BUYER PLANNING TOOL

Food Extruder Production Line Selection Checklist

Define the product, capacity basis, equipment boundary, utilities and acceptance plan before comparing quotations. Complete one copy for every supplier so proposals are evaluated on the same basis.

How to use this checklist

Complete known items and mark unknown items for discussion. Attach product photos, formula categories, package samples and workshop drawings when available. Final equipment selection remains project-specific.

1. Project identification

Company / project name

Country and installation city

Primary contact

Email / WhatsApp

Target start-up date

PROJECT TYPE

- ☐ New factory or first extrusion line
- ☐ Existing factory expansion
- ☐ Replacement of an existing extruder
- ☐ New product on an existing line
- ☐ Capacity increase or bottleneck removal
- ☐ Pilot, R&D; or product development line

Do not compare model names alone

Two extruders with similar motor power can deliver different saleable output when formula, moisture removal, dryer load, seasoning and packaging are included.

2. Finished product and formula

Start with the finished product. A different formula may require a different screw, die, cutter, dryer or downstream section.

- ☐ Puffed corn or cereal snacks
- ☐ Breakfast cereal
- ☐ Dry dog or cat food kibble
- ☐ Artificial rice or fortified grains
- ☐ Plant-protein or textured product
- ☐ Center-filled snacks
- ☐ Corn flakes or formed flakes
- ☐ Floating or sinking aquatic feed
- ☐ Nutrition powder base
- ☐ Other extruded product

Product name and reference brand

Target shape and dimensions

Finished moisture target

Bulk density or texture target

3. Raw-material definition

- ☐ Cereal flour or meal
- ☐ Starch or modified starch
- ☐ Fresh meat or wet ingredients
- ☐ Minerals, vitamins or micro-dosing
- ☐ Corn, rice or wheat base
- ☐ Protein meal or concentrate
- ☐ Oil or liquid additions
- ☐ Heat-sensitive ingredients

Main ingredient categories

Particle size before extrusion

Initial moisture range

Recipe limitations / allergens

Formula confidentiality

A supplier can often begin with ingredient categories and approximate percentages. A representative test formula is still needed before a meaningful factory acceptance trial.

4. Capacity and operating basis

Define whether the requested figure means dry-material feed rate, extruder discharge or saleable packed product.

Required saleable output (kg/h)

Required output per shift / day

Operating hours per shift

Operating days per year

Expected product changeovers

Acceptable start-up waste

5. Equipment boundary

- ☐ Raw-material receiving
- ☐ Batch weighing and mixing
- ☐ Preconditioning
- ☐ Die, cutter and forming
- ☐ Cooling
- ☐ Seasoning
- ☐ Buffer storage
- ☐ Metal detection or inspection
- ☐ Grinding or milling
- ☐ Conveying and feeding
- ☐ Twin-screw extrusion
- ☐ Drying or toasting
- ☐ Oil spraying or coating
- ☐ Screening and fines return
- ☐ Weighing and packaging
- ☐ Dust collection and cleaning

6. Dryer and downstream requirements

- ☐ Electric heating
- ☐ Steam heat exchanger
- ☐ Multi-layer belt dryer
- ☐ Oil application after drying
- ☐ Natural gas
- ☐ Hot-air circulation
- ☐ Batch oven or tray drying
- ☐ Powder or liquid flavor coating

Inlet moisture estimate

Final moisture target

Available heat source

Package size and bags/minute

7. Factory, utilities and compliance

- ☐ Voltage, frequency and phases confirmed
- ☐ Compressed-air capacity confirmed
- ☐ Gas pressure or steam condition confirmed
- ☐ Floor loading and access checked
- ☐ Food-contact material requirement defined
- ☐ Required guarding and safety devices listed
- ☐ Transformer capacity checked
- ☐ Water supply and drainage confirmed
- ☐ Ventilation and exhaust route planned
- ☐ Maintenance clearance reserved
- ☐ Local electrical standard identified
- ☐ Cleaning method and hygiene zoning reviewed

Workshop length x width x height

Available electrical supply

Available heat source

Required certification / standard

8. Factory acceptance test (FAT)

- ☐ Representative raw material agreed
- ☐ Stable-run duration defined
- ☐ Moisture test method agreed
- ☐ Power and utility readings recorded
- ☐ Alarm and interlock checks completed
- ☐ Photos and test video retained
- ☐ Trial product and shape agreed
- ☐ Capacity measurement point defined
- ☐ Product quality criteria recorded
- ☐ Start-up waste recorded
- ☐ Cleaning and changeover demonstrated
- ☐ Open items signed before shipment

Acceptance principle

Define acceptance around the agreed product and stable operating condition. A short no-load run does not confirm finished-product output or quality.

9. Compare supplier proposals on one basis

Leave a cell blank rather than assuming that an item is included.

Comparison item	Supplier A	Supplier B	Supplier C
Accepted product and formula			
Saleable output basis			
Extruder model and motor			
Dryer type and heat source			
Upstream equipment included			
Downstream equipment included			
Stainless-steel scope			
Automation and controls			
Installation and commissioning			
Warranty and spare parts			

10. Documents to request before order

- ☐ Final equipment list and scope boundary
- ☐ General arrangement or line layout
- ☐ Food-contact material specification
- ☐ Spare-parts list
- ☐ Packing and shipping plan
- ☐ Operation and maintenance manuals
- ☐ Process-flow diagram
- ☐ Installed power and utility schedule
- ☐ Electrical component list
- ☐ FAT plan and acceptance criteria
- ☐ Installation responsibility matrix
- ☐ Warranty terms and service contacts

Send the completed checklist to ZEKO for an initial process and equipment review.
Start a Production Line Project Brief

Prepared by Shandong ZEKO Intelligent Equipment Co., Ltd. This checklist is a planning aid and does not replace a project-specific technical proposal, formula trial or local compliance review.