
# KartridgPak
# Chub Packaging Machines

R.A JONES

# CHUB PACKAGING-CONTINUOUS FORM, FILL, SEAL, CLIP

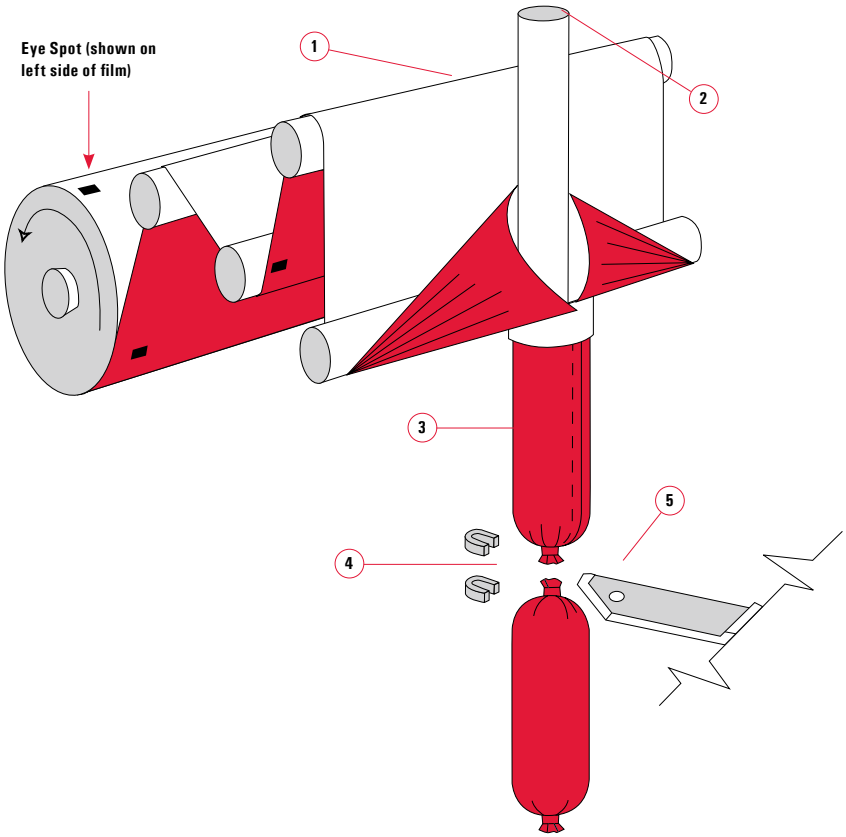
Since 1944, we've been designing and manufacturing the highest quality Chub Packaging Machinery. Our product innovations include quality control sensors, electronic analyzing device integration, servo drives, touch screen controls, a new ultra high-speed clipping process and unique continuous motion with a sequential stop process. From installation, startup and training, to parts and aftermarket support and technical service, our worldwide distributor network means you can count on R.A Jones & Co.

Rugged waterproof construction consisting of stainless steel and plated metals delivers extended operating life. This durable construction and smooth, continuous-motion design ensures maximum uptime, producing one quality package after another.

- Film is pulled via drive wheels over a shouldered forming collar or folder
- As the film is formed into a tube, the overlap is sealed, product is pumped through a mandrel into the formed tube
- Sizing parts are used to determine package diameter
- Clips are applied and an internal knife separates the clipped packages into individual chubs

**In-line Clipping**

KartridgPak invented high speed in-line clip forming and transfer from roll-stock steel or aluminum wire and application. The latest design allows clip forming and application in one motion, eliminating separate steps for clip transfer or positioning.




The Chub Packaging Machine® forms, fills, seals and clips uniform weights of semi-viscous products in a tubular package formed of plastic film having gathered ends secured by metal closures.

1. Film is fed from a roll, formed around a cylinder, and sealed into a continuous tube.

2. Product is introduced through the cylinder by a variable speed, positive displacement metering pump which controls the product flow rate. The continuous product flow and tube formation rates maintain precise weight and package length.

3. The package film containing the product is propelled by drive wheels to voider rolls which are timed to void the product from the plastic tube in the area to be clipped.

4. Closure plates then gather the package film in the voided area and install a pair of closure clips.

5. Simultaneously, a knife cuts the plastic tube between the clips. The package is then complete and slides down the package chute into a container or onto a "take-away" conveyor.

