

# Used Extruders

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Not unlike the used car market, there is a whole industry out there devoted to the resale of pre-owned extruders and their accessories. For most plastics processors, the decision to increase capacity comes on quickly (based on a new order or anticipated business). One of the problems with new equipment is the time required to get it. To put together a complete new line requires dealing with numerous suppliers and getting into their individual production schedules. With pre-owned machinery, it is possible to purchase everything from one vendor with immediate delivery.

The sources for pre-owned extruders include the following:

1) Original Equipment Manufacturers- Start with the supplier you are presently using for information about trade-ins, show machines not sold, laboratory units which are being replaced, orders started then cancelled, other customers not using existing lines, or knowledge of machines being sold by independent brokers.

2) Used Equipment Brokers - Look in the back of any magazine associated with extrusion and you will find companies listing used equipment. In addition, all brokers publish their own stock lists and these are constantly changing, so don't assume what you inquired about last week is still available. We have found some of these dealers to be very knowledgeable and capable of quoting equipment from gaylord unloading to finished pellets or sheet. Keep in mind that there is also a number of these brokers located in Europe. Purchasing a used piece of equipment from abroad can be a little tricky, but, with proper planning, can be accomplished.

## PURCHASING A USED EXTRUDER:

1) It is the responsibility of the buyer to determine that the equipment to be purchased will process your polymer(s). (The possible exception being when an OEM is involved.)

2) Because some of the machinery offered for sale is twenty years old or more, it is vital that they be inspected prior to making a bid. When considering the process, it is necessary to look at the power required to make it go.

What is the drive rating? What is the fixed ratio of the reducer? Can change gears be purchased, and if so, at what cost?

The screws come "as is", are they useful? Chances are, the existing design isn't going to produce the necessary results in rate or quality. What is the cost of a replacement screw? In some instances, the larger raw material vendors will help with the design.

Review the barrels for process configuration. Is venting required? Does the L/D look right? If not, can it be changed? For barrel heating, most single screw machines use electric while other twin screw extruders employ oil or steam. Is cooling a requirement?

Reliability of a used machine must be evaluated very carefully to ensure safety of operation and to avoid costly breakdowns after start up. The best approach here is to assign or employ an engineer to compile a specification that is very similar to one that would be used for the purchase of new equipment. Most plant regulations apply regardless of whether the hardware is new or used.

The preceding questions are just a sample of what needs to be discussed and resolved for the process part.

The following list summarizes some of the more important items to be considered:

- 1) Existing electrical classification and rating.
- 2) Drive motor, speed reducer, and gearbox condition.
- 3) Condition of the extruder barrels and screws. Is there excessive wear or corrosion present?

- 4) Materials of construction of existing parts.
- 5) Usable instrumentation, control panels, lubrication systems, etc.
- 6) Is existing method of heating and cooling the components suitable or available in your plant?
- 7) Availability of replacement parts and if used machinery is similar to that presently installed are there common spare parts existing?
- 8) Review any documentation such as manuals, drawings, etc.
- 9) Finally, obtain the name of the last owner. If they are not a competitor, contact them and review the previous performance.

**Summary:** A purchase of a pre-owned extrusion line can provide extra capacity at low cost in a short period of time. The key to realizing this gain is to understand fully what you are now doing and recognize what can be compromised without affecting product quality.

- Thomas Crouch

See also:

- Buying used extrusion equipment
- Is used equipment worth the effort?
- Machinery installation
- Old vs. new extruders

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