Accuracy class C2,C3.

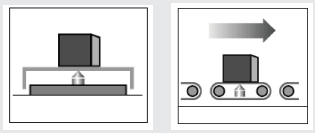
Compact installation at minnimum installation height.

Easy installation.

Alloy steel.

Unit:mm



## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

| Item | Unit | Parameter | | | | | |
|---|---|---|---|---|---|---|---|
| Accuracy class | | C 2 | | | C 3 | | |
| **Maximum capacity (Emax)** | **kg** | 50,100,200,300,500,1000 | | | | | |
| **Sensitivity (Cn) / Zero balance** | **mV/V** | **2.0 ± 0.2 / 0 ± 0.1** | | | | | |
| Temperature effect on zero balance (TK0) | % of Cn/10K | ± 0.0175 | | | ± 0.0140 | | |
| Temperature effect on sensitivity (TKc) | % of Cn/10K | ± 0.0175 | | | ± 0.0140 | | |
| Hysteresis error ($d_{hy}$) | % of Cn | ± 0.02 | | | ± 0.0150 | | |
| Non-linearity($d_{lin}$) | % of Cn | ± 0.0270 | | | ± 0.0167 | | |
| Creep(dcr) over 30 min. | % of Cn | ± 0.0250 | | | ± 0.0167 | | |
| Eccentric error | % | ± 0.0233 | | | | | |
| **Input ($R_{LC}$) &Output resistance ($R_0$)** | **Ω** | **400±15 & 352±3** | | | | | |
| **Nominal range of excitation voltage (Bu)** | **V** | **5~15** | | | | | |
| Insulation resistance (Ris) at50Vdc | MΩ | ⩾ 5000 | | | | | |
| Service temperature range ($B_{tu}$) | ℃ | -20~50 | | | | | |
| Safe load limit ($E_L$) & Breaking load(Ed) | % of Emax | 120 & 200 | | | | | |
| **Protection class according to EN 60 529 (IEC 529)** | | **IP65** | | | | | |
| Material | | Alloy steel. | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Maximum capacity (Emax) | kg | 50 | 100 | 200 | 300 | 500 | 750 |
| Min. load cell verification inter(vmin) | g | 20 | 20 | 50 | 50 | 100 | 100 |
| Maximum platform size | mm | 800×800 | | | | | |
| Deflection at Emax (snom) ,approx | mm | < 0.6 | | | | | |
| Weight(G),approx | kg | 4.3 | | | 4.5 | | |
| Cable : Diameter : ø5mm Length | m | 3m | | | | | |
| Mounting:Cylindrical head screw | | M14-10.9 | | | | | |
| Tightening torque | N. m | 35N.m | | | | | |

# GML-DHH8B

## Features

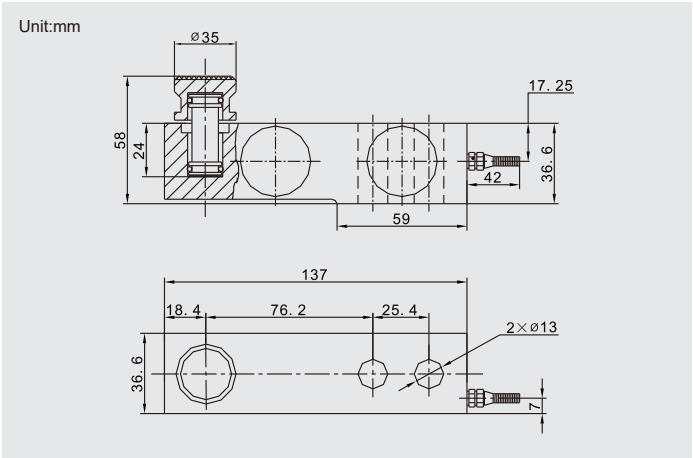
Compact installation at minnimum installation height.

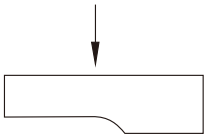
Easy installation.

Option: Alloy steel,Stainless steel.

| Material | Model |
|---|---|
| Alloy steel | GML-DHH8B |
| Stainless steel | GML-DSH8B |

Unit:mm



Floor scale, blending scale,
hopper scale, platform scale

## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

| Item | Unit | Parameter | |
|---|---|---|---|
| Accuracy class | | C 2 | C 3 |
| **Maximum capacity (Emax)** | t | 0.5,1,2 | |
| Minimum LC verification interval (Vmin) | % of Emax | 0.0200 | |
| **Sensitivity (Cn) / Zero balance /** | mV/V | 2.0± 0.002 / 0± 0.02 | |
| Temperature effect on zero balance (TK0) | % of Cn/10K | ± 0.02 | ± 0.0170 |
| Temperature effect on sensitivity (TKc) | % of Cn/10K | ± 0.02 | ± 0.0170 |
| Hysteresis error ($d_{hy}$) | % of Cn | ± 0.0330 | ± 0.0180 |
| Non-linearity($d_{lin}$) | % of Cn | ± 0.0250 | ± 0.0167 |
| Creep(dcr) over 30 min. | % of Cn | ± 0.0233 | ± 0.0167 |
| **Input ($R_{LC}$) &Output resistance ($R_0$)** | Ω | 400±10 & 352 ±3 | |
| **Nominal range of excitation voltage (Bu)** | V | 5~15 | |
| Insulation resistance (Ris) at50Vdc | MΩ | ＞5000 | |
| Service temperature range ($B_{tu}$) | ℃ | -30~70 | |
| Safe load limit ($E_L$) & Breaking load(Ed) | % of Emax | 150 & 200 | |
| **Protection class according to EN 60 529 (IEC 529)** | | IP68 | |
| Material | | Option: Alloy steel,Stainless steel. | |

| | | | | |
|---|---|---|---|---|
| Maximum capacity (Emax) | t | 0.5 | 1 | 2 |
| Deflection at Emax (snom) ,approx | mm | ＜0.5 | ＜0.5 | ＜0.6 |
| Weight(G),approx | kg | 1.3 | | |
| Cable： Diameter：ø6mm Length | m | 3.5 | | |