**Money-Saving Flexibility**
Because all efforts at R.A Jones & Co. are exclusively dedicated to the manufacture of innovative packaging machinery, our customers are free to choose consumable suppliers ideally suited to their needs for price, quality and specific applications.

**Economy**
Design innovations from R.A Jones & Co. significantly reduce packaging material costs. The key? Instead of using pre-formed clips, our in-line process forms and places clips sourced from economical wire stock reels. Use of flat roll stock, rather than pre-formed tubing adds to your savings. Our unique voiding system removes the product from the area where the clips are being applied, making tight clean package ends.

**Quality**
Our ability to offer two different clip spacing options improves packaging appearance and reduces film costs. What's more, there are materials available that provide excellent barrier properties against oxygen, light and moisture, ensuring product quality and maximizing shelf life. Packages can be constructed to reduce waste volume.


Two-compartment mine roof bolt

## Food Applications

- Cream Cheese
- Liverwurst
- Ice cream
- Cookie dough
- Processed cheese
- Pork sausage
- Butter
- Ground meat
- Processed meat
- Vegetables
- Pet foods
- Stuffings
- Shortening
- Marzipan
- Polenta
- Marmalade/jams

## Institutional Applications

- Mashed & au gratin potatoes
- Soups
- Sauces
- Gravies
- Dressing
- Slack filled products

## Industrial Applications

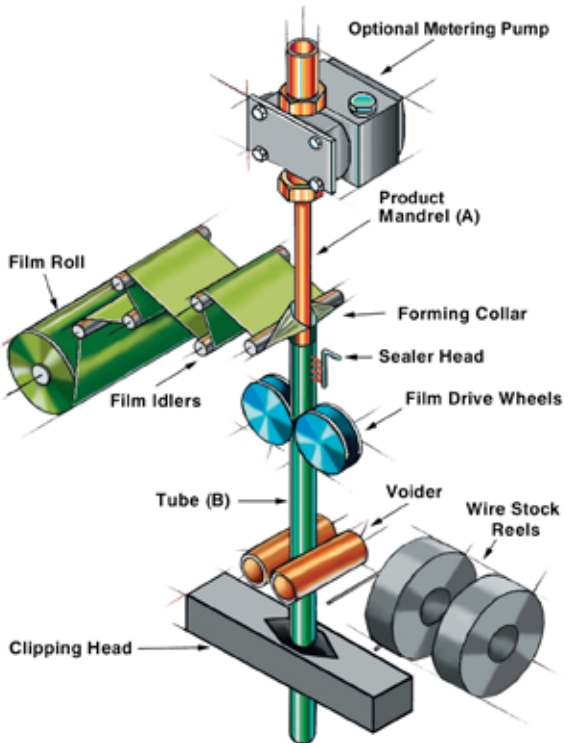
- Caulks, adhesives, silicones
- Sealants
- Explosives
- Two compartment resin bolts & construction adhesives

## Technical Specifications

| | Standard | Option |
|---|---|---|
| PPM Min/Max | 150 | 30-180 |
| Machine Control | PLC | PLC |
| Available Seal Methods | Heated Air, RF, Extrusion | Heated Air, RF, Extrusion |
| Diameter Range | 5/8" - 4 1/8" | 5/8" - 2" |
| Standard Length Range | 6" - 12" * | 6" - 10" * |
| Max Film Sealing Speed | 1,350 inches/min | 1,250 inches/min |

*Up to 40" with optional clutch brake. Packages shorter than 6" available by request.
**Depends on film type characteristics.

