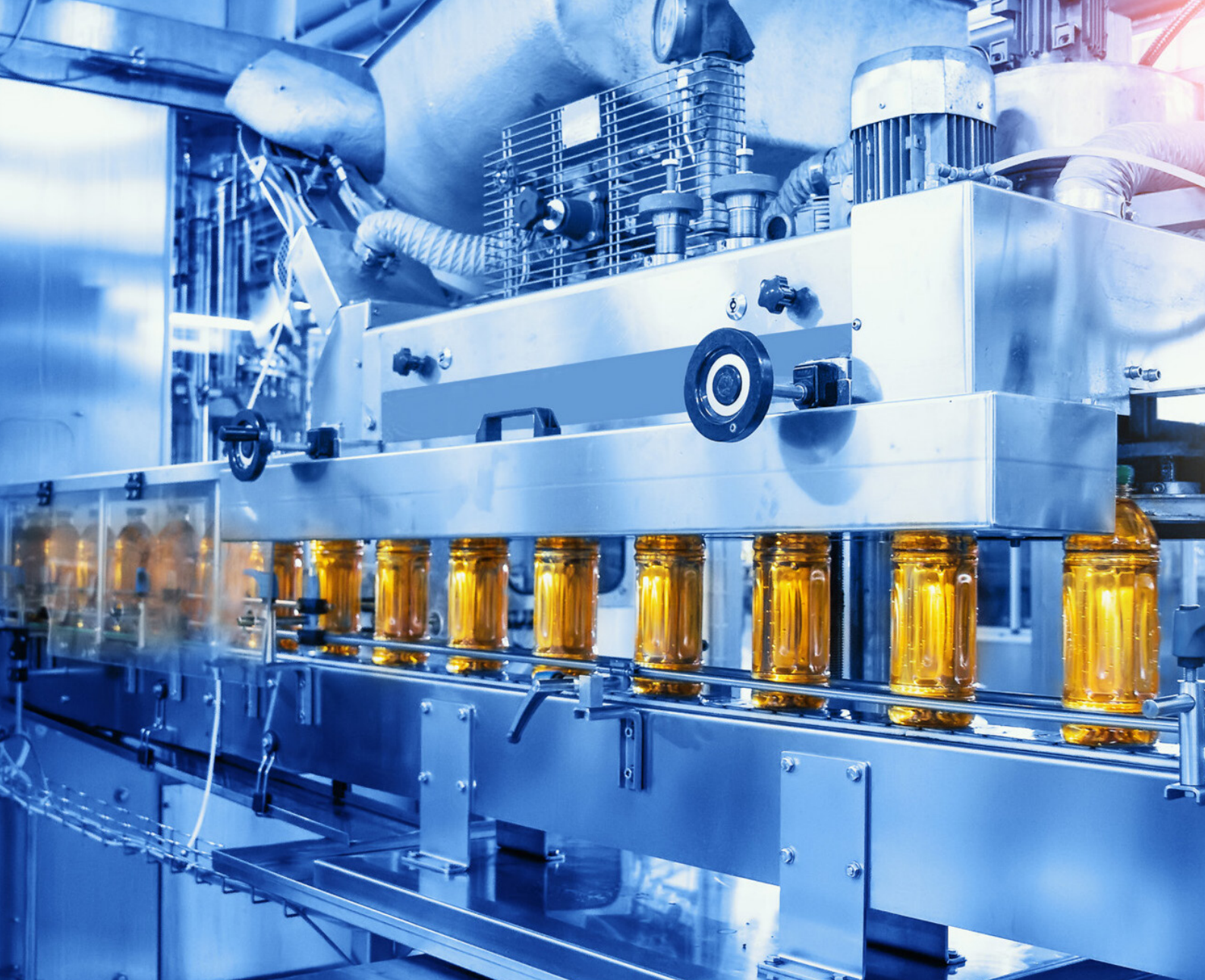




# High-Speed Weighing

Market Solutions

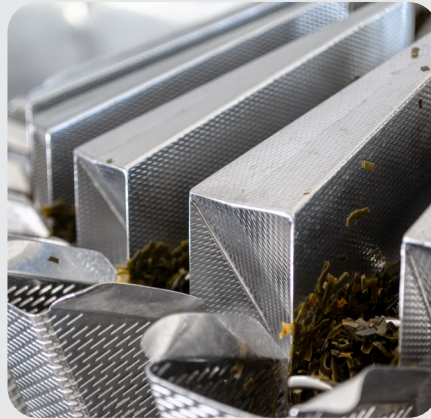
**VPG force sensors**  
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[VPGforcesensors.com](http://VPGforcesensors.com)

