VISHAY
PRECISION
GROUP

Product Overview

Process Weighing Technologies
BLH • Nobel Weighing Systems
Brands of VPG Process Weighing

BLH Nobel Elektronik

www.weighingsolutions.com

The VPG Process Weighing organization designs and manufactures outstanding products, and is a turnkey supplier of weighing and batching solutions for the process industry.

Whether used to weigh fractions of a gram or thousands of tons, our precision weighing systems address every imaginable weight-processing need plant-wide – from quality reactor vessels to ingredient storage bins to clean-in-place batching processes.

KIS Load Cells

Simple to install, KIS Load cells are easily adapted to special weighing applications. A moveable loading point eliminates the need for stay rods and other expensive mechanical supports, so weighing results are not compromised by thermal expansion of the support structures. In addition, highly accurate KIS load cells can tolerate side-loads up to 100%. This is particularly valuable for applications where structural deflection or wind loads are present and allows process vessels to be weighed while agitated.

Instrumentation

We offer a complete program of instrumentation, transmitters, and batching units. Our instruments are known for their reliability, user-friendliness, and their ability to communicate easily with factory networks.

Meeting Your Needs

Because we design both load cells and instrumentation to specific customer requirements, we are able to offer complete solutions to your weighing needs. Our system and application engineers possess the know-how needed to solve intricate weighing problems. We are happy to put our expertise to work for you.

Batching Processes—Reactors and Process Vessels

VPG Process Weighing offers batching systems to help maximize product quality, consistency and safety. Our specially developed instrumentation includes over 250 application software packages that can be adapted to meet your needs.

Process Measurement— Tanks, Silos, and Mixers

Our unique KIS Beam load cell provides accurate measurement in the most demanding process environments. Requirements for simple weight measurement on tanks or stable measurements during mixing are equally well met. Our instrumentation systems are powerful, flexible and user-friendly, and enable easy calibration and set-up.
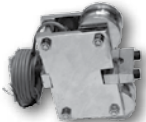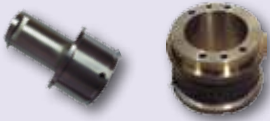
Special Weighing Demands

For over 35 years, customers have turned to the experts at VPG Process Weighing for special weighing installations. Whether you are interested in converting a crane in a steel mill or developing a weighing system for a pharmaceutical pilot plant, we can provide a solution.

Weigh Modules

	• Simple installation • Moveable load point • Intensitive to side loads • Extremely accurate	• Rugged • Degree of protection IP67 • All units available in ATEX version	Ex
KIS-1	**Combined error:** % of R.O. ±0.03 **Repeatability:** % of R.O. 0.01 **Overload:** Safe % of R.L. 100 (50 for 300 kN) Ultimate % of R.L. 200 (100 for 300 kN) **Side Load:** Safe % of R.L. 100 (50 for 300 kN) Ultimate % of R.L. 200 (100 for 300 kN) Request product data sheet number 12308		**Capacities** 50, 100, 200, 300, 500 kN
KIS-11	**Combined error:** % of R.O. KIS-11 ±0.02 **Repeatability:** % of R.O. 0.01 **Overload:** Safe % of R.L. 100 Ultimate % of R.L. 200 **Side Load:** Safe % of R.L. 100 Ultimate % of R.L. 200 Request product data sheet number 12314		**Capacities** 50 kN
KIS-2 and KIS-3	**Combined error:** % of R.O. KIS-3 ±0.02 KIS-2 ±0.05 **Repeatability:** % of R.O. 0.01 **Overload:** Safe % of R.L. 100 (50 for 30 kN) Ultimate % of R.L. 200 (100 for 30 kN) **Side Load:** Safe % of R.L. 100 (50 for 30 kN) Ultimate % of R.L. 200 (100 for 30 kN) Request product data sheet number 12309 (KIS-2) and 12310 (KIS-3)		**Capacities** 1, 2, 5, 10, 20, 30* kN (*30 kN only available on KIS-2)
KIS-8	**Combined error:** % of R.O. ±0.075 **Repeatability:** % of R.O. 0.02 **Overload:** Safe % of R.L. 50 Ultimate % of R.L. 100 **Side Load:** Ultimate % of R.L. 100 Request product data sheet number 12311		**Capacities** 1, 2, 5, 10, 20, 50, 100, 200 kN
KIS-9	**Combined error:** % of R.O. ±0.1 **Repeatability:** % of R.O. 0.02 **Overload:** Safe % of R.L. 50 Ultimate % of R.L. 100 **Side Load:** Ultimate % of R.L. 100 Request product data sheet number 12312		**Capacities** 5, 10, 20, 50, 100 kN
KIMD-1	**Combined error:** % of R.O. ±0.1 **Repeatability:** % of R.O. 0.02 **Overload:** Safe % of R.L. 50 Ultimate % of R.L. 100 Request product data sheet number 12318		**Capacities** 500, 800 kN