| Features | Benefits |
|---|---|
| CE marked | Fulfills global safety requirements |
| Close-clip option | Reduced film costs/enhances package aesthetics |
| Continuous motion | Reduces downtime and parts usage |
| Clutch brake option | Provides flexibility to fill long packages |
| Explosion proof motors & pressurized cabinet option | Provides safe operation in hazardous environments/Low risk & insurance premiums |
| Graphic readout of operating conditions | Ease of operator interface |
| Heavy-duty, high-speed clipping head | Increases productivity & reliability/Up to 120 packages per min |
| Easy-open | Consumer friendly package |
| Multiple date coding options | Flexibility in choosing date coder |
| Multiple film sealing systems | Heat seal, radio frequency seal and extrusion sealing systems |
| PLC control | Easy adjustment using visual display/ Ability to store up to 10 recipes/Time savings during start-up & changover/ Multiple languages available |
| Registration | No label required/Ability to run pre-printed film |
| Rollstock clips & film | Up to 30-50% cost savings vs. preformed clips/No pre-formed casting/Film supplier flexibility/hygienic |
| Simplified clipping head assembly | Reduces parts & service costs/Prevents parts damage |
| Simplified film handling | Ease of film loading and threading/ Reduced down-time/Less operator training |
| Simultaneous adjustment of clipping, film & pump | Quick changeover & reduces scrap |
| Stainless steel construction | Suitable for rigorous wash-down environments |
| Under carriage w/overload clutch | Reduces maintenance costs |
| Voider system | Reduces package & product waste/ Improved package appearance/tighter clips |
| 2nd package registration | Eliminates film waste and saves set-up time |
| 3 different sealing system options: Heat, RF, Extruder | Allows flexibility in choosing package materials |
| 50+ ppm with clutch brake | Handles 2nd or 3rd package registration and extended length packages |




Our unique voiding and squeeze roll removes air and product from the area where the clips are being applied, making tight clean package ends.

# CHUB PACKAGE DIMENSIONS

To find pkg. length L for known pkg. dia., wt., and specific gravity:

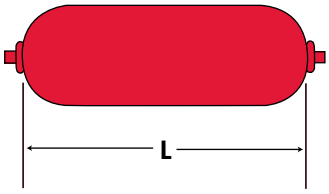
$L = \frac{35.26W + .333D}{D^2 (S.G.)}$ Where: D=pkg. dia. in inches.
W=weight in pounds.
S.G.=specific gravity.


To find pkg. length L for known pkg. dia., wt., and density:

$L = \frac{1.273 W + .333D}{D^2 (density)}$ Where: D=pkg. dia. in inches.
W=weight in pounds.
Density=pounds/in$^3$.


To find film cutoff for known L and D:

Cutoff (in.)
= L + .571 D + d + S Where: L=pkg. length clip to clip in inches.
D=pkg. dia. in inches.
d=wire dia. in inches.
S=clip spacing.




| | |
|---|---|
| M7 Standard spacing | .760 in. |
| C4 Clip transfer | .650 in. |
| M7 Close clip | .500 in. |

Note: All above assume that package ends will be spherical and package dia. will not stretch. Actually, the package ends will flatten to more of an octagon shape and package will be shorter than calculated and/or heavier.

To find number of pkgs. on a roll of film of given dia. or feet of film on a roll:

$N = \frac{.785 (D^2-d^2)}{t (Cutoff)}$ Where: n=number of pkgs. on roll.
D=O.D. of film roll.
d=O.D. of core.
t=film thickness in inches*.

*To convert mils to inches, multiply by .001

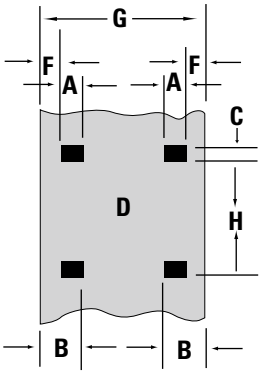
# ANYL-RAY 316-6

For more than 40 years, KartridgPak AnylRay machines have been the most widely accepted fat analysis instruments in the meat industry.

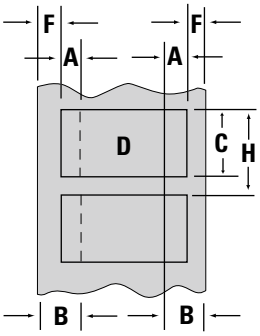
Engineered to the make the most of your production time, the AnylRay 316-6 allows your operator to take larger 13 pound test samples in a short period of time. It checks lean/fat ratios for both pre-blended (trimmings) and final blended meats. It also provides Fat/Protein/Moisture (FPM) analysis to determine the protein and moisture content of ground meat samples.

And the AnylRay allows you to instantly correct any product that is out of specification - keeping your costs and your profits in your control.

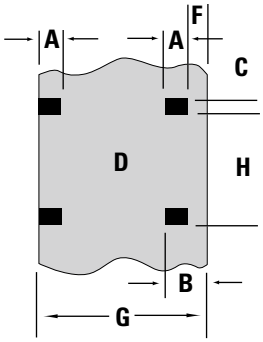
**Option 1**
Preferred PVDC layout. Registration Mark required on one side only. Left side is most common.