# GML-DHH4ZS

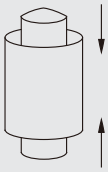
## Features

Laser welded,IP68.
Self-restoring function,nominal loads:10t~50t.

Optimized for paralled connection by corner pre-adjustment
Meets EMC/ESD requirements according to EN 45 501.

Option: Alloy steel,Stainless steel.

| Material | Model |
|---|---|
| Alloy steel | GML-DHH4ZS |
| Stainless steel | GML-DSH4ZS |



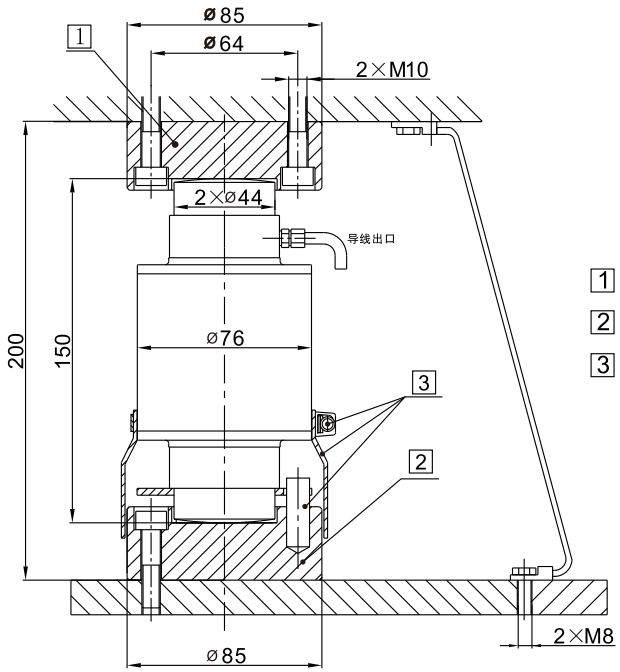
Truck scale,railway scale,axle wheel scale,floor scale

## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

| Item | Unit | Parameter | |
|---|---|---|---|
| Accuracy class | | C 2 | C 3 |
| **Maximum capacity (Emax)** | **t** | **10,15,20,30,40,50** | |
| Minimum LC verification interval (Vmin) | % of Emax | 0.0200 | 0.0100 |
| **Sensitivity (Cn) / Zero balance** | **mV/V** | **2.0 ± 0.002 / 0 ± 0.02** | |
| Temperature effect on zero balance (TK0) | % of Cn/10K | ±0.02 | ±0.0170 |
| Temperature effect on sensitivity (TKc) | % of Cn/10K | ±0.02 | ±0.0170 |
| Hysteresis error ($d_{hy}$) | % of Cn | ±0.0270 | ±0.0180 |
| Non-linearity($d_{lin}$) | % of Cn | ±0.0250 | ±0.0167 |
| Creep(dcr) over 30 min. | % of Cn | ±0.030 | ±0.0167 |
| **Input ($R_{LC}$) & Output resistance ($R_0$)** | **Ω** | **700±20 & 703±3.5** | |
| **Nominal range of excitation voltage (Bu)** | **V** | **5~12** | |
| Insulation resistance (Ris) at50Vdc | MΩ | ＞5000 | |
| Service temperature range ($B_{tu}$) | ℃ | -30~70 | |
| Safe load limit ($E_L$) & Breaking load(Ed) | % of Emax | 150 & 250 | |
| **Protection class according to EN 60 529 (IEC 529)** | | **IP68** | |
| Material | | Option: Alloy steel,Stainless steel. | |

| Maximum capacity (Emax) | t | 10 | 15 | 20 | 30 | 40 | 50 |
|---|---|---|---|---|---|---|---|
| Min. scale verification (emin) according to En45501 [...#=max. Number of load cells] | kg | 5 [6#] | 5 [6#] | 5 [6#] 10 [8#] | 10 [8#] | 10 [6#] 20 [8#] | 10 [4#] 20 [10#] |
| Recommended maximum weighing capacity of scale | t | 20 | 30 | 50 80 | 100 | 120 150 | 100 200 |
| Deflection at Emax (snom) ,approx | mm | 0.55 | 0.55 | 0.65 | 0.75 | 0.85 | 0.85 |
| Weight(G),approx | kg | 2.8 | 3.2 | 3.2 | 3.6 | 3.6 | 3.8 |
| Cable：Diameter：Ø5mm Length | m | 10 | 12 | 12 | 14 | 16 | 16 |