# Build the VPG transducers advantage into your high-speed weighing applications



High-speed in-motion system



Dynamic weighing

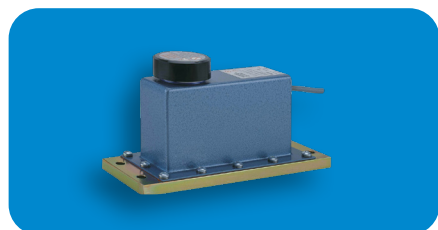


Rotary filling machine

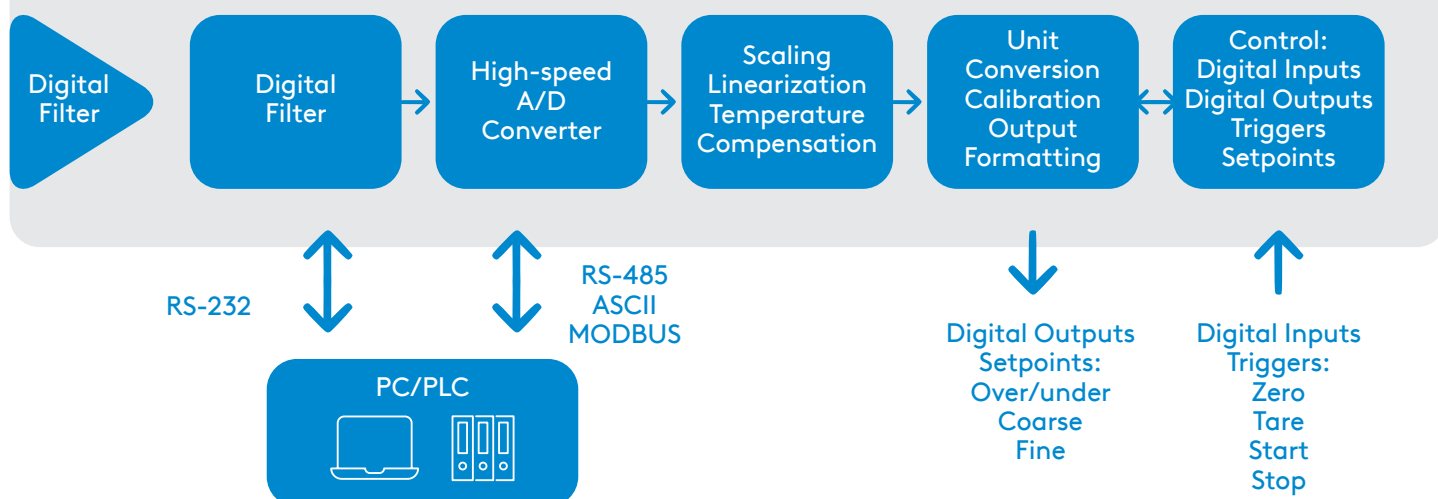
- Shorter settling time
- Faster weighing speeds
- Environmentally sealed and/or wash-down construction Stainless steel housing
- Ultra-fast response time
- High resistance to side loads
- Insensitivity to rotary dynamic force
- Ultra high-performance in
- dynamic weighing
- Multi-axis overload protection
- Mechanical tare load cancelling
- Extended load cell life
- Fluid damped load cell
- Fully calibrated and programmable
- filtered digital output from DHS
- Adjustable communication speed

# DHS—Dynamic Digital Interface

- Conversion of analog signal to digital data
- Full calibration and filtered digital output
- Link to any analog load cell and fluid-damped load cells
- Perfect solution to improve your weighing process
- Designed for easy installation and calibration in harsh process environments
- Cost-effective solution for your needs
- Guarantees high reliability and accurate production



## DHS Dynamic High-Speed Digital Interface



# Dynamic Solutions

VPG Transducers supplies the largest and most comprehensive product line for high-speed weighing. We offer the widest range of solutions for dynamic in-motion systems, and have 50 years of experience in producing load cells and fluid-damped load cells. Our products accommodate all your demands for filling, batching, and high-speed controlled processes.