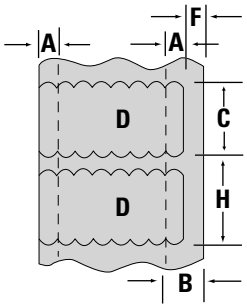

**Option 2**
Common design where clear film is used and maximum ink coverage is desired. Registration Mark required on one side only. Left side is most common.



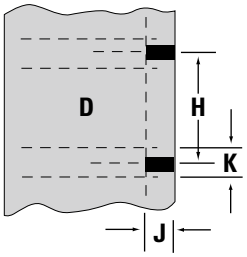

**Option 3**
Most common polyethylene design. Registration Mark required on one side only. Left side is most common.




**Option 4**
Most common where art design requires printing or copy to extend to the left edge (bleed edge). Registration Mark path frequency found in center of film sheet. See "B."




**Option 5**
This design is used when background pattern is simulated cloth, basket weave, etc., which prohibits the use of one solid color in the Registration Mark path. Printed copy may extend to the left edge. Ink from the Registration Mark will be inside the package and must not bleed into the product.




**Film Printing Pointers**

A. Registration Mark path, 5/8" (16 mm) minimum width. Path must have two and only two color contrasts. One color can be clear or manufacturer's pigment. Attempt as much color contrast as possible. Avoid light shades of yellow, red or green to contrast each other, or with white or clear film.

B. Registration Mark with a standard machine, can be anywhere within the width of the film, but should not be in the sealing area with RF Sealing.

C. Registration Mark length to be 1/2" (13 mm) minimum. No maximum limit to within 1/2" (13 mm) of the total package length.

D. Denotes the printed side.

E. All rolls can be 3" (76 mm) or 6" (152 mm) cores up to 20" (508 mm) maximum diameter. Right hand bottom unwind as shown.

F. Denotes the seal area. Must be free of all printing, lacquer and surface treatment except manufacturer's pigment. PVDC requires 1/2" (13 mm) minimum on both edges. Polyethylene requires 1/2" (13 mm) on one edge only. See Option 5 for Registration Mark in seal area of polyethylene.

G. Film Web width is established by adding 3/8" (10 mm) to 1" (25 mm) to the circumference of the package diameter.

H. Film Cut-Off Length or one complete package.

J. Printed Registration Mark in seal area, polyethylene only. This area must be free of all printing (except for Registration Mark). See "K."

K. When Registration Mark is in seal area, formed tube will NOT seal for this 1/2" (13 mm) length. Printed design must allow for package clips to be placed in this area.

