

#### **EQUIPMENT** FOR FILLING, CORKING, AND LABELING

### "I'COM-EKT"





**OUR MACHINERY FILLS UP TO LAST DROP** 



### LIST OF COUNTRIES AND CITIES WHERE "IRCOM-EKT" EQUIPMENT IS OPERATED





cientific-production Company "Ircom-EKT" founded on 17th of March 1994 develops, designs and produces packaging (filling) equipment for chemical and paint industries.

Wide range of equipment, from small semiautomatic machines to complex automated packaging, sealing and labeling lines, provides for satisfaction of various customer demands.

Using state-of-the-art technology and materials company designers and developers make every effort to produce equipment that meets the requirements of today.

Because Company is oriented towards clients' needs, general development framework has provided chemical and paint industries with packaging and filling equipment that is not only competitive with foreign counterparts but in some aspects surpasses them.

Equipment is manufactured in blast-resistant and fire-proof design with pneumatic components of world-famous European companies, such as "Camozzi" and "Festo".

© Confirmed with certificates of conformity GOST R Government Standard of Russia

Service of Russia for utilization in productions and installations related to handling and storage of explosive and fire dangerous and toxic substances and mixtures in chemical and paint industries.

★Also confirmed with certificates of conformity of Government Certification System UkrSEPRO Combined with extensive research work Company "Ircom-EKT" designs and manufactures equipment of high performance level. All this has allowed the Company to gain solid grounds on the market and become reliable partner in your business.

Wish you success and confidence on the way towards achieving the goal!

# gravimetric

### DOSING AND FILLING SEMI-AUTOMATIC MACHINE

PRK Series, type PRK.01, PRK.02



#### INTENDED USE

Semiautomatic devices of PRK.02 series are designed to pack water dispersive paints, fillers and acrylic primers into polypropylene tare. Weighting by dosing is performed on the weight platform with strain sensors. The control for weighting process is carried out by electronic microcontroller, which provides with the following functions:

- deduction of tare's weight;
- correction of tare's weight;
- regulation of additional filling;
- calculation for general weight of the product, which has been dosed;
- calculation for general amount of packages;
- storage of up to 20 settings of program in the memory.







PRK.02B-00.00.4010.0R

PRK.02BM-00.00.4020.0R







PRK.022-01



PRK.022





PRK.01B-00.00.0030.OP

FNS.01

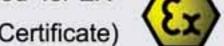
#### INTENDED USE

Semiautomatic devices of PRK.01 series are designed to pack liquid, foaming, low viscosity chemical and technical products of enamel of PF type, paints of MA and NTs type, primers of PF and GF types, organic impregnations on the basis of white spirit, solvent as well as water acrylic materials..

TECHNICAL CHARACTERISTICS	PRK.01	PRK.01M	PRK.02(022)	PRK.02M
Value of dose*, kg	1,0-30 ( brutto	) 1,0-30 (brutto	) 1,0-30(netto)	1,0-30(netto)
Fallibility of batching, %, at most	±0,5	±0,5	±0,5	±0,5
Pressure of compressed air, kg/cm		5-6		
Consumption of compressed air, m2/h		3-25		
Overall dimension, m. at most	1,6×0,9×1,8	1,8×1,2×2,5	2,0×1,1×1,9	$2,0\times1,1\times2,2$
Weight, kg. at most		240		
Maintenance staff		1 operat	or	

\* -continuously adjustable

SERVICE CONDITIONS: Machine is completely adapted for EX



# Volumetric

#### **BATCHERS**

Series PRK, type PRK.03; PRK.04; PRK.06







#### INTENDED USE

Batcher and semi-automatic PRK.03, PRK.04,
PRK.06 are intended for filling in manual and automatic
conditions of container by pool both poorly viscous
chemical