## 9010 Self-Contained Fluid-Damped Load Cell

Fluid-damped load cell | Unique and adjustable tare | load-cancelling mechanism | Highly effective viscous damping | Built-in | overload limit stops | Fast weighing speed | IP65 protection | Aluminum housing, electroless nickel plating (optional stainless steel)



## 1410 Load Cell for Rotary Filling Machines

Specially designed for use in rotary filling machines | Short settling time | High resistance to side loads | Effective isolation of base vibrations | Centrifugal forces do not affect accuracy | Two mounting options



## 240 Fluid-Damped Load Cell

Painted steel construction (optional stainless steel) | OIML R60- and NTEP-approved | Available in metric and | UNC threads



## 1430 Damped Load Cell for Rotary Filling Machines

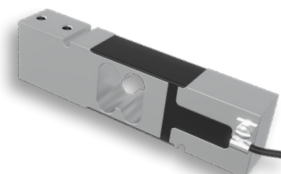
Stainless steel construction | Insensitive to rotary | dynamic forces | Single-point performance | Rotary speed to 13 rpm at 1 m radius | Sealed wash-down configuration



## 1010 / 1015 Aluminum Single-Point Load Cell



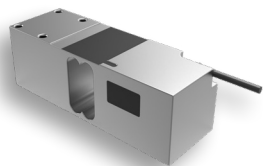
## 1033 Low-Profile Aluminum Single-Point Load Cell



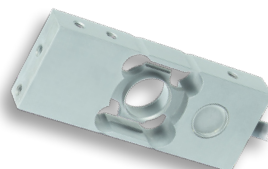
## 1042 Single-Point Aluminum Load Cell with C6 OIML Approval



## 1510 Hermetically Sealed Single-Point Load Cell



## 1260 Aluminum High-Capacity Single-Point Load Cell

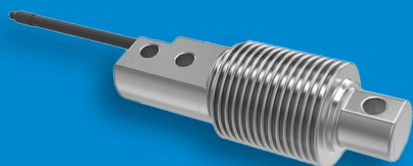


## HPS Hermetically Sealed Single-Point Load Cell

# Packaging Machine Solutions

VPG Transducers offers a wide range of load cells suitable for packaging machines with capacities between 5 and 500 kg. Rugged, stainless steel construction is designed for any area, from hazardous environments to the food industry

Robust, reliable, and designed to deliver high quality performance for years



## Model 355 - Capacities 5–500 kg

5, 10, 20, 30, 50, 100, 200, 250, 500 kg

Stainless steel construction

OIML R60 and NTEP approved

IP68 protection

Optional: EEx ia IIC T6 hazardous area approval; FM approval available



## Model SHB—Capacities 5–500 kg

5, 10, 20, 30, 50, 100, 200, 350, 500 kg

Fully welded, stainless steel construction

Hermetically sealed, IP66 and IP68

Certified to OIML R-60, 4000d and NTEP class IIIIL, 10000 divisions

Current calibration output (SC version) ensures easy and accurate parallel connection of multiple load cells

Optional: ATEX and FM certified versions are available for use in potentially explosive atmospheres



## Model HBB—Capacities 0–250 kg

10, 20, 30, 50, 75, 100, 200, 250 kg

Stainless steel and alloy steel construction

OIML C3 approved

IP68 protection for stainless version



## DHS Dynamic High-Speed Digital Interface

Link to any load cell or analog fluid-damped load cell

Convert the signal to digital data

Four opto-isolated digital inputs and outputs

Advanced configurable digital filtering

Reading on request or continuous output

Graphic User Interface (GUI) PC application enables easy setup, calibration, and monitoring