# TYPICAL CHUB PACKAGE SIZES

| Pkg. Wt. | Dia. (D), In. | Length (L), In. | Cutoff (H), In. (See Note 2) | Web (G), In. (See Note 3) | $FT^2$ Film/1000 ($M^2$) |
|---|---|---|---|---|---|
| .67 oz. (19 gr) | 5/8 (16 mm) | 4.0 (102 mm) | 5-1/8 (130 mm) | 2-5/16 (59 mm) | 82 (7.6 $m^2$) |
| 4 oz. (113 gr) | 1-7/16 (37 mm) | 6-3/16 (157 mm) | 7-3/4 (197 mm) | 5-1/4 (133 mm) | 282 (26.2 $m^2$) |
| 6 oz. (170 gr) | 1-3/4 (44 mm) | 4-7/8 (124 mm) | 6-5/8 (168 mm) | 6-1/4 (159 mm) | 289 (26.8 $m^2$) |
| 8 oz. (227 gr) | 1-1/2 (38 mm)<br>1-3/4 (44 mm)<br>2.0 (51 mm)<br>2-1/8 (54 mm) | 8-5/16 (211 mm)<br>6-5/16 (160 mm)<br>5-1/16 (129 mm)<br>4-5/8 (117 mm) | 9-15/16 (252 mm)<br>8-1/16 (205 mm)<br>6-15/16 (176 mm)<br>6-9/16 (167 mm) | 5-7/16 (138 mm)<br>6-1/4 (159 mm)<br>7-1/16 (179 mm)<br>7-7/16 (189 mm) | 376 (34.9 $m^2$)<br>351 (32.6 $m^2$)<br>342 (31.8 $m^2$)<br>339 (31.5 $m^2$) |
| 10 oz. (284 gr) | 2-5/8 (67 mm) | 4-1/16 (103 mm) | 6-5/16 (160 mm) | 9.0 (229 mm) | 395 (36.7 $m^2$) |
| 12 oz. (340 gr) | 2.0 (51 mm)<br>2-3/4 (70 mm) | 7-1/4 (184 mm)<br>4-7/16 (113 mm) | 9-3/16 (233 mm)<br>6-3/4 (171 mm) | 7-1/16 (179 mm)<br>9-3/8 (238 mm) | 446 (41.4 $m^2$)<br>439 (40.8 $m^2$) |
| 14 oz. (397 gr) | 2.0 (51 mm) | 8-3/8 (213 mm) | 10-1/4 (260 mm) | 7-1/16 (179 mm) | 499 (46.4 $m^2$) |
| 1 lb. (454 gr) | 2.0 (51 mm)<br>2-1/4 (57 mm)<br>2-3/8 (60 mm)<br>2-1/2 (64 mm)<br>2-9/16 (65 mm) | 9-1/2 (241 mm)<br>7-11/16 (195 mm)<br>7-1/16 (179 mm)<br>6-1/2 (165 mm)<br>6-1/4 (159 mm) | 11-3/8 (289 mm)<br>9-3/4 (248 mm)<br>9-1/8 (232 mm)<br>8-5/8 (219 mm)<br>8-7/16 (214 mm) | 7-1/16 (179 mm)<br>7-13/16 (198 mm)<br>8-3/16 (208 mm)<br>8-5/8 (219 mm)<br>8-13/16 (224 mm) | 553 (51.4 $m^2$)<br>529 (49.1 $m^2$)<br>524 (48.7 $m^2$)<br>518 (48.1 $m^2$)<br>516 (47.9 $m^2$) |
| 2 lb. (907 gr) | 2-7/16 (62 mm)<br>3.0 (76 mm) | 12-11/16 (322 mm)<br>8-13/16 (224 mm) | 14-13/16 (376 mm)<br>11-13/16 (284 mm) | 8-1/2 (216 mm)<br>10-13/16 (259 mm) | 867 (80.5 $m^2$)<br>799 (74.2 $m^2$) |
| 3 lb. (1.36 kg) | 3-1/4 (83 mm) | 11-1/8 (283 mm) | 13-11/16 (348 mm) | 10-15/16 (278 mm) | 1,047 (97.3 $m^2$) |
| 5 lb. (2.27 kg) | 4.0 (102 mm) | 12-3/8 (314 mm) | 15-3/8 (391 mm) | 13-5/16 (338 mm) | 1,421 (132 $m^2$) |
| 10 lb. (4.54 kg) | 4.0 (102 mm)<br>4-1/8 (105 mm)<br>4-3/4 (121 mm) | 23-3/8 (594 mm)<br>22-1/8 (562 mm)<br>17-3/16 (437 mm) | 26-3/8 (670 mm)<br>25-3/16 (640 mm)<br>20-11/16 (525 mm) | 13-5/16 (338 mm)<br>13-11/16 (348 mm)<br>15-15/16 (405 mm) | 2,441 (227 $m^2$)<br>2,399 (223 $m^2$)<br>2,288 (213 $m^2$) |
| 20 lb. (9.07 kg) | 5-5/8 (143 mm)<br>6.0 (152 mm) | 24-3/16 (614 mm)<br>21-9/16 (548 mm) | 28-1/8 (714 mm)<br>25-3/4 (654 mm) | 18-11/16 (475 mm)<br>19-7/8 (505 mm) | 3,663 (340 $m^2$)<br>3,574 (332 $m^2$) |

NOTES:

1) Values for L and H are theoretical values based upon the assumption that package ends are hemispherical and that product specific gravity=1. Actual values for L and H must be determined by measurement of sample packages containing product.

2) Add .11 in (3 mm) to H dimension for model 50 and M7 accessory applications.

3) Film overlap at seal: 5/8 dia. = 3/8 in. (16 mm = 10 mm)
1-7/16-4-1/8 dia. = 3/4 in. (37 mm - 105 mm = 19 mm)
5-5/8-6 dia. = 1 in. (143 mm - 152 mm = 25 mm)

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