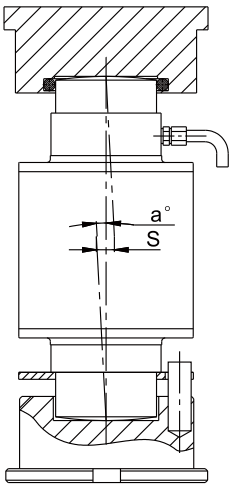
Mounting variation:
for (10~50)t



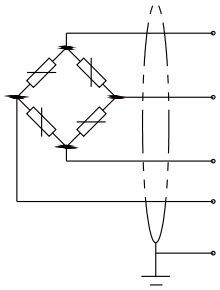

1 CTA/ZOU B1

2 CTA/ZOU2 B2

3 Dowel pin Φ10×30(rotation stop), flexible tube and tube clip enclosed in the packing of the load cell




Wiring code (4-wire circuit)



Excitation+ (red)

Signal+ (green)

Excitation- (black)

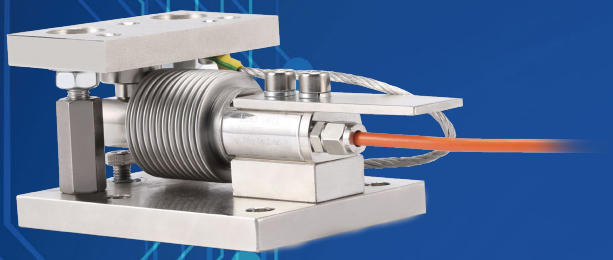
Signal- (white)

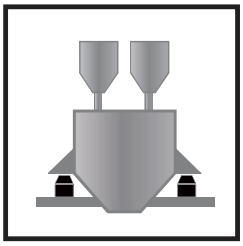
Shield /wire strand

| Maximum capacity (Emax) | t | 10 | 15 | 20 | 25 | 30 | 40 | 50 |
|---|---|---|---|---|---|---|---|---|
| R ball | mm | 130 | 130 | 160 | 160 | 160 | 180 | 180 |
| amax | ″ ° ″ | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.5 |
| Smax | mm | 12 | 12 | 12 | 12 | 12 | 12 | 10.5 |
| FR(%of applied load) | at Smax | 6.3 | 6.3 | 9.8 | 9.8 | 9.8 | 12 | 12 |
| | at S=1mm | 0.48 | 0.48 | 0.75 | 0.75 | 0.75 | 0.93 | 0.93 |

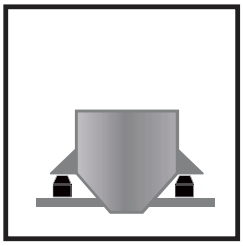
# B

# Weighing module

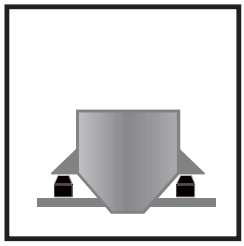




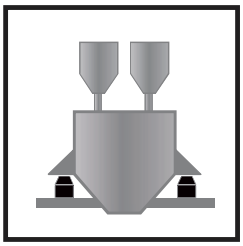
Hopper scale (small)



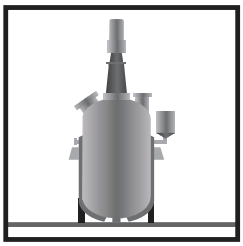
Hopper scale (medium)



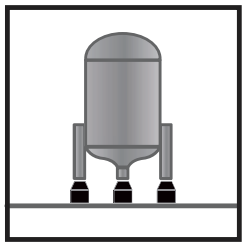
Hopper scale (large)



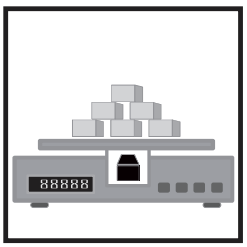
Batching scale



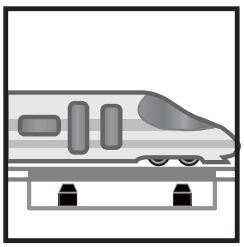
Silo scale



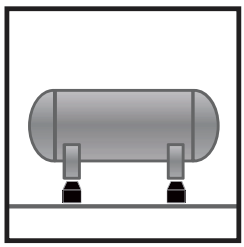
Silo scale



Platform scale



Railroad scale



Tank scale

# GML-DHH8SB-M1

## Features

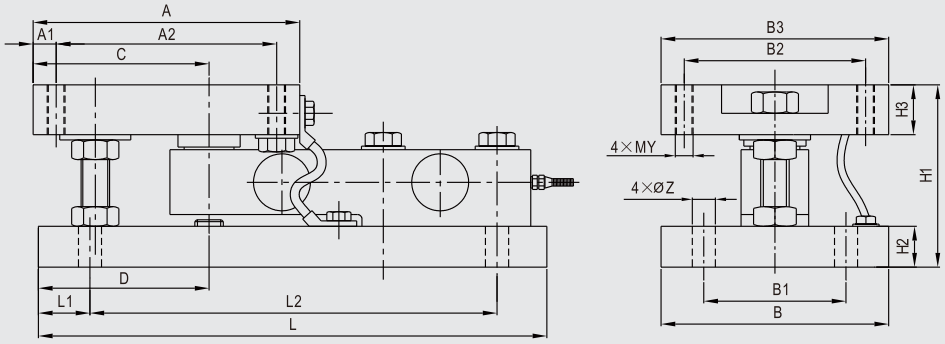
Equipped with load cell GML-DHH8SB,
Accuracy class C2,C3.

