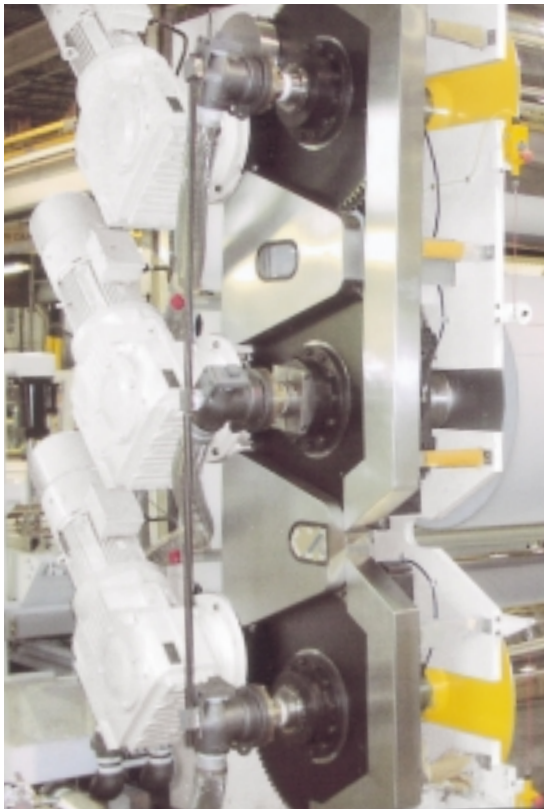
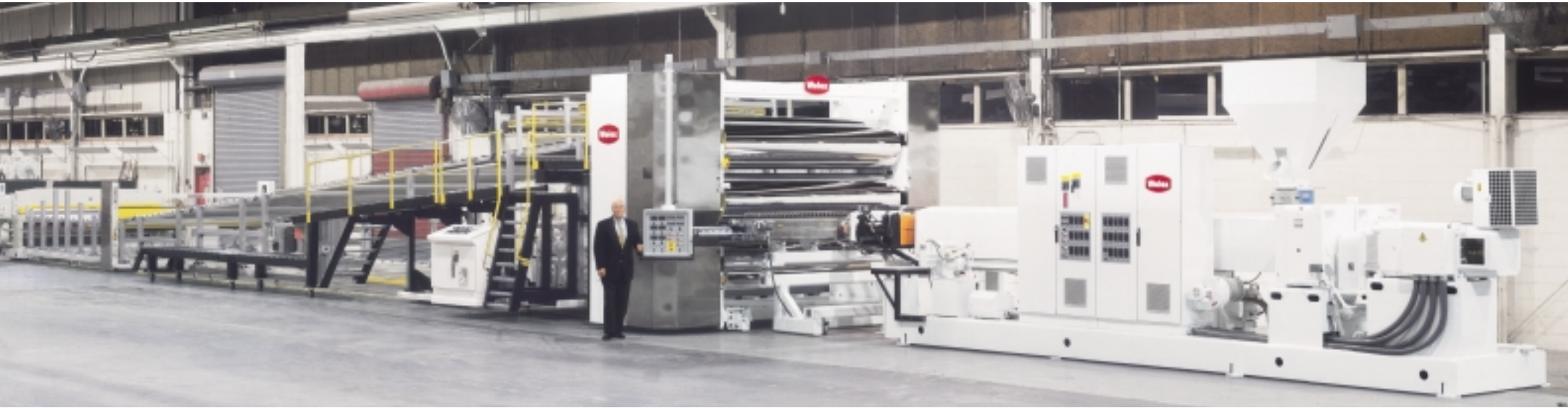




Hercules™ Industrial Sheet Lines





Individual Roll Drive

Industrial sheet requires highly specialized equipment because it is relatively thick and wide. Welex specializes in the construction of these lines.

Thick sheet is much more difficult to cool than thinner sheet. Slow heat diffusion through the sheet limits the cooling rate. Cooling must also be done very gradually to avoid sheet distortion from differential shrinkage of the colder surface layers and the hotter inner layers.

To achieve this, large diameter heated rolls must be used, and after initial surface cooling, long cooling conveyors are needed to produce flat sheet.

Banks of high capacity air cooling fans or Welex developed temperature controlled immersion baths can further accelerate cooling.

Thick sheet is always run upstack for better contact with the third roll and to facilitate inspection of the embossed surface. The resultant downhill cooling conveyor also reduces stresses in the sheet.

Drives and roll closing

Wide sheet production necessitates take-offs with both high power and high roll closing pressures. In some cases, the sheet is actually calendered using a large bank of material which is pressed into the finished thickness.

While gear drive requires less total power, individual roll drives offer greater flexibility of speed differentials and permit the use of varying embossing roll diameters. Differential speed is sometimes also required to compensate for sheet shrinkage.