# VPG Transducers' Wide Range of Products Offers Solutions for Your Dynamic Weighing and Precision Control Applications

## Fluid-damped load cell

9010 / 240 for high-speed weighing

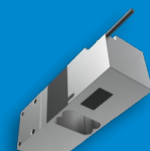
1430 / 1410 for rotary filling machines

**A wide range of load cells** (1010, 1033, 1042, 1063, 1260, 1510, HPS) for dynamic applications

**Dynamic high-speed digital interface DHS**

## Load Cells Type

### Load Cells

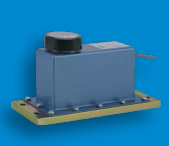


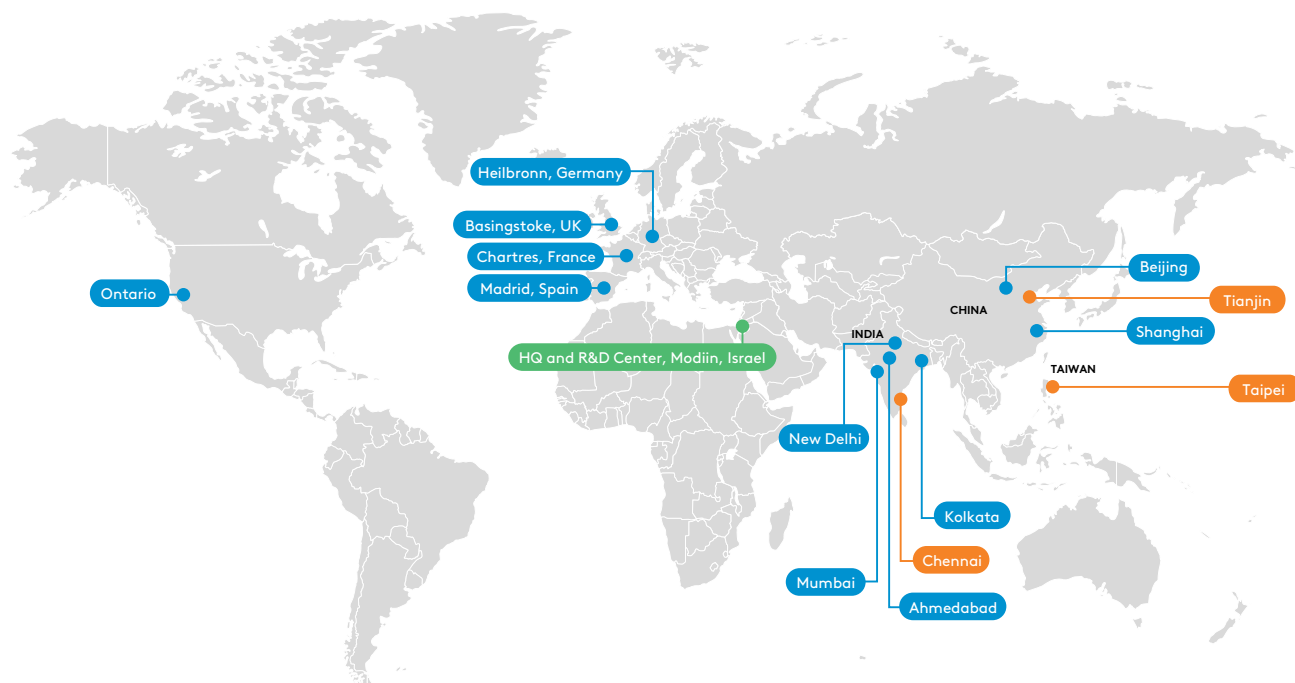
| Model                          | 1010                    | 1042                      | 1033     | HPS             | 1260     | 1510            |
|--------------------------------|-------------------------|---------------------------|----------|-----------------|----------|-----------------|
| Capacities                     | 3 –90kg                 | 1 –200kg                  | 10 –30kg | 6–60kg          | 50–660kg | 100–500kg       |
| Rated Output (mV/V)            | 2                       | 2                         | 2        | 2               | 2        | 2               |
| Relative Stiffness             | RFF. (1.0)              | 1042 – 0.8<br>1042S – 1.2 | 0.9      | 0.9             | 1.2      | 3.0             |
| Environmental Protection       | IP65<br>(optional IP67) | IP66                      | IP66     | IP66 / IP68     | IP66     | IP66 / IP68     |
| Safety Overload                | 150%                    | 150%                      | 150%     | 150%            | 150%     | 150%            |
| External Construction Material | Aluminum                | Aluminum                  | Aluminum | Stainless steel | Aluminum | Stainless steel |
| Optional Material              | –                       | –                         | –        | –               | –        | –               |
| Settling Time                  |                         |                           |          |                 |          |                 |
| Communication Interface        | –                       | –                         | –        | –               | –        |                 |
| Communication Protocol         | –                       | –                         | –        | –               | –        |                 |
| Applications                   | Batching                | ✓                         | ✓        | ✓               | ✓        | ✓               |
|                                | Filling                 | ✓                         | ✓        | ✓               | ✓        | ✓               |
|                                | Rotary Filling          |                           |          |                 |          |                 |
|                                | High Speed Weighing     |                           |          |                 |          |                 |