Weigh Modules

KOM-1

		Capacities
Combined error:	% of R.O. ±0.5	**Capacities**
Repeatability:	% of R.O. 0.5	10, 20, 50, 100,
Overload:	Safe % of R.L. 100	200, 500 kN
	Ultimate % of R.L. 200	

Request product data sheet number 12313

EconoMount

- High grade stainless steel load beams
- Overload and uplift safety protection
- Fixed, full-floating, semi-floating mounting
- NTEP, OIML, FM, and CSA approvals

Request product data sheet number 12165

Capacities
500, 1.25 K,
2.5 K, 5 K,
and 10 K lb

EZ-Mount

- High grade stainless steel construction
- Overload and uplift safety protection
- Accommodates process thermal expansion
- NTEP, OIML, and FM approvals

Request product data sheet number 12154

Capacities
11 to 1.1 K lb
(5, 10, 20, 50, 100,
200, 250, and
500 kg)

PRO-Mount

- Ideally suited for applications with high dead-load to high-load ratios
- Self-checking design for thermal expansion
- Load beam sealed to IP67 standards
- NTEP, OIML, FM, and CSA approvals

Request product data sheet number 12153

Capacities
10 K, 15 K, 25 K,
35 K, 50 K,
and 75 K lb

KDH Series

Designed for large indoor and outdoor process or silo type vessels, KDH modules meet ANSI and UBC structural requirements for wind load and seismic applications. A floating top plate and yoke arrangement allows each module to accommodate vessel thermal expansion and contraction without measurement errors.

- 100% stainless steel construction—KDH-3B
- Seismic and wind resistant self-checking design
- 0.02% repeatability full scale
- FM and CSA approvals

Request product data sheet number 12161 and 12162

Capacities
22.5 K, 45 K,
111.5 K, 200 K,
and 300 K lb

Z-BLOK

- Weigh modules with seismic and wind load approvals
- Inherent structural "overdesign" for ANSI and UBC
- Double cantilever load beam improves accuracy
- 0.01% repeatability full scale
- FM and CSA approvals

Request product data sheet number 12163

Capacities
500, 1 K,
2 K, 5 K,
10 K, 20 K,
and 50 K lb

Load Cells		
KISD-6	**Combined error:** % of R.O. ±0.1 **Repeatability:** % of R.O. 0.02 **Overload:** Safe % of R.L. 100 Ultimate % of R.L. 200 **Side Load:** Safe % of R.L. 100 Ultimate % of R.L. 200 Request product data sheet number 12315	**Capacities** 50, 100, 200, 400, 1000 kN
KOSD	**Combined error:** % of R.O. ±1 **Repeatability:** % of R.O. 0.5 **Overload:** Safe % of R.L. 100 Ultimate % of R.L. 200 **Side Load:** Safe % of R.L. 100 Ultimate % of R.L. 200 Request product data sheet number 12316	**Capacities** 1000, 2000 kN
KOSD-40	**Combined error:** % of R.O. ±0.1 **Repeatability:** % of R.O. 0.5 **Overload:** Safe % of R.L. 100 Ultimate % of R.L. 200 **Side Load:** Safe % of R.L. 100 Ultimate % of R.L. 200 Request product data sheet number 12317	**Capacities** 10, 20, 50, 100, 200, 500 kN
U3SB "S" Type	• Constructed with quality nickel plated, alloy tool steel for superior corrosion resistance • Stainless steel versions available • Sealed to IP67 standards • NTEP and FM Approvals Request product data sheet number 12152 and 12166	**Capacities** 50, 100, 150, 250, 300, 500, 750, 1 K, 1.5 K, 2 K, 2.5 K, 3 K, 5 K, 10 K, 15 K, and 20 K lb
Canister	• Compact, rugged with low deflection • Compression, tension, or universal service • Sealed to IP67 standards • FM and CSA approvals Request product data sheet numbers 12170, 12171, 12172, 12173, and 12174	**Capacities** 500 to 500 K lb
Floor and Bench Scales	• Platform sizes from 10 inches square to 5 x 7 feet • Stainless steel versions available • Compatible with all BLH indicators, transmitters, and network products Request product data sheet number 12175 and 12176	**Capacities** 5 to 10 K lb

Load Cells		
KIMD-M	Load cell module for heavy duty application with moveable load point in KIS principal. This load module is designed for harsh environment with high accuracy Request product data sheet number 12340	**Capacities** 500-1000 kN and 1500-2000 kN
CLC	Low profile shear force Load Cell Request product data sheet number 12345	**Capacities** 25, 50, 100 and 200 ton
RTT	Rope tension transducer clamp-on module for rope and wire forces measurement Request product data sheet number 12339	–
Custom Load Cells	We can design load cells, based on different principals and sizes, to meet your needs.	**Capacity** Any

Load Beams that Serve as Pins, Shafts, and Axles

We offer a unique series of load beams for use as axles, pins, and shafts. These cells replace "dead" shafts in bogies, pulleys, and coupling devices, thereby providing live force measurement for crane scales, aircraft/ship wheel bogies, push-pull systems, and other onboard devices.

