Specifications

Machine Model	RPF-4	RPF-8	RPF-8-MC	RPF-8G	RPF-16	RPF-24
Number of Nozzles	4	8	8	8	16	24
Maximum Fill Volume	1035 ml 35 oz.	1035 ml 35 oz.	1035 ml 35 oz.	4700 ml 160 oz.	1035 ml 35 oz.	1035 ml 35 oz.
Maximum Container Diameter	127mm 5″	127mm 5″	127mm 5″	254mm 10″	127mm 5″	127mm 5″
Maximum Container Height	305mm 12″	305mm 12″	305mm 12″	355mm 14″	305mm 12″	305mm 12″
Container Height Adjustment	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Electrical
Container Infeed Control	Spiral	Spiral	Spiral	Spiral	Spiral	Spiral
Flow of Containers	L to R	L to R	L to R	L to R	L to R	L to R
Piston Stroke Adjustment	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Electrical
Speeds (cpm) Maximum	80	150	150	100	240	360
Air Requirements	60 psi 1 cfm	60 psi 1 cfm	60 psi 1 cfm	60 psi 1 cfm	60 psi 1 cfm	60 psi 1 cfm
Stainless Steel Reservoir Capacity	27 liters 7 gallons	53 liters 14 gallons	53 liters 14 gallons	190 liters 50 gallons	190 liters 50 gallons	380 liters 100 gallons
Conveyor Length (Standard 4½″ Delrin)*	3.1 m 10′	3.1 m 10′	3.4 m 11′	3.7 m 12′	3.1 m 10′	3.7 m 12′
Electricals	1 HP 230/3/60 NEMA 12	2 HP 230/3/60 NEMA 12	2 HP 230/3/60 NEMA 12	3 HP 230/3/60 NEMA 12	3 HP 230/3/60 NEMA 12	5 HP 230/3/60 NEMA 12
Dimensions (Crated) L x W x H	3m x 2m x 2m 11′ x 4′ x 7′	3 m x 2m x 3m 11′ x 5′ x 8′	3m x 2m x 3m 12′ x 5′ x 7′	4m x 3m x 3m 13′ x 7′ x 8′	3m x 2m x 3m 11′ x 6′ x 8′	4m x 3m x 3m 13′ x 8′ x 8′
Net Weight	998 kg 2200 lbs.	1360 kg 3000 lbs.	1814 kg 4000 lbs.	1542 kg 3400 lbs.	1814 kg 4000 lbs.	3810 kg 8400 lbs.
Gross Weight	1180 kg 2600 lbs.	1590 kg 3500 lbs.	2040 kg 4500 lbs.	1770 kg 3900 lbs.	2040 kg 4500 lbs.	4080 kg 9000 lbs.

Team with Mono-Capper	Yes	Yes	Monobloc Design	Yes	Yes	Yes**
Motion	Inline, continuous					
Closure Types	13mm to 70mm					
Container Handling	Gripper Belts					
Cap Feeding	Vertical pinwheel, vibratory, or centrifugal sorters					

*Stainless steel available.

**Speeds attainable up to 250 containers per minute.

MRM/Elgin Corp. maintains a continuing development program. Equipment built after publication may vary from specifications given here. Actual production speeds may vary depending upon product and containers.

Rotary Piston Fillers

The MRM/Elgin fully automatic Rotary Piston Fillers are custom designed to accommodate a wide range of container sizes and products of most viscosities at high production speeds.

The RPF Series is available in six frame sizes and models, with from 4 to 24 filling nozzles.

Rugged, durable construction assures high performance with little maintenance. The Rotary Piston Fillers can be supplied with nickel alloy or stainless steel contact parts. For further product corrosion resistance, all parts above the machine cabinet are stainless steel or electro-nickel plated.