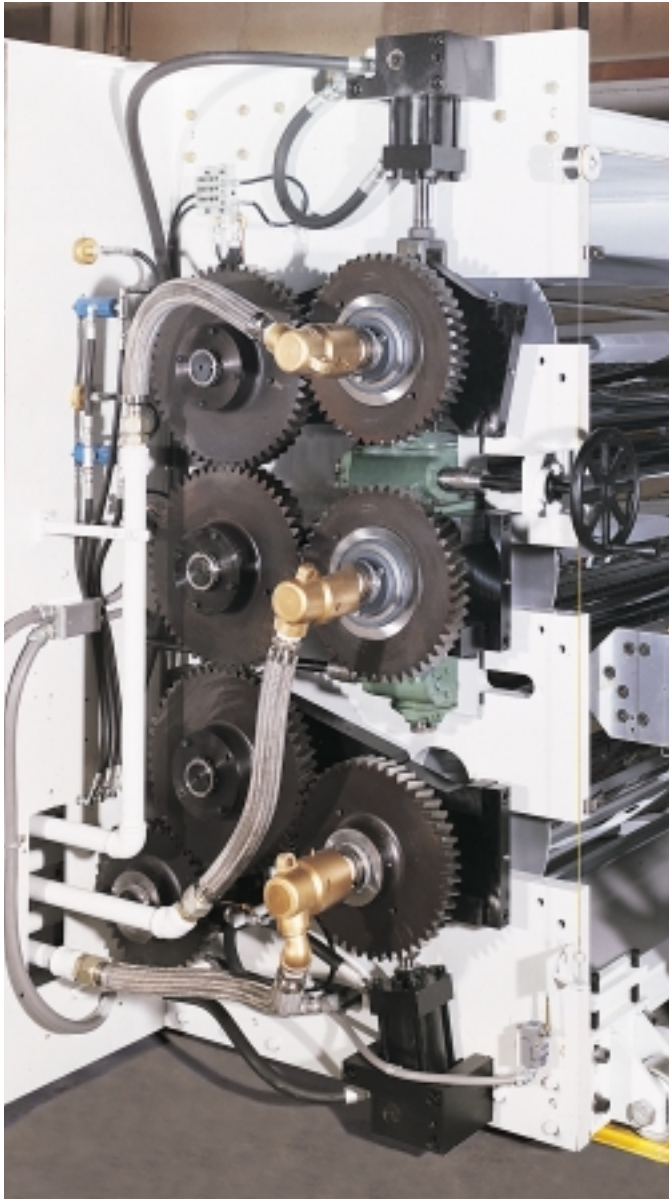
High pressure hydraulic roll closing is essential to provide the force necessary to maintain the rolls closed.

Textured sheet

Industrial sheet is often embossed in a variety of patterns. Quick roll change is therefore necessary. This feature is standard on all Welex industrial sheet lines.

Since patterned rolls are not always available to exact polishing roll diameters, individual roll drives are required.

The middle roll is the primary embossing position due to long dwell time. The bottom roll is also used if both sides require embossing.



Gear Drive

Lamination or coextrusion for surface enhancement

Various films can be applied by coextrusion or lamination for light stability, scratch resistance, or decorative purposes. Films are usually fed in at the first nip for proper heat sealing.

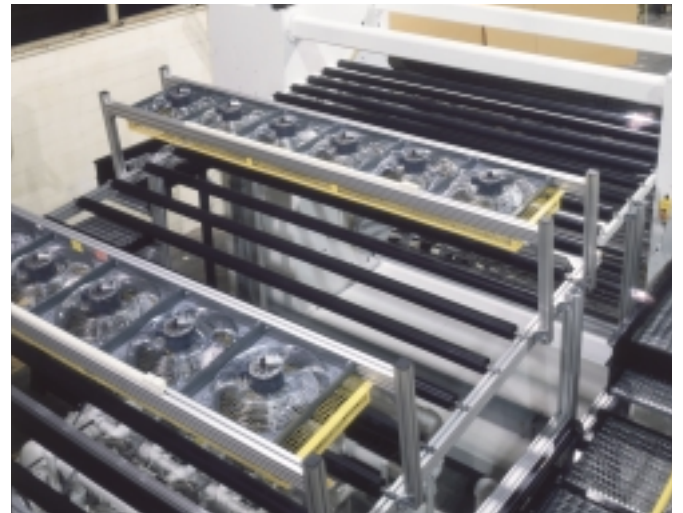
Welex supplies complete coextrusion systems to produce simple to complex barrier structures (detailed in our Mark III extruder catalog).

To apply protective film to one or both sides of the sheet prior to cutting, we can also provide laminating stations along the cooling conveyor.

Edge trimming and cut-off systems

Edge trimming can be done with heated blades while the sheet is still hot and soft, or by means of cut-off saws.

Heavy sheet must be cut-to-length when completely cooled. Guillotine cut-off shears are applicable to most materials. Traveling cut-off saws or hot knife shears are required for brittle polymers. In either case, run-out tables and stackers are required to accept the finished cut-to-length sheet. Welex will recommend and supply precisely what your application requires.



Air cooling fan bank

Welex Hercules Industrial Sheet Lines: Profit from our experience

Welex has vast expertise in the construction of highly specialized sheet lines for the production of thick, wide industrial and commercial sheet.

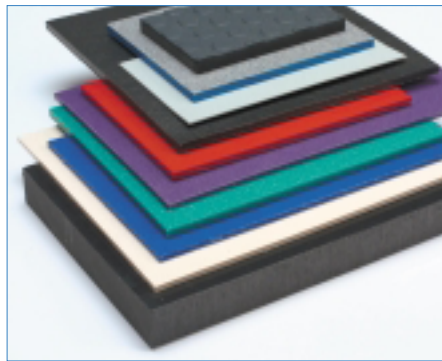
We look forward to recommending and supplying precisely what your application requires for profitable, day-in, day-out production.



Photo courtesy of Ameriform



Photo courtesy of Durakon



Welex Industrial Sheet Line Customer Sheet Samples




Photo courtesy of PolyJohn



Photo courtesy of Ameriform

Welex service and support

Welex extrusion systems are backed by a worldwide sales and service organization that you can call on for help at any time. We employ the most qualified field service staff and maintain the most complete spare parts inventory in the industry, so that we can always provide whatever support you need.

Whether you're near us or half a world away, we understand your needs and we'd like to work with you to meet them—in your language and measurement system. Our equipment meets the  ANSI and NFPA standards—plus other certifications on request.

Call your local Welex representative (listed on our home page on the Internet), or contact us directly.



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