

## Power tools with comfortable Celstran® LFRT handle "Good vibrations"

Professional power tools demand high performance. But high power is also often accompanied by strong vibrations. One notable exception to this rule, however, can be found in the angle grinders and impact drills from Bosch, a tool manufacturer that relies on "Vibration Control" and Celstran® LFRT to keep vibration to a minimum.



This extra handle made of long glass fiber reinforced Celstran® and an elastomer lets users operate tools without tiring.

**Comfortable operation included as standard equipment**

Vibration damping via decoupled

handles and a damping element facilitates work with these powerful tools. Their low weight and the ergonomic touch and feel of their handles help make them easier to hold. That's why the extra handle of these large professional angle grinders and drills is produced by three-component injection molding from a special combination of materials: Long glass fiber reinforced Celstran® and

an elastomer. The elastomer gives the handle its comfortable touch and feel and absorbs vibrations. Celstran® provides the relevant mechanical performance.

With its glass fiber content, the Ticona polymer is extremely robust. Thanks to its high impact strength and high notched impact strength, the material easily withstands shocks and temperature variations. As well as glass fibers, reinforcement fibers made of other materials such as stainless steel, carbon or aramid can also be incorporated to obtain just the right property profile for a wide variety of demanding applications. Other matrix materials used include polypropylene and polyamide.

## Competitive edge of polymers

Replacing metal with polymers was the guiding principle that the design engineers adopted at Gazdevice, the Russian manufacturer of gas meters. That's why they now use Hostaform® POM and Fortron® PPS in their production. In this conversion the company took advantage not only of the positive characteristics of the polymers, but also of the specialized know-how of Ticona's specialists, who supported the process with their extensive technical expertise and contributed their many years of experience in the use of technical polymers in precision assemblies.



Precise and durable – gas meters made with Fortron® PPS and Hostaform® POM

Advantages in production and a more attractive cost/benefit relationship justified the material change. But it's in their daily application that the polymers really make a difference. Take Hostaform® C13031, for instance: Used in the housing and in other functional components within the device, it offers excellent slip/frictional properties and is characterized by resistance to gas and its condensates. The polyoxymethylene copolymer (POM) can also be processed with the same precision as the two tribologically optimized Fortron® PPS grades that reliably determine the flow rate through the measurement unit. Ambient temperature swings ranging from -50 to +80 °C are no

problem for polyphenylene sulfide (PPS) and POM. The polymers thus ensure that components also operate in hostile climates.

### High potential market

With its use of the high tech polymers, Gazdevice is ideally positioned to cover the expanding market in Eastern Europe. The individual recording of consumption has been rare in this region so far, but a large demand for the measurement devices is expected in the future – bright prospects for the Russian manufacturer, which is already one of the three largest producers of gas meters in Europe.