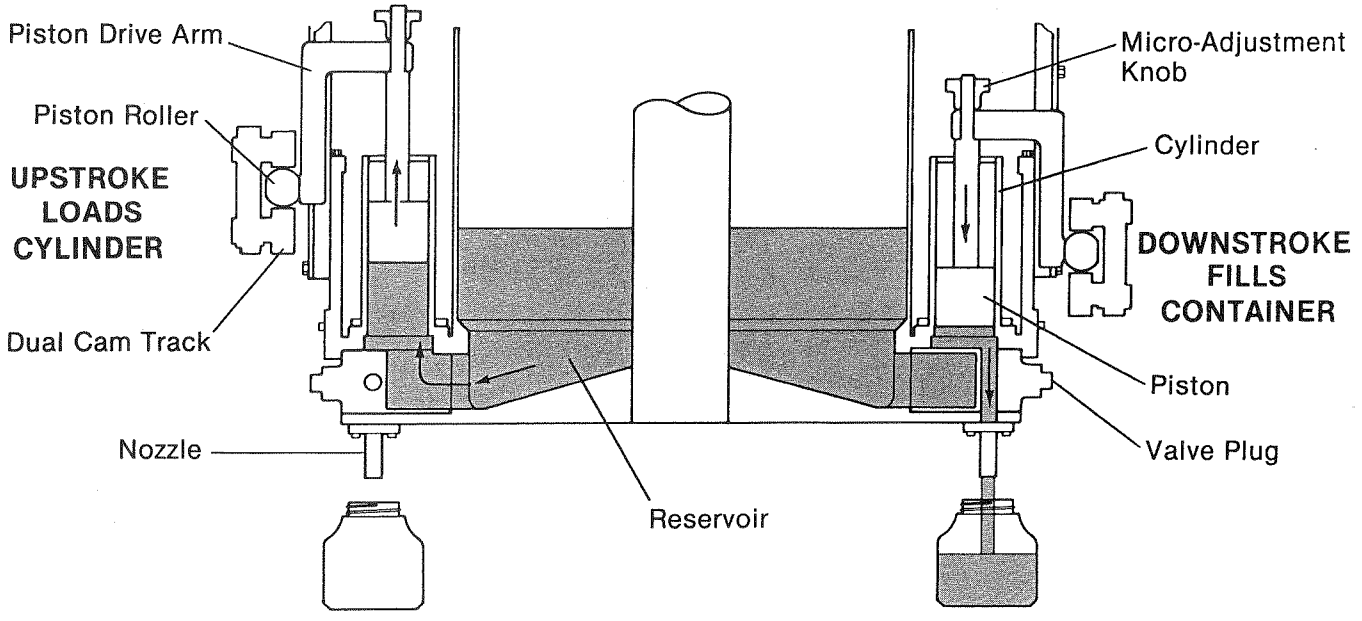
Custom nozzles are designed for each product to ensure unrestricted flow and positive no-drip cutoff. Bottom up fill is featured on all RPF fillers. The no-container/no-fill system utilizes an electric eye which activates a mechanically-controlled cam and prevents discharge of product. Pistons and valve plugs are easily removed for cleaning and sanitizing.

A spiral feed worm transfers the containers into the infeed starwheel, onto a lift platform, and under the fill station. The spiral plus infeed and discharge starwheels retain their timing from changeover to changeover through keyed, quick change drive shafts. Quick changeover of container size and fill volume is completed without the use of tools. All RPF models exhibit positive container handling of metal, glass, or plastic containers throughout the filling process.

Fill volume is adjusted by changing the pitch of the dual cam track, to increase or decrease the stroke of the piston within the cylinder. With the exclusive, patented MRM/Elgin individual piston adjustment, these machines provide fills as accurate as ± 1/10 of 1% of volume with speeds up to 360+ containers per minute on the larger models. This stabilized degree of filling accuracy maximizes packaging efficiency.

All RPF models can be teamed with our Mono-Capper for a fully synchronized filler/capper combination.

Operating Sequence



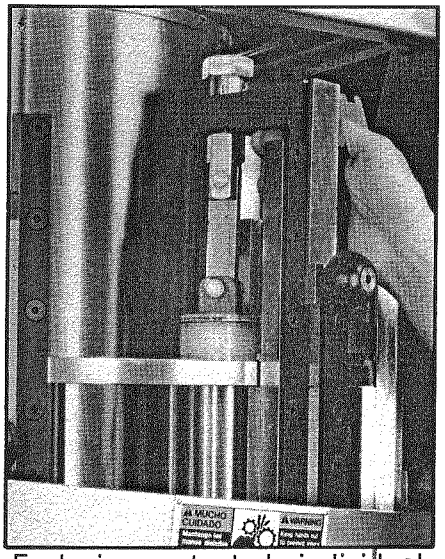
Fill Principle

The piston roller raises the piston via a dual cam track assembly. Product is drawn from the reservoir through the valve plug up into the cylinder. The valve plug is rotated by cam action, closing off product flow from reservoir to the cylinder and opens discharge port to nozzle. On the downstroke of the piston, the product is forced through the discharge port and nozzle and then into the container. Valve plugs and pistons remain in position during fill volume change.