Compact installation at minnimum installation height.

Easy installation.

Option: Alloy steel,Stainless steel,
Wtih anti-liftoff device and lifting device.

Unit:mm



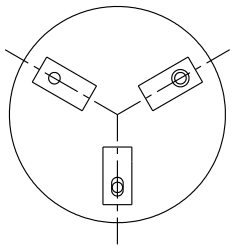

| Emax [t] | A | A1 | A2 | C | D | L | L1 | L2 | B | B1 | B2 | B3 | H1 | H2 | H3 | Y | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0. 5,1,2 | 150 | 16 | 124 | 99 | 96 | 286 | 32 | 226 | 112 | 80 | 102 | 128 | 107 | 19 | 24 | 10 | 13 |
| 3 | 150 | 16 | 124 | 99 | 96 | 286 | 32 | 226 | 112 | 80 | 102 | 128 | 107 | 23 | 28 | 10 | 13 |
| 5,8 | 178 | 16 | 146 | 102 | 99 | 318 | 32 | 257 | 152 | 102 | 120 | 152 | 130 | 30 | 38 | 16 | 17 |
| 10,15 | 184 | 16 | 152 | 108 | 105 | 360 | 32 | 295 | 154 | 106 | 122 | 154 | 168 | 45 | 45 | 20 | 21 |

## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

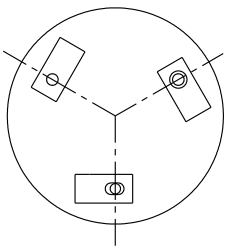
| Maximum capacity | t | 0.5 | 1 | 2 | 3 | 5 | 8 | 10 | 15 |
|---|---|---|---|---|---|---|---|---|---|
| Limit load | % of Emax | 150% | | | | | | | |
| Tatal error of load cells | % of Emax | ±0.02,±0.03,±0.05 | | | | | | | |
| Material | | Alloy steel or Stainless steel. | | | | | | | |
| Cable :Diameter ø6mm Length | m | 2.6 | | | 3.5 | 5.2 | 5.2 | 7 | 12 |

## Mounting examples for weighing modules

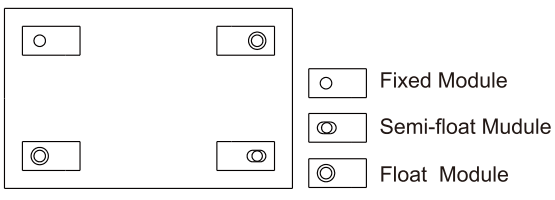
Radial install



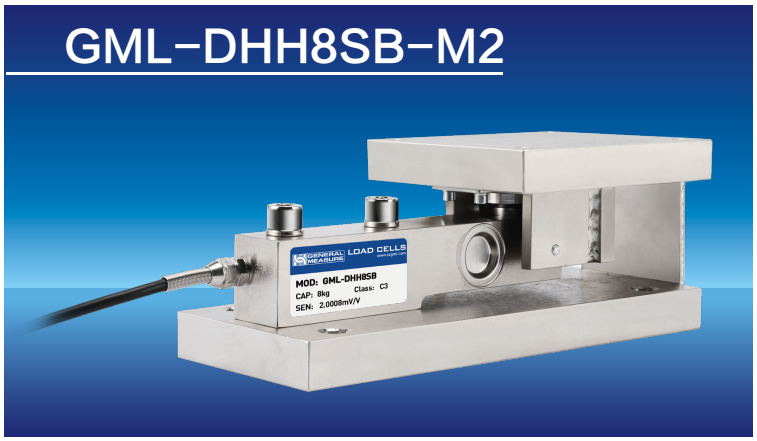
Cutting install



Rectangle install



# GML-DHH8SB-M2




## Features

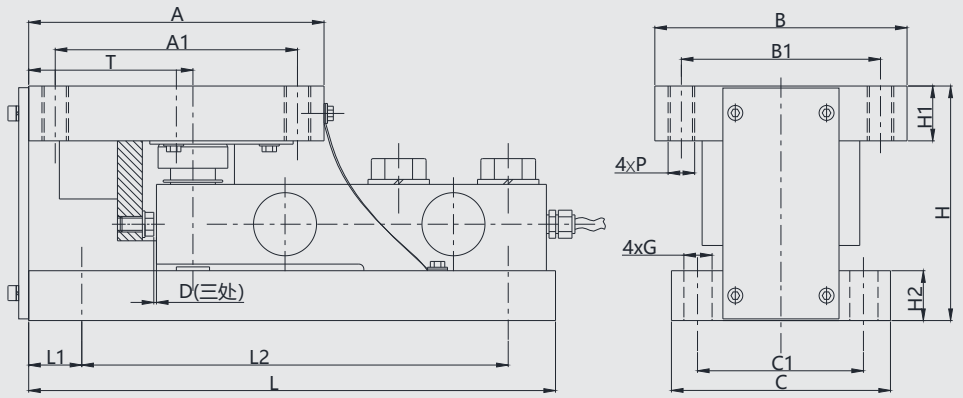
Equipped with self-restoring load cell GML-DHH8SB, Accuracy class C2,C3.