Applications

- Crane scale pulley wheels
- Axle replacements in multiple bogey systems
- Load sensing sheave axle pins

Beam Features

- Stainless steel construction
- Capacities from 10 kN to 2 MN
- IP67 Protection with ATEX Certification available

Instrumentation

- **Developed for process industry**
- **Available for several communication options**
- **Modern design**
- **High accuracy**
- **Easy to calibrate**
- **Reliable and user-friendly**

AST 3P

DIN Rail Mounted, High-Performance Transmitter

- Analog output ±10 VDC, 0-20 mA or 4-20 mA
- Serial communications: RS-485 Modbus RTU protocol
- Internal resolution >8000000 counts
- Relay outputs
- Patented A/D converter

Request product data sheet number 12165

Instrumentation

AST 3IS

DIN Rail Mounted, High-Performance Isolation Amplifier

- Designed for applications with strain gage transducers inside hazardous areas and without the need of zener barriers
- Data and performance identical to that of AST 3P

Request product data sheet number 12302

WST 3P

DIN Rail Mounted, High-Performance Weight Transmitter

- Tare, gross/net and zero function
- Fieldbus interface: Profibus DP
- Analog output ±10 VDC, 0-20 mA or 4-20 mA
- Serial communications: RS-485 Modbus RTU protocol
- Internal resolution >8000000 counts
- Relay outputs for level or setpoint control
- Patented A/D converter

Request product data sheet number 12303

TAD 3

Very Accurate Weight Processor for Panel Mounting

- Excellent connectivity and operator interface
- Customized software
- Easy set-up via front panel or PC
- Comprehensive batching and recipe handling capacity in two versions — Batching of up to six components in coarse and fine feeding phases; the extended Recipe version storing up to 30 recipes and handling up to 24 activities per recipe
- Batching is carried out using separate, digital I/O units. Non-weighing functions such as stirring, heating, and dumping can also be controlled

Request product data sheet number 12333

WIN 3

Weight Indicator

- Housed in a rigid IP65 stainless-steel case
- Three different levels can be monitored by relay outputs. Remaining keys are used for simple set-up and calibration of the instrument
- Analog output 0-10 V, 0-20 mA or 4-20 mA
- Communication via interfaces RS-232 or RS-485

Request product data sheet number 12305

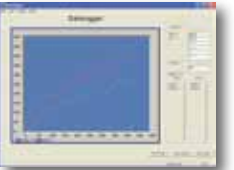| PC-Software	
deltaCOM	• Valuable tool for configuration, calibration and servicing of Nobel Weighing Systems transmitters, indicators and weight processors • Works under Windows 95/98/2000/NT4/ME/XP Request product data sheet number 12304
Batchview	• A PC-based software package for remote monitoring and control of Nobel Weighing Systems' TAD 3 Weight Indicator with optional batching function • Complete overview of the full batching sequence and setpoints. Allows control of setpoint values start, stop, halt, restart, etc. Save and load batch data from a PC • Can be customized to meet special requirements Request product data sheet number 12306
Datalogger	• Utility program for plotting and logging weight signal over time. Can be used with any Nobel Weighing Systems instrument with a Modbus communication and can plot up to 6 curves in one graph, and up to 2000 points (per curve) in each scan • Scans can be started manually, or triggered on a value Request product data sheet number 12307
Controllers/Indicators	
LCp-104	**Safe-Weigh® Systems for Quality Critical Applications** • Display individual load cell data as weight or percent of load • Continual, proactive diagnostics assure system performance • Intuitive digital filtering and multiple analog outputs • Overload status monitoring of each system load cell • DeviceNet, Profibus, A-B Remote I/O, or Modbus Plus Interface Request product data sheet number 12179
LCp-100/200	**Weight Indicator/Controllers** • Designed for precise high-speed process weighing applications • Interface with any PLC, DCS, or PC-based process control system • A-B Remote I/O, Modbus Plus, Profibus or DeviceNet protocol • Ultra efficient Plug-n-Weigh® set-up and calibration • Weight and mass flow measurement with setpoint control (200) Request product data sheet number 12180 and 12181
G4	**Multi-Vessel Weigh System Controller** • Measure, monitor, and control up to 8 vessels simultaneously • Synchronization of measured channels (vessels) • Vibrant graphical user interface (GUI) • High speed performance (300 updates/second) • Expandable I/O capability Request product data sheet number 12207 (Panel Mount) and 12208 (Rail Mount)