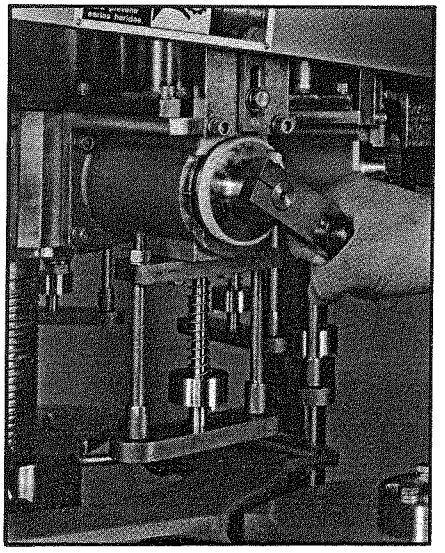
Individual Piston Adjustment

The purpose of this mechanism is to allow the operator to adjust each individual piston for exact metering of product. It can be used to compensate for piston wear or any difference in tolerances of the piston, cylinder, or piston drive components. Pistons are adjusted at the micro-adjustment knob. This adjusts the amount of lag time before the piston moves and makes a very slight change in effective piston stroke.

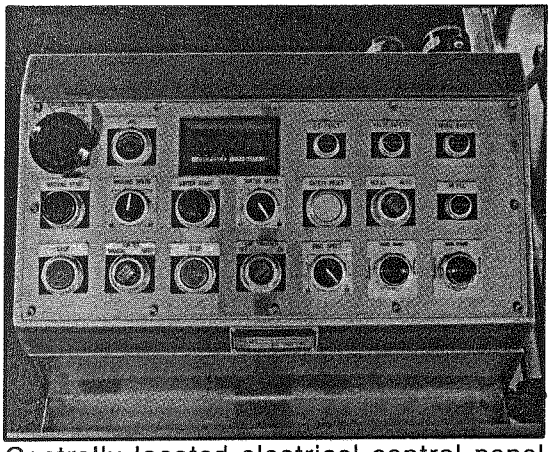
Special Features



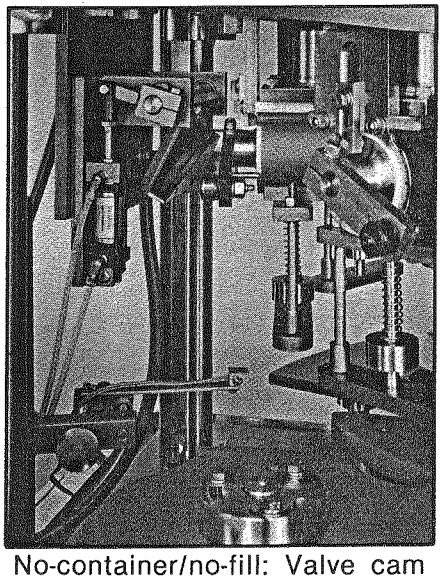
Exclusive patented individual piston adjustment. Pistons are hand removable.



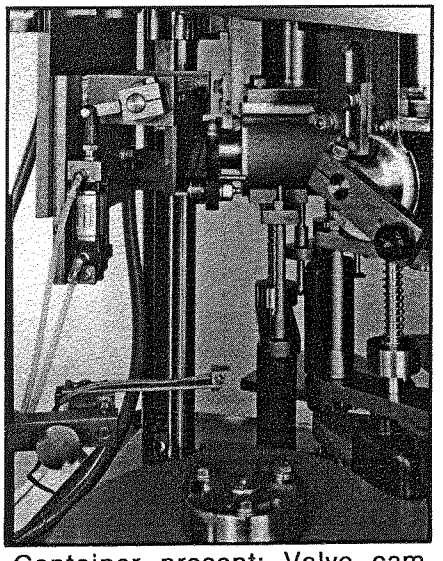
Hand removal of valve plugs for ease of servicing and cleaning.