Compact installation at minnimum installation height.

Easy installation.

Option: Alloy steel,Stainless steel.

Unit:mm



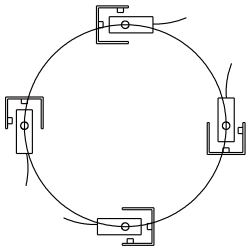

| Emax [t] | A | A1 | B | B1 | T | L | L1 | L2 | C | C1 | H | H1 | H2 | P | G | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5,1,2 | 150 | 124 | 128 | 102 | 96 | 286 | 32 | 226 | 112 | 80 | 107 | 19 | 19 | M10 | ø13 | 1.6 |
| 3 | 150 | 124 | 128 | 102 | 96 | 286 | 32 | 226 | 112 | 80 | 107 | 24 | 23 | M10 | ø13 | 1.6 |
| 5,8 | 178 | 146 | 152 | 120 | 99 | 318 | 32 | 257 | 152 | 102 | 146 | 38 | 30 | M16 | ø17 | 1.6 |
| 10,15 | 184 | 152 | 154 | 122 | 105 | 360 | 32 | 295 | 154 | 106 | 216 | 45 | 45 | M20 | ø21 | 3 |

## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

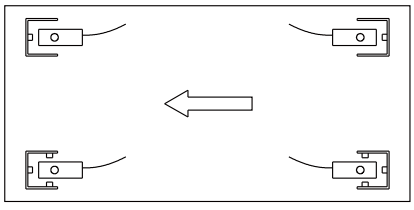
| Maximum capacity | t | 0.5 | 1 | 2 | 3 | 5 | 8 | 10 | 15 |
|---|---|---|---|---|---|---|---|---|---|
| Limit load | % of Emax | 150% | | | | | | | |
| Tatal error of load cells | % of Emax | ±0.02,±0.03,±0.05 | | | | | | | |
| Material | | Alloy steel or Stainless steel. | | | | | | | |
| Cable : Diameter ø 6mm Length | m | 2.6 | | | 3.5 | 5.2 | | 7 | 12 |

## Mounting examples for weighing modules

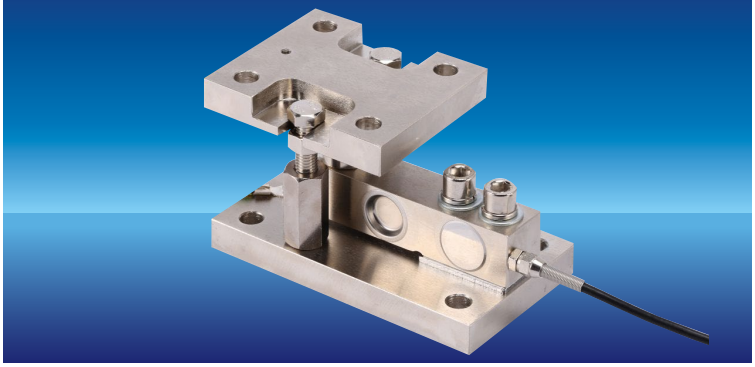
Cutting install



Rectangle Install



# GML-DHH8Q-M



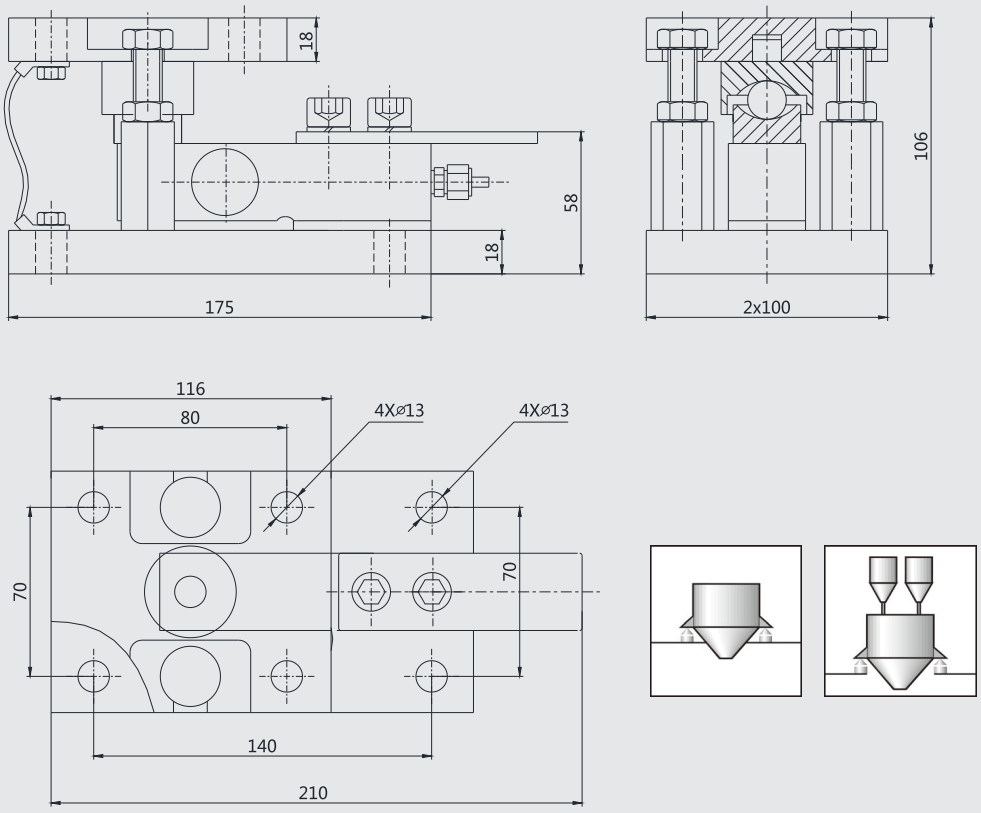
## Features

Equipped with self-restoring load cell GML-DHH8SB, Accuracy class C2,C3 .