Transmitters

DXp-40

High Resolution Weight Transmitter

- Individually digitized load cell data for superior system accuracy
- Continuous diagnostics of system performance
- Keypad calibration eliminates expensive deadweight calibration
- Optional dynamic digital filtering rejects process "noise"
- Interfaces include Modbus RTU and A-B Remote I/O
- Web tension measurement version available

Request product data sheet number 12177

DXp-10/15

Blind Weight Transmitters

- Microprocessor-based "blind" weight transmitters
- Integral summing junction circuit for multi-cell applications
- 50,000 count (DXp-15) or 20,000 count (DXp-10) resolution
- A-B Remote I/O or Modbus RTU interface available (DXp-15)
- Standard NEMA 4/4X enclosure for harsh environments

Request product data sheet number 12178

PS-1040/45/50

Weight Transmitters

- Panel or DIN rail mount configurations
- Push button configuration and calibration
- Ten-point load cell linearization
- 0-10 VDC or 4-20 mA isolated analog output
- Peak hold measurement feature
- Keypad entry or dead load calibration
- Selectable/adjustable digital filtering
- Serial communication with Modbus RTU protocol

Request product data sheet number 12156 and 12157

PS-2010W

Transmitter/Controller

- Compact, full function weight indicator
- DIN rail mount capability
- 700,000 count resolution; 8 millisecond sample rate
- Dynamic digital filtering with online diagnostics
- Eight open collector setpoint outputs with main and dribble operation
- High speed—120 updates-per-second
- 4-20 mA current output
- 24 VDC version available

Request product data sheet number 12186

PS-1020

Analog Transmitter

- Complete load cell signal conditioner
- Precise 10 VDC excitation supply for up to four load cells
- Selectable 0-5 VDC, 0-10 VDC, or 4-20 mA analog output
- Independent zero and span adjustments
- DIN rail "Snap Track" mounting
- Adjustable analog filtering
- Integral load cell summing

Request product data sheet number 12158

Calibrators

FSk-40

Complete Field Service Kit

Start-up, commissioning, routine servicing, and calibration of process weighing systems can be simplified significantly using the FSk-40 Service and Calibration Kit. This complete kit is equipped with a four-channel load cell instrument, an instrument calibrator, a serial communication module, operation and servicing manuals, and a set of 10-foot remote connection cables. The entire assembly is housed in a rugged, portable suitcase with shock mounting.

Request product data sheet number 12191

Model LCc-II

Load Cell Calibrator

• For indication and calibration of up to 10 load cells
• Ten registers with 10-point linearization curves each
• Quick Cal, 10-point dead load, or data sheet calibration/each register
• Peak and valley storage capability for each register

Request product data sheet number 12185

Model 325

Precision Calibrators

• Compact, rugged construction for cal lab or plant floor service
• Model 625: five ranges, 56 calibration points, 0.05% accuracy
• Model 325: eight ranges, three bridge impedance selections, vernier
• Model 125 Pocket Calibrator: palm sized, four selectable ranges

Request product data sheet number 12190

Accessories

Load Cell Tester 1006

A load cell tester with calibration and diagnostic functions.

GATE 3S

Communication link between local network for transferring weight, force or servo data over external networks (field buses) to PCs or PLCs.

Request product data sheet number 12300

VISHAY PRECISION GROUP

Accessories

PS-121

Power Supply

Request product data sheet number 12155

SL-4

The junction box allows fast and easy connection of many transducers to a single weighing instrument.

Request product data sheet number 12321

SL-5

Rugged summing junction box, build for harsh environment. Easy connection to load cell tester model 1006 for testing of individual transducer, calibration, service and diagnostic.

Request product data sheet number 12342

RD 10 Display

RD 10 is a compact, digit-for-digit, high visibility remote display. The large LED display (57mm digits) and wide viewing angle contribute to ease of reading at long distances.

Request product data sheet number 12346

Services

Support

Application Support and Field Service

VPG Process Weighing Application Engineers are the best in the business. With over 50 years of accumulated process industry knowledge and experience, our Application Engineers profile and model your system before you buy it. After installation, our Field Service Engineers fine tune it for maximum dynamic performance and repeatability to meet your expectations. The Field Engineering group provides on-site startup, calibration, and service 24 hours a day, 7 days a week, anywhere in the world.

Our service engineers are equipped and trained to perform a wide range of calibration procedures. Available service contracts offer a turn-key calibration program that includes full computer generated documentation of results and traceability of methods and equipment.

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