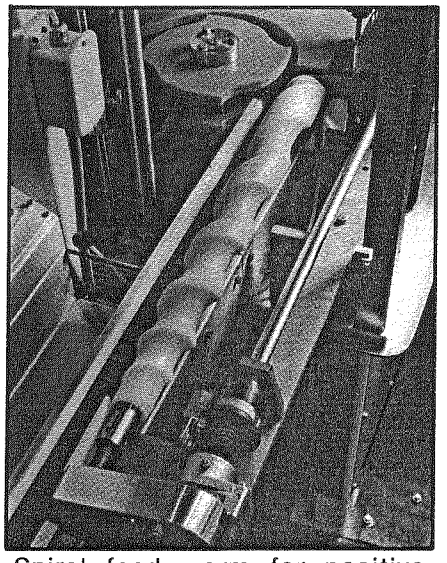
Centrally located electrical control panel of RPF-8-MC Filler/ Capper combination.



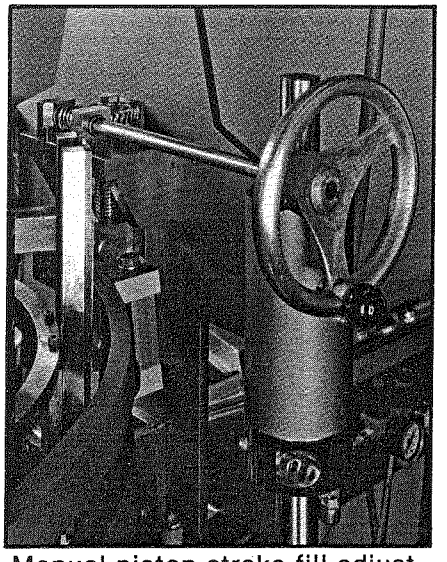
No-container/no-fill: Valve cam withdrawn.



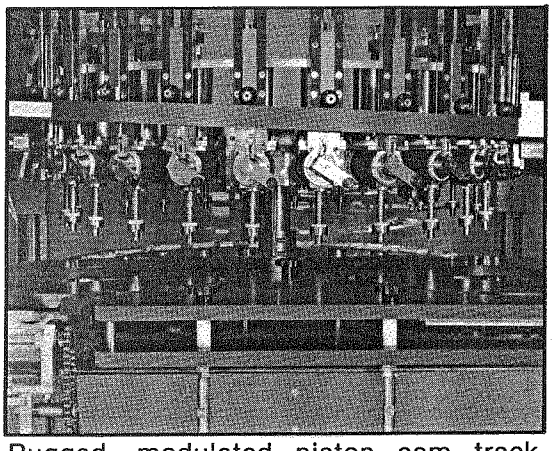
Container present: Valve cam activated for fill.



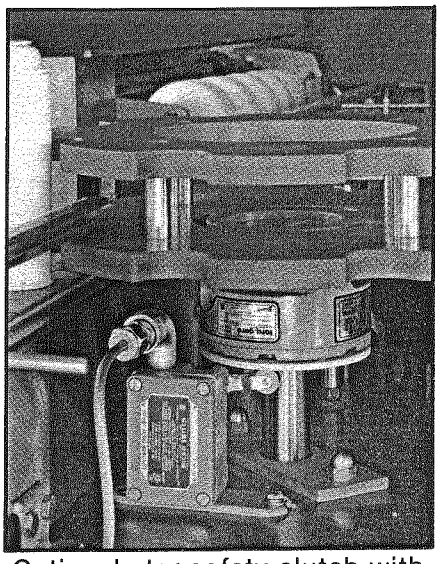
Spiral feed worm for positive container handling into star-wheel.



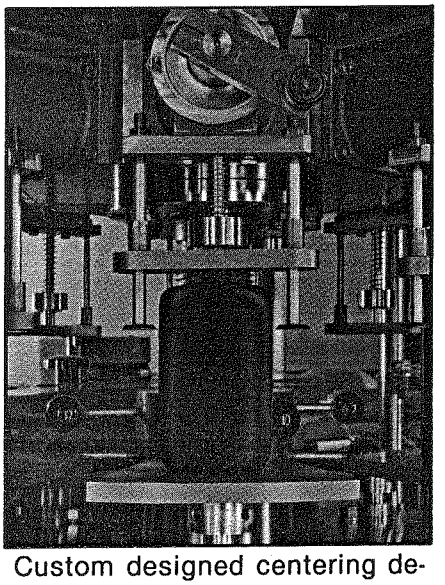
Manual piston stroke fill adjustment. (Electrically adjusted on 24-head.)