Compact installation at minnimum installation height.
Easy installation

Option: Alloy steel,Stainless steel,
Self-restoring due to pendulum bearing,
Wtih anti-liftoff device and lifting device.

Unit:mm




## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

| Maximum capacity | kg | 100,200,250,300 | 500,1000,2000,2500 |
|---|---|---|---|
| Limit load | % of Emax | 120% | |
| Breaking load | % of Emax | 200% | |
| Tatal error of load cells | % of Emax | ±0.02,±0.03,±0.05 | |
| Material 材料: | | Alloy steel or Stainless steel. | |
| Weight (incl.load cell) | kg | 7~8 | |
| Adjustment range of the overload stop | mm | ≤0.33 | ≤0.45 |
| Cable : Diameter ⌀5mm Length | m | 3 | |

# GML-DHH8B-M

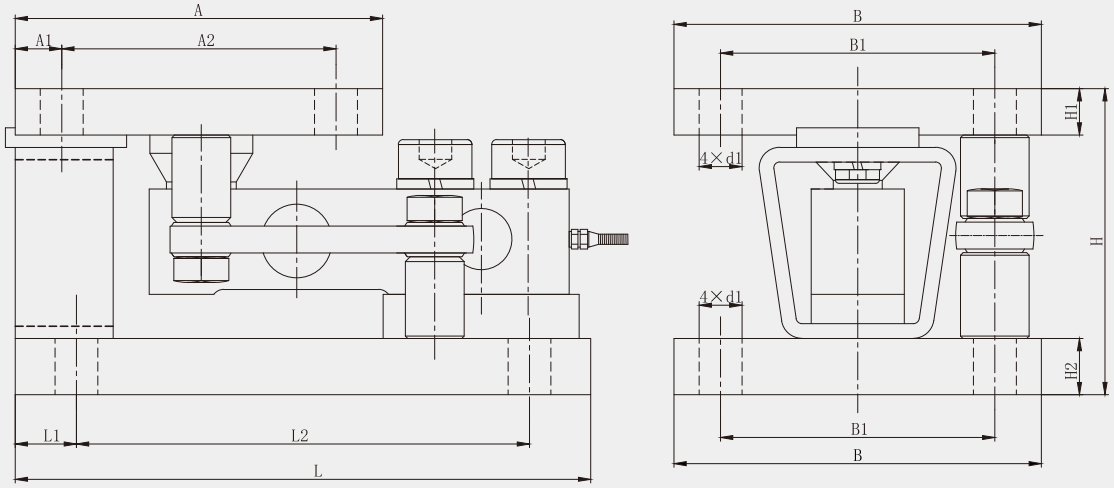
## Features

Equipped with self-restoring load cell GML-DHH8B, Accuracy class C2,C3 .

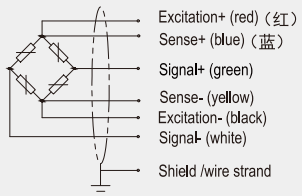
Compact installation at minnimum installation height. Easy installation.

Option: Alloy steel,Stainless steel,
Self-restoring due to pendulum bearing,
Wtih anti-liftoff device and lifting device.

Unit:mm




Wiring code (6-wire circuit)

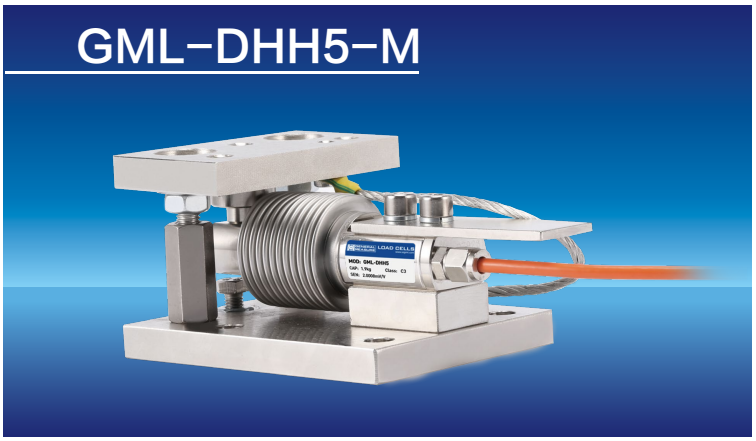



| Emax[t] | A | A1 | A2 | L | L1 | L2 | B | B1 | H | H1 | H2 | d1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5,1,2 | 114 | 12.5 | 89 | 177.5 | 12.5 | 152.5 | 114 | 89 | 105 | 17 | 17 | Ø13 |
| 3 | 114 | 12.5 | 89 | 177.5 | 12.5 | 152.5 | 114 | 89 | 108 | 19 | 19 | Ø13 |
| 4.4 | 150 | 18 | 112 | 235 | 25 | 185 | 150 | 112 | 125 | 19 | 22 | Ø17.5 |
| 7.5 | 150 | 18 | 112 | 235 | 25 | 185 | 150 | 112 | 135 | 22 | 29 | Ø17.5 |

## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

| Maximum capacity | t | 0.5, 1, 2, 4.4, 7.5 |
|---|---|---|
| Limit load | % of Emax | 150% |
| Breaking load | % of Emax | 200% |
| Tatal error of load cells | % of Emax | ±0.02,±0.03,±0.05 |
| Material | | Alloy steel or Stainless steel. |
| Cable : Diameter ø5mm Length | m | 3.5 |

# GML-DHH5-M

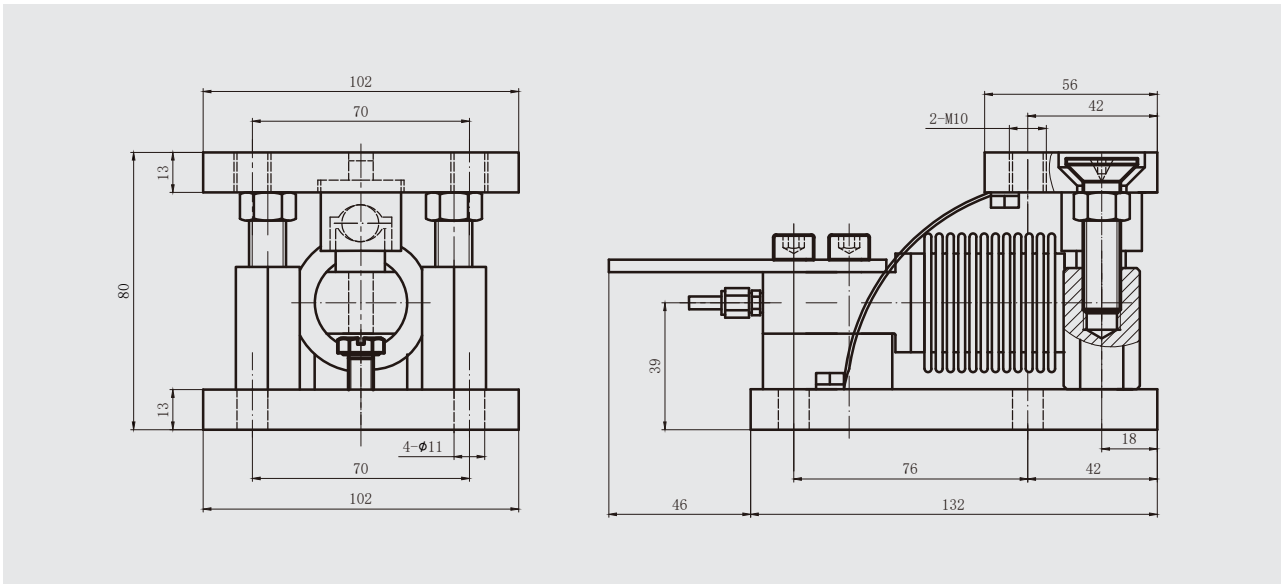


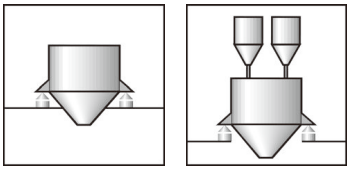
## Features

Equipped with self-restoring load cell GML-DSH5, Accuracy class C2,C3 .

Compact installation at minnimum installation height. Easy installation.

Option: Alloy steel,Stainless steel,
Self-restoring due to pendulum bearing,
Wtih anti-liftoff device and lifting device.



## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

| Maximum capacity | kg | 50 | 75 | 100 | 200 | 250 | 300 | 500 |
|---|---|---|---|---|---|---|---|---|
| Limit load | % of Emax | 120% | | | | | | |
| Breaking load | % of Emax | 200% | | | | | | |
| Tatal error of load cells | % of Emax | ±0.02,±0.03,±0.05 | | | | | | |
| Material | | Option: Alloy steel,Stainless steel. | | | | | | |
| Weight (incl.load cell) | kg | 8~9 | | | | | | |
| Adjustment range of the overload stop | mm | ≤0.33 | | ≤0.25 | ≤0.45 | | ≤0.8 | |
| Cable : Diameter⌀5mm Length | m | 3 | | | | | | |

