The ULTRA Extruder

ULTRA
Proudly made in the USA, the ULTRA is available in 16 sizes and hundreds of possible configurations, our ULTRA extruders offer proven technology and high-quality components with all of the technical features your application requires. Each ULTRA extruder is backed by our unique customer protection plan, including:
- Three Year Warranty
- Comprehensive Wet Testing
- Complete Spare Parts Package

ULTRA MD
These extruders are designed exclusively for a variety of medical applications and are typically used in a cleanroom environment. Our medical line of extruders are supplied with a special environment-based medical paint that is more chip resistant and does not “yellow” over time. The closed-loop AC vector or servo drives improves speed regulation. A replaceable feed section liner on all small machines provides the flexibility to configure the feed geometry to suit the application. There are many available options, including pressure feedback control that enables small but rapid changes in the screw speed to correct any drifting of the modelate. Melt pump systems are also available on all models.

ULTRA R/S Rubber extruders are fixed horizontal extruders ranging from 1.0” to 4.5” diameter, any L/D, vented or non-vented. ULTRA R/S Rubber extruders come standard with electric heat & water cooling. Water cooling is a bolt-on cast aluminum, double-pass system. Temperature control units for screw and head tooling can be supplied, mounted, and pre-plumbed to the extruder base. These extruders are designed exclusively for a variety of medical applications and are typically used in a cleanroom environment. Our medical line of extruders are supplied with a special environment-based medical paint that is more chip resistant and does not “yellow” over time. The closed-loop AC vector or servo drives improves speed regulation. A replaceable feed section liner on all small machines provides the flexibility to configure the feed geometry to suit the application. There are many available options, including pressure feedback control that enables small but rapid changes in the screw speed to correct any drifting of the modelate. Melt pump systems are also available on all models.

ULTRA R/S Silicone extruders are fixed horizontal extruders ranging from 1.0” to 4.5” diameter, typically 12:1 L/D. They come standard with high-efficiency bolt-on cast aluminum, double-pass barrel coolers. The ULTRA R/S Silicone machines feature a unique easy open roller feed section. This proprietary design enables unprecedented access for cleaning & scraper blade adjustment. The ULTRA R/S is well suited for all extrusion applications, including precision tubing, profiled, sheet, wire & cable, etc. They may be mounted on wheels with or without track, with or without some limited height adjustment.

ULTRA Low Boy
These extruders include Steward Barrier® screws for high output and low melt temperature, heavy-duty double reduction gearboxes (gearless is optional), AC or DC motor, deep finned cast barrel heaters, & smooth or grooved feed sections. Control panels can be provided mounted on the extruder base, or remote mounted.

Graham Engineering’s exclusive PC-based control system is designed specifically for extrusion and extrusion blow molding machinery. Developed in 2001 as a replacement for traditional PLC-based systems, it provides more flexibility, a higher performance, with a lower cost. The Navigator control system comes in three versions to fit your needs: XC100, XC200, and XC300 provide varying integration, optimization, and customization levels to your Graham Engineering ULTRA extruder.
GEC’s decades-long experience in designing screws and extrusion systems for every conceivable polymer provides confidence to your processing team. Screw design, geometry, sizing, metallurgy, and the specific polymers and applications are all considered when designing the extrusion system to ensure a successful extruded product.

### Pivot Hopper
GEC’s unique pivoting hopper aids the operator in managing time-consuming changeovers and purging events. With no tools required, the operator quickly and safely moves the hopper to an on-line, off-line, or dump position. Not only does this increase uptime, but it also provides for clearly collecting materials and reducing scrap.

### AutoGrip® Safety Clamp
For extrusion systems with frequent screw, breaker plate & downstream tooling changes, the AutoGrip® Power Clamp is designed for operator safety & efficiency. Available with a new machine or retrofitted to your existing extruder, it eliminates the need to manually release & tighten clamps during a changeover, reducing the risk of injury or damage. An added safety feature, it is governed from a few steps away by a two-hand push-button controller.

### MELTRIC Switch-Rated plugs and receptacles combine the safety of a switch with the convenience of a plug and receptacle in one device. Their Decontactor® technology, with springs-loaded silver-nickel butt contacts, push button disconnection, enclosed arc chambers and dead-front construction with safety shutter provides users with safety benefits that are not possible with other devices.

### Navigator Trending & Data
Anything the Navigator controls, sets, adjusts, or measures can be monitored in a real-time trend plot. Timing updates can be measured in milliseconds or hours to suit the need of the operator or QA technician. The data can then be viewed on the HMI, printed, stored to an off-line device or network, or pushed to a comprehensive quality system. The data is stored for a minimum of 365 days.

### Rupture Disc Monitoring
An important safety device, its function is to "rupture" if the pressure should exceed the limit of the disc. If the disc ruptures, the melt flow to relieve the stress and trips the limit switch creating a rupture plug fault triggering high-pressure shutdowns. Our Navigator® control solution provides two levels of melt-pressure monitoring. First-level monitoring utilizes a melt pressure transducer feedback and automatically stops the extruder when a high melt pressure condition is detected. Second level monitoring is accomplished with a rupture disc and limit switch paddle.