Rugged, modulated piston cam track. Model RPF-24 shown.

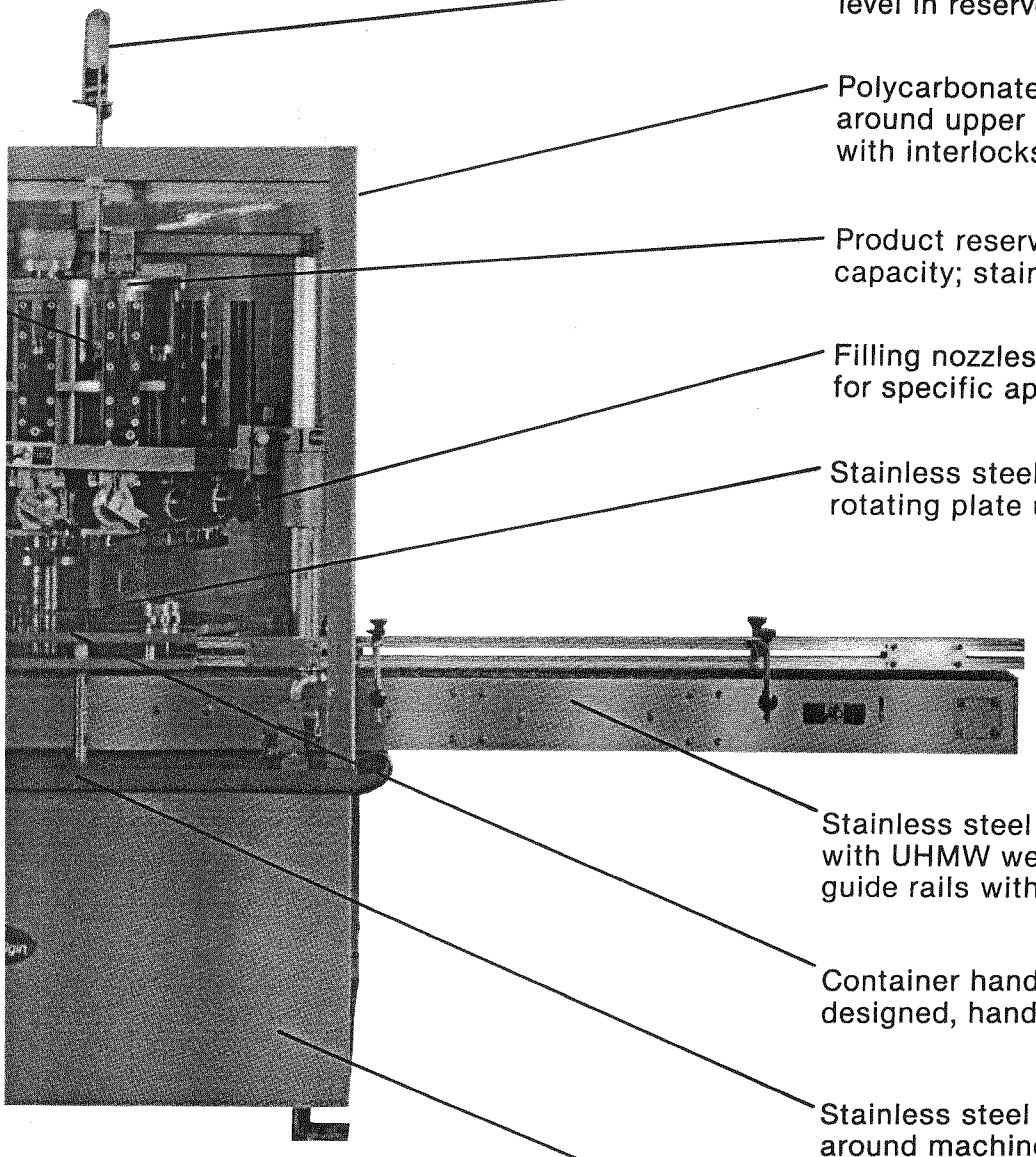


Optional star safety clutch with automatic reset.



Custom designed centering devices.