# Typical Applications

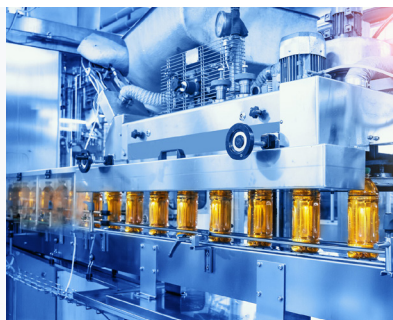
Check weighers  
Bottle rotary filling  
Multi-head packaging  
Dynamic batching and weighing  
Batching control

Packaging, filling, sorting, controlling  
High-speed in-motion weighing  
Rotary filling  
Multi-head combination precise weighing

| Load cells                                                                       |                                                                                   |                                                                                   | Fluid-damped load cells for rotary filling machines                               |                                                                                   | Analog fluid-damped load cells                                                      |                                                                                     | Digital interface                                                                   |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |  |  |
| <b>355</b>                                                                       | <b>SHB</b>                                                                        | <b>HBB</b>                                                                        | <b>1430</b>                                                                       | <b>1410</b>                                                                       | <b>240</b>                                                                          | <b>9010</b>                                                                         | <b>DHS</b>                                                                          |
| 5 –500kg                                                                         | 5 –500kg                                                                          | 10 –250kg                                                                         | 3 kg, 17 lb, 23 lb                                                                | 10, 20, 30 kg                                                                     | 2–50kg                                                                              | 3–90kg                                                                              | –4 mV/V to +4 mV/V                                                                  |
| 2                                                                                | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   | 2                                                                                   | –                                                                                   |
|                                                                                  |                                                                                   |                                                                                   | –                                                                                 | –                                                                                 | –                                                                                   | –                                                                                   | –                                                                                   |
| IP68                                                                             | IP66 & IP68                                                                       | IP68<br>For Stainless Steel                                                       | IP66                                                                              | IP66                                                                              | IP66                                                                                | IP65<br>(optional IP66)                                                             | IP66                                                                                |
|                                                                                  |                                                                                   |                                                                                   | Negative 120%<br>Positive 160%                                                    | Negative 120%<br>Positive 160%                                                    | 150%                                                                                | 400%                                                                                |                                                                                     |
| Stainless steel                                                                  | Stainless steel                                                                   | Alloy Steel and<br>Stainless steel                                                | Stainless steel                                                                   | Aluminum                                                                          | Coated mild<br>steel                                                                | Nickel plated<br>aluminum                                                           | Stainless steel                                                                     |
| –                                                                                | –                                                                                 | –                                                                                 | –                                                                                 | –                                                                                 | Stainless steel                                                                     | Stainless steel                                                                     |                                                                                     |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   | 300 milliseconds                                                                  | 40-300<br>milliseconds                                                              | 40-300<br>milliseconds                                                              |                                                                                     |
|                                                                                  |                                                                                   |                                                                                   | –                                                                                 | –                                                                                 | –                                                                                   | –                                                                                   | RS232, RS485                                                                        |
|                                                                                  |                                                                                   |                                                                                   | –                                                                                 | –                                                                                 | –                                                                                   | –                                                                                   | ASCII, Modbus                                                                       |
| ✓                                                                                | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                     |                                                                                     | ✓                                                                                   |
| ✓                                                                                | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |
|                                                                                  |                                                                                   |                                                                                   | ✓                                                                                 | ✓                                                                                 |                                                                                     |                                                                                     | ✓                                                                                   |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |



VPG Force Sensors develops and manufactures the world's most advanced force measurement sensors and solutions, delivering optimal performance and empowering tomorrow's innovations. With our renowned brands, we offer the largest range of load cells, weighing instruments and accessories available from a single-source supplier. Chosen for their high accuracy, uncompromising quality and long-lasting reliability, our products are implemented in millions of machines, devices and systems around the world. Due to our large manufacturing capacity, fast turnaround on orders, high product quality and competitive cost structure, we are a leading load cell supplier to many industries and markets. VPG Force Sensors is part of VPG (Vishay Precision Group), a global leader in precision measurement sensing technologies.



## Sales Contact

[vpgfs.americas@vpgsensors.com](mailto:vpgfs.americas@vpgsensors.com)

[vpgfs.asia@vpgsensors.com](mailto:vpgfs.asia@vpgsensors.com)

[vpgfs.emea@vpgsensors.com](mailto:vpgfs.emea@vpgsensors.com)

# VPG force sensors

Celtron ▪ Revere ▪ Sensortronics ▪ TedeA-Huntleigh



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