

Pulp and Paper Applications

Process Weighing, Web Tension, and Force Control Systems

Market Solutions



SMART SOLUTIONS FOR
DEMANDING INDUSTRIES

BLH NOBEL
A VPG Brand

Paper Rolls, Pulpers and Coating Kitchen

BLH Nobel has four decades of experience in pulp and paper mill process control. In addition to providing precision force and web tension measurement for machine operation, we have extensive experience in mill process weighing. We provide weighing systems that are insensitive to side load forces introduced by thermal expansion and vibration. This guarantees high reliability and accurate production in coating kitchens. We weigh finished "Jumbo" rolls with overhead crane scales or at fixed weighing stations. Conventional rolls are weighed on lifting tables after slitting and winding. Pulpers and barking drums are weighed by high-capacity load cell systems that also control filling levels. Our transducers and instruments are designed for easy installation and use, and provide excellent performance in harsh process environments.

We offer the broadest range of load cells and weighing instrumentation on the market. Providing customized solutions, special load cells and application specific software is not just an option—it is standard procedure with us.



WE BELIEVE IN
RELIABILITY.

That's why our custom load cells are tailored to your specific needs.

WE BELIEVE IN
CONTROL.

That's why our solutions measure actual force.

WE BELIEVE IN
QUALITY.

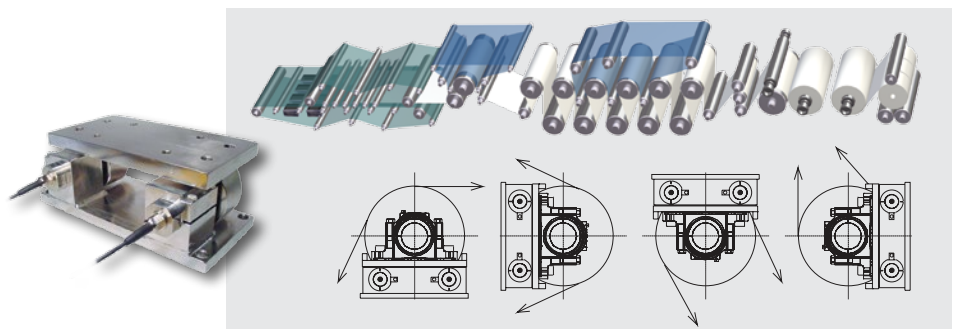
That's why we design, build, and deliver a custom made solution with very competitive lead times.

Web Tension Measurement Unit

An FMU consists of two precision load cells, a load plate that carries the pillow block, and a base plate that mounts to the machine support. The unique design of the FMU allows measurement of the resultant web tension force. Because the load cells are cylindrical, they can be rotated to measure in the direction of the exact resultant force. Measuring the resultant force rather than a vertical or horizontal component assures the highest possible accuracy and eliminates wrap angle restrictions. Whether you are using standard products or customized solutions, our highly skilled system engineers, service technicians and flexible production sites can meet your demands with a high level of professionalism.

Applications

- Paper machines
- Steel strip tension equipment
- Felts, dryers, calenders, coaters, and laminators
- Winders and rewinders



Dynamic Resultant Force Measurement

Patented HTU universal web tension load cells measure force in both vertical and horizontal directions. This makes it possible to calculate the exact web tension and resulting force, even in the presence of alternating web angles. The low height of the HTU module makes it easy to fit into existing machines under a pillow block, and the load cell is temperature compensated to 250°F. These features add up to zero maintenance, simple retrofit, and long-term reliability for machines that continuously process material in the paper industry.

Applications

- Calenders
- Winders
- Coaters
- Breakers
- Rewinders
- Laminators
- Felts
- Wire sections
- Dryers



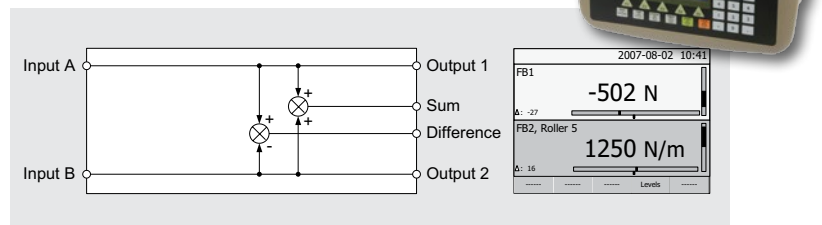
G4 – State-of-the-Art Instrument for Weighing and Force Measurement

The G4 family of process control instruments offers high speed, high performance control for industrial weighing/force measurement applications plant wide. G4 units set new standards geared for today's application demands and tomorrow's expanding requirements. The multichannel G4 has synchronized samplings of all channels, which enables true measurement that is not affected by severe vibration and shock.