PF-16



Level control maintains product level in reservoir (option)

Polycarbonate barrier guarding around upper machine turret with interlocks

Product reservoir: high capacity; stainless steel

Filling nozzles custom designed for specific application

Stainless steel cover over rotating plate under lift platforms

Stainless steel conveyor bed with UHMW wear strips and guide rails with nylon inserts

Container handling parts custom designed, hand removable

Stainless steel trough around machine table perimeter

Stainless steel cabinet guarding

- Magnets fitted to lift platforms
- Stainless steel frame
- Right to left operation
- Custom designed centering devices
- Stainless steel conveyor chain
- Two-piece reservoir cover

Rotary Piston Fillers

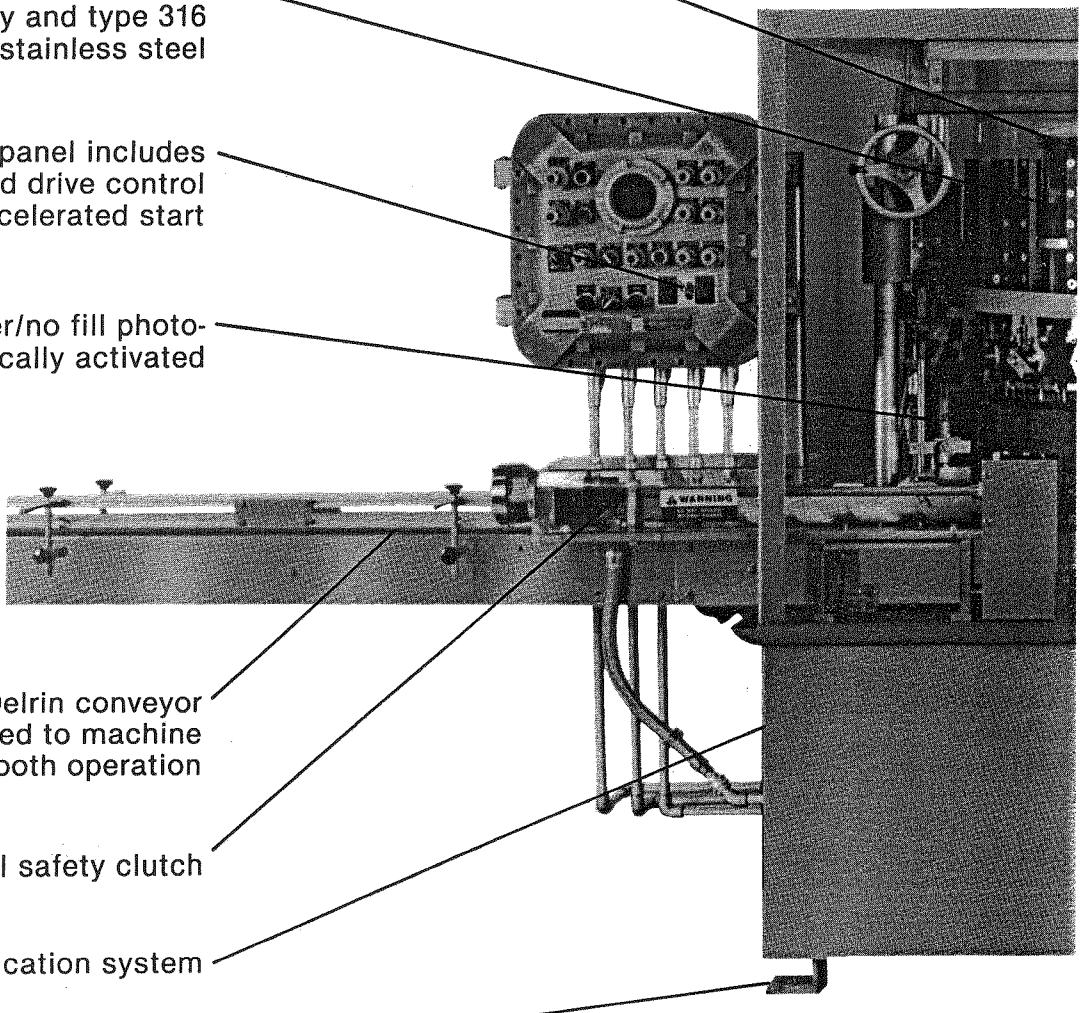
Model

Exclusive Individual Piston Adjustments result in ± 1/10 of 1% fill accuracy

Contact parts constructed of nickel alloy and type 316 stainless steel

Operator control panel includes variable speed drive control with accelerated start

