Press Release

Bosch Rexroth’s system simulation becomes reality
Simulation program realistically assesses the dynamics of drive solutions

Ready for virtual commissioning; simulation model of a Sytronix variable-speed pump drive with variable load profile

The increasing complexity and performance requirements for plastics machines require feasibility studies in the development process of projects to substantiate the selection of systems and components. Bosch Rexroth offers simulations of holistic drive systems that allow the interaction of hydraulics, mechanical systems, electronics and software to be assessed at an early stage. In addition, Rexroth demonstrates the validity of the simulation of an energy-efficient Sytronix drive in direct comparison of computed results with the performance values of real hybrid drives.

Optimizing series machines is a complex process with more and more machine manufacturers relying on simulation programs to accelerate optimization. The programs available on the market often examine sub-systems of machines and do not take in account special characteristics of fluid power technology.

Based on worldwide application experience in a wide variety of plastics processing machines, Rexroth has developed simulation programs that cover
Press Release

all drive and control technologies. In cooperation with machine manufacturers, Rexroth’s simulation programs verify customer applications with regard to achievable dynamics under normal operating conditions, including extreme situations (power failure, emergency stop) as well as the rating of selected drive components with regard to dimensions and operating conditions. Rexroth proposes control concepts and parameterization (e.g. for commissioning) and optimization in terms of dynamics and energy.

This virtual commissioning process carried out in advance substitutes expensive real machine prototypes. Even extreme situations can be examined easily. In addition, it is possible to recognize potential problems and eliminate them with little effort. Simulation also allows access to all measured variables of the drive system and the machine, including variables that can otherwise not be acquired on real machines.

Rexroth presents the analysis of load profile changes of a typical injection cycle in conjunction with a real variable-speed drive and demonstrates how the effects of the use of an energy-efficient Sytronix SvP 7010 drive can be established with high accuracy before the drive is actually installed.

About Bosch Rexroth:
Economical, precise, safe, and energy efficient: drive and control technology from Bosch Rexroth moves machines and systems of any size. The company bundles global application experience in the market segments of Mobile Applications, Machinery Applications and Engineering, Factory Automation, and Renewable Energies to develop innovative components as well as tailored system solutions and services. Bosch Rexroth offers its customers hydraulics, electric drives and controls, gear technology, and linear motion and assembly technology all from one source. With locations in over 80 countries, roughly 36,700 associates generated sales revenue of approximately 5.7 billion euros ($7.6 billion) in 2013. To learn more, please visit www.boschrexroth-us.com

About Bosch:
The Bosch Group is a leading global supplier of technology and services. In 2013, its roughly 281,000 associates generated sales of 46.1 billion euros ($61.2 billion.) (NB: Due to a change in accounting policies, the 2013 figures can only be compared to a limited extent with the 2012 figures). Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. The Bosch Group comprises Robert Bosch GmbH and its roughly
Press Release

360 subsidiaries and regional companies in some 50 countries. If its sales and service partners are included, then Bosch is represented in roughly 150 countries. This worldwide development, manufacturing, and sales network is the foundation for further growth. In 2013, the Bosch Group invested some 4.5 billion euros in research and development and applied for some 5,000 patents. This is an average of 20 patents per day. The Bosch Group’s products and services are designed to fascinate, and to improve the quality of life by providing solutions which are both innovative and beneficial. In this way, the company offers technology worldwide that is “Invented for life.” Additional information is available online at www.bosch.com, www.bosch-press.com and http://twitter.com/BoschPresse

In the U.S., Canada and Mexico, the Bosch Group manufactures and markets automotive original equipment and aftermarket products, industrial drives and control technology, power tools, security and communication systems, packaging technology, thermotechnology, household appliances, healthcare telemedicine and software solutions. For more information, please visit www.boschusa.com, www.bosch.com.mx and www.bosch.ca

###