



**GRAHAM  
ENGINEERING**

**The ULTRA Extruder**



# UNMATCHED VERSATILITY

Graham Engineering's ULTRA extruder has long been synonymous with extruder excellence. Proudly made in the USA and identified by the AK Brand, the ULTRA family of extruders represents proven technology, high-quality craftsmanship, and all of the technical features your application requires.

*Our vision focuses on delivering innovative solutions to our customers.*

Featuring thousands of configurations and custom options, the ULTRA Extruder can provide unlimited solution potential for your team. Each extruder is designed to meet our customers' specifications and backed by our unique protection plan.

## Three Year Warranty

For extruders sold within North America, we provide a warranty covering defects in material & workmanship for a full three years, including all electrical & mechanical components. Contact us for more details.

## Comprehensive Wet Testing Prior to Shipment

Every ULTRA extruder with controls is run under load with your resin or similar stock resin. This process enables us to validate mechanical and electrical functions, program and test the pressure indicator, auto-tune temperature control zones and fully configure the drive parameters. The result is the fastest, smoothest start-up possible.

## Complete Spare Parts Package

With your extruder we ship a comprehensive set of mechanical & electrical spare parts. If a part fails during the three year warranty, simply pull the part from your shelf & install it on the machine.

### MARKETS WE SERVE:

- Medical
- Pharmaceutical
- Pipe
- Profile
- Tubing/Hose
- Pelletizing
- Specialty Applications
- Fiber
- Compounding
- Wire & cable
- Blown Film
- Recycling
- Sheet/Cast Film

## Technologies to Give Customers Every Edge

In today's competitive market and high production environments, GEC is continually looking for ways to help customers improve production quality and speed. We strive to enhance the value of the products made on our machines and achieve our customers' sustainability goals through source reduction.

## Service That Maintains Peace of Mind

GEC is firmly committed to providing the highest levels of customer support. Our service professionals can respond around the world to ensure that every machine exceeds customer expectations and helps your company achieve the highest possible standards of success.

*Our experience brings confidence, trust, and peace-of-mind.*

GEC's professional team of highly experienced field engineers are always ready to provide all the on-site services your operation may need. Also, remote diagnostics enable us to troubleshoot and solve many problems from anywhere. Our service and spare parts groups focus on a single goal – superior customer satisfaction, based upon maximizing your ROI.

# THE ULTRA FAMILY OF EXTRUDERS



## ULTRA EXTRUDER

The ULTRA represents AK's innovative, high-value extruder family. Available in 20+ sizes (ranging from 5/8" to 12" extruder diameter with various L/D) and thousands of possible configurations and custom options, the ULTRA extruder offers proven technology and high-quality components with all the technical features your application requires. Available in high-temperature and corrosion-resistant for running engineered or fluoropolymer resins. Custom-built to meet any customer's needs, the ULTRA has a proven record in many applications, including wire & cable, pipe, profile, and blown film, as well as with any material.

## ULTRA MD

The ULTRA can also be designed for the medical environment. The ULTRA MD is designed exclusively for various medical applications and is well-suited for a cleanroom environment. The ULTRA MD has closed-loop AC vector or optional servo motors for improved speed regulation. Replaceable feed section liners provide the flexibility to configure the feed geometry and pressure to suit the application best. All extruders are supplied with a special urethane-based medical paint that is chip-resistant & does not "yellow" over time.

## ULTRA R/S

ULTRA Rubber & Silicone extruders range from .075" to 4.5" in diameter (can go larger with special request), any L/D, vented or non-vented. ULTRA R/S extruders come standard with electric heat & bolt-on cast aluminum double-pass water cooling. Temperature control units for screw and head tooling can be supplied, mounted, and pre-plumbed to the extruder base. The ULTRA R/S features a unique, easy-open roller feed section. This proprietary design enables unprecedented access for cleaning and scraper blade adjustment.

The ULTRA R/S suits all extrusion applications, including tubing, automotive profiles, sheet, and wire & cable. They may be mounted on wheels with or without track, with or without some limited height adjustment. Special extruder & base configurations are available upon request. The ULTRA R/S - Silicone can be configured for medical applications.

## ULTRA LOW BOY

Designed for vertically extruded processes. ULTRA Low Boy extruders are engineered with a lower profile to provide easier tooling access and lower the bubble cage/tower height requirements required for blown film applications. These extruders include Steward Barrier screws for high output and low melt temperature, a heavy-duty double reduction gearbox (gearless is optional), an AC motor, deep-finned cast barrel heaters, and smooth or grooved feed sections. Control panels can be provided mounted on the extruder base or remote mounted. Designed for the following markets:

- Can Liners
- Medical Film
- Stretch Film
- Converter Grade Film
- Shrink Film
- Agricultural Film
- Barrier Film
- Packaging Film

# The Navigator® Family of Control Systems



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 various versions to fit your needs. XC100, XC200, XC300, XBM, and XLS provide varying integration, optimization, and customization levels to your Graham Engineering extruder.



The XC Navigator® control system provides complete eXtrusion Control for all our extrusion solutions, from stand-alone machines to complete medical tubing lines. The XC platform is offered in three levels (XC100, XC200, XC300) depending on the complexity of the extrusion application. All three solutions leverage the same powerful technology as our other Navigator® products. XC100 provides comprehensive control for stand-alone extruders in a package that includes closed-loop temperature control for barrel and die zones, extruder speed control, and optional pressure control. XC200 provides expanded control for up to 3 extruders from a single HMI, with up to 10 die zones and integrated melt pump control. XC300 is a highly flexible, modular solution that provides unified control of multiple extruders that can be operated independently or linked together in a plug-and-play configuration. The XC300 also offers connectivity to a wide range of downstream equipment, including air systems, vacuum tanks, gauges, pullers, cutters, conveyors, and coilers. The entire family of XC products includes a full suite of diagnostic tools. The robust design of our XC platform is highly flexible to optimize each specific extrusion application.

*[Through Navigator] ...the issue was resolved at lightening speed. My team and I were impressed with how fast the issue was resolved. They were knowledgeable with the machine controls, recognized the problem immediately, and resolved it.*

*-Facilities Manager, Ecowater Systems*