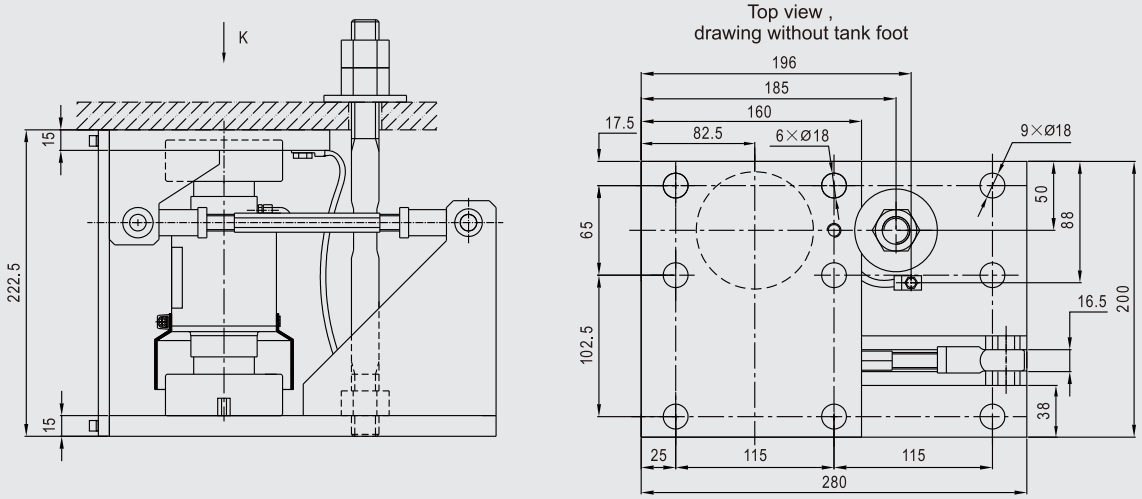
# GML-DHH4ZS-M

## Features

Equipped with self-restoring rocker pin load cell GML-DHH4ZS, Accuracy class C2,C3 .

Compact installation at minnimum installation height.
Easy installation.

Option: Alloy steel,Stainless steel,
Designed for lift-off device,
Stay rod included in the scope of supply.

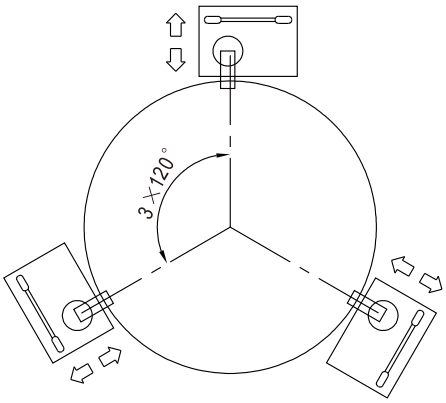


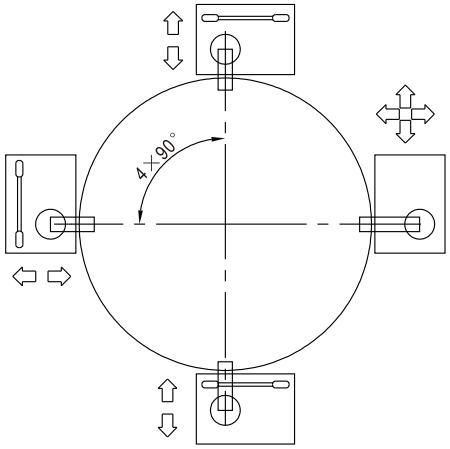

## Specifications Exc+ (Red); Exc-(Black); Sig+ (Green); Sig- (White)

| Maximum capacity | t | 10 | 20 | 25 | 30 | 40 | 50 |
|---|---|---|---|---|---|---|---|
| Limit load | % of Maximum capacity | 150% | | | | | |
| Restoring force (at 1mm side offset vertically to the control arm direction) | % of Applied load | 0.45 | 0.49 | 0.65 | 0.76 | 0.94 | 0.98 |
| Maximum permissible side offset transverse to the control arm axis | mm | 4.0 | | | | | |
| Maximum permissible horizontal force in the control arm direction | kN | 50 | | | | | |
| Max. permissible lifting force (when a lift-off device is used) | kN | 80 | | | | | |
| Material | | Option: Alloy steel,Stainless steel. | | | | | |
| Weight(G),approx | kg | 19 | | | | | |
| Cable : Diameter ø 6mm Length | m | 10 | 12 | | 14 | 16 | |

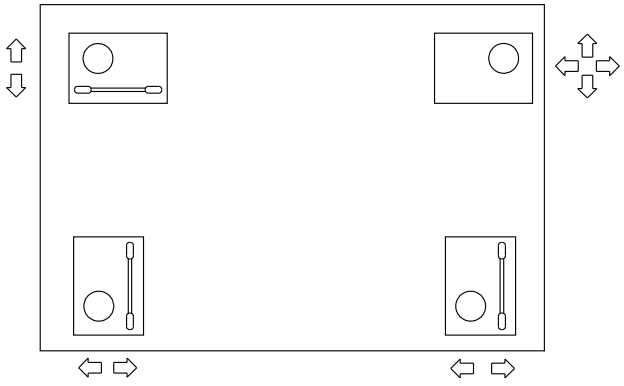
# Mounting examples for weighing modules with stay rods:

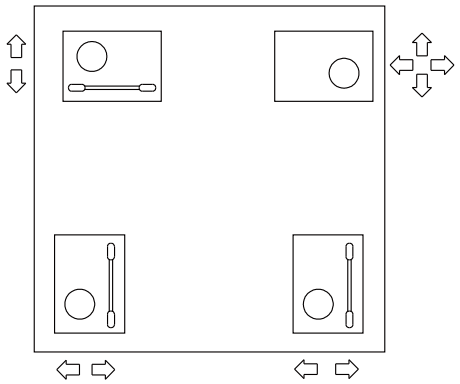
Cylindrical arrangement of the weighing module below tanks




Rectangular arrangement of the weighing module below tanks





Remark : Stay rod

Load introduction Degree of freedom

## Further accessory:

Fixed bearings with the same installation height as the weighing module.

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