No container/no fill photo-electrically activated



Machine driven Delrin conveyor chain synchronized to machine speed for smooth operation

Spiral safety clutch

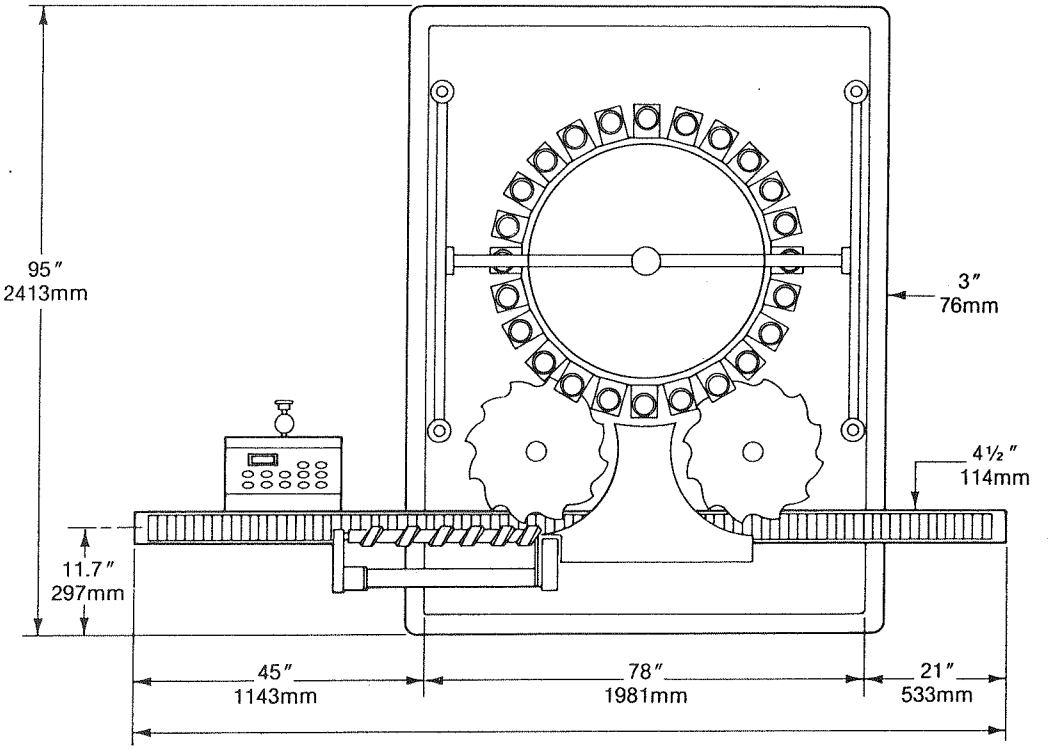
Centralized lubrication system

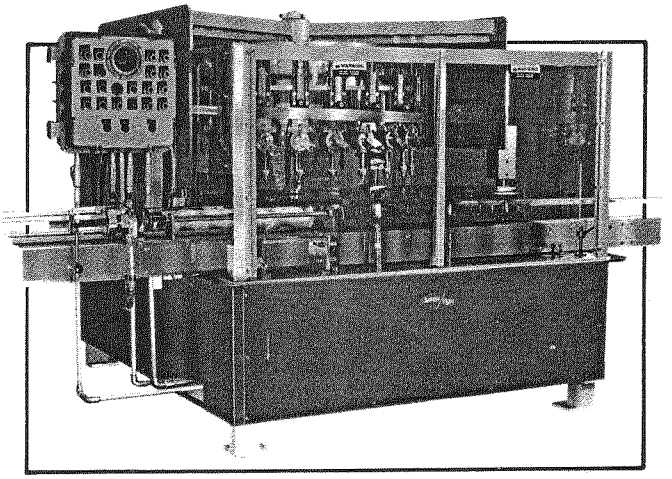
Lower machine frame of rugged welded tubular steel with polyurethane coating