G4 instruments accommodate up to seven different, easily installed modules for advanced performance, more functional channels, custom applications, or repair. This provides customers with a highly flexible, upgradeable, single instrument system capable of weighing up to eight independent vessels or scales. Load cells are measured via function blocks (force) and input calibrated separately. Inputs and outputs can be configured according to customer requirements. G4 supporting a wide variety of industrial communication interfaces and protocols such as Ethernet/IP remote access, digital I/O and web browser support. G4 instruments have four base mounting options: DIN Rail, Panel, Desktop, and Harsh Environment. Custom software designed to customer requirements for special applications is available upon request.

Applications

- Process weighing and control
- Force measurement
- Web tension measurement and control
- Automation
- Force vector calculations
- High dynamic force measurement
- High speed batching/blending systems



Refiners Position and Pressure Control

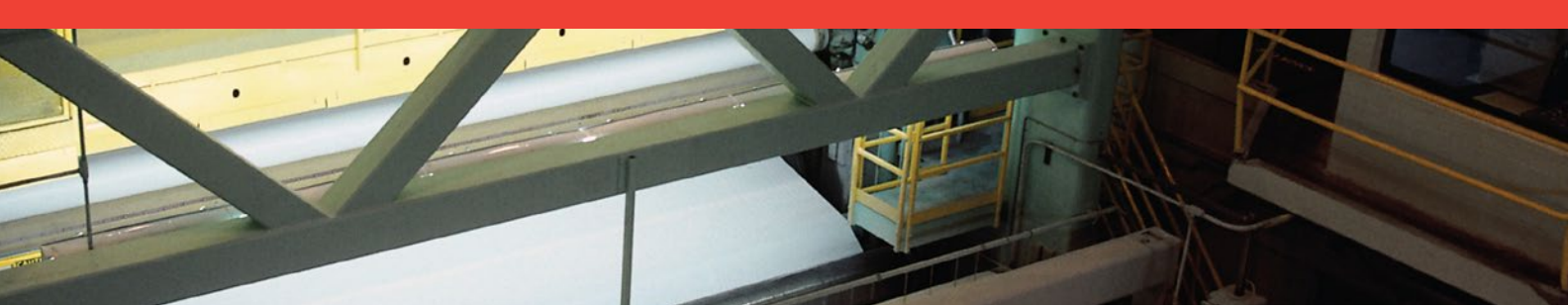
Disc Gap Control (DGC) Systems are installed in pulp and paper mills worldwide. These systems were designed to fit most new disc refiners and enable easy retrofit of old ones. The system incorporates a manual- or stepper motor-controlled hydraulic servo valve, with mechanical feedback from the grinding plate and a transducer for measuring the disc position. An electronic unit controls and monitors disc gap and wear. The gap can be set either manually or remotely. The position of the discs is maintained independent of load variations or loss of power.



Disc refiner with SK 700 tracer valve

SMART SOLUTIONS FOR
DEMANDING INDUSTRIES

BLH NOBEL
A VPG Brand



Contact

Americas: blhnobel.usa@vpgsensors.com

Europe: blhnobel.eur@vpgsensors.com

Asia: blhnobel.asia@vpgsensors.com

blhnobel.com

DISCLAIMER: ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE. Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "VPG"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product. The product specifications do not expand or otherwise modify VPG's terms and conditions of purchase, including but not limited to, the warranty expressed therein. VPG makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. **To the maximum extent permitted by applicable law, VPG disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.** Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on VPG's knowledge of typical requirements that are often placed on VPG products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. You should ensure you have the current version of the relevant information by contacting VPG prior to performing installation or use of the product, such as on our website at vpgsensors.com. No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of VPG. The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling VPG products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify VPG for any damages arising or resulting from such use or sale. Please contact authorized VPG personnel to obtain written terms and conditions regarding products designed for such applications. Product names and markings noted herein may be trademarks of their respective owners.

VPW-PL0017-1507