Options

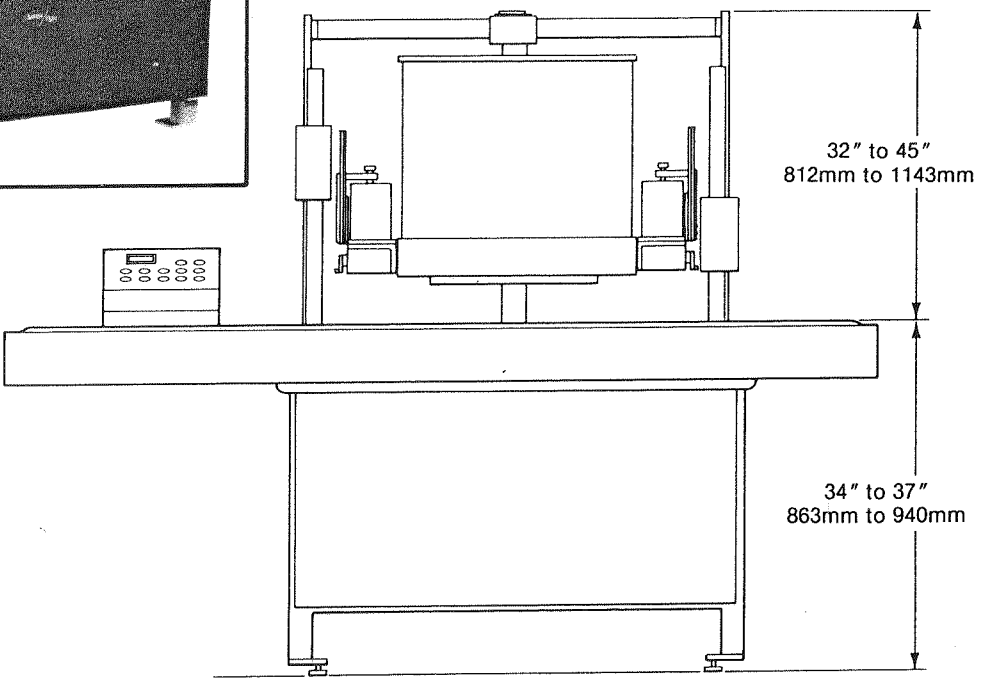
- Explosion proof electricals (pictured)
- Electronic level control
- Wiring to water-tight standards
- Contact parts of Elg #1 and 316 stainless steel
- Independent conveyor drive
- Safety clutches on stars

Model RPF-24





Shown With Optional
Explosion-Proof Electricals



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HCM2.5M0986

ROTARY PISTON FILLER VOLUME CHART (FLUID OUNCES)
STANDARD FILLER

CYL I.D.	PIST AREA	STROKE (INCHES) 0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00
1.00	0.785	0.22	0.44	0.65	0.87	1.09	1.31	1.52	1.74	1.96	2.18	2.39	2.61	2.83	3.05
1.50	1.767	0.49	0.98	1.47	1.96	2.45	2.94	3.43	3.92	4.41	4.90	5.38	5.87	6.36	6.85
1.75	2.405	0.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.66	7.33	8.00	8.66	9.33
2.00	3.142	0.87	1.74	2.61	3.48	4.35	5.22	6.09	6.96	7.83	8.70	9.57	10.44	11.31	12.18
2.13	3.547	0.98	1.96	2.95	3.93	4.91	5.89	6.88	7.86	8.84	9.82	10.81	11.79	12.77	13.75
2.25	3.976	1.10	2.20	3.30	4.41	5.51	6.61	7.71	8.81	9.91	11.01	12.12	13.22	14.32	15.42
2.50	4.909	1.36	2.72	4.08	5.44	6.80	8.16	9.52	10.88	12.24	13.60	14.96	16.32	17.68	19.04
2.75	5.940	1.65	3.29	4.94	6.58	8.23	9.87	11.52	13.16	14.81	16.45	18.10	19.74	21.39	23.03
3.00	7.069	1.96	3.92	5.87	7.83	9.79	11.75	13.71	15.66	17.62	19.58	21.54	23.50	25.45	27.41
3.50	9.621	2.67	5.33	8.00	10.66	13.33	15.99	18.66	21.32	23.99	26.65	29.32	31.98	34.65	37.31
4.00	12.566	3.48	6.96	10.44	13.92	17.40	20.89	24.37	27.85	31.33	34.81	38.29	41.77	45.25	48.73
4.13	13.364	3.70	7.40	11.11	14.81	18.51	22.21	25.91	29.62	33.32	37.02	40.72	44.42	48.13	51.83

605018 / 10 7902 8"
576449 — 938oz
4/8/12
16/24/30/36
6 3/4" stroke
RPF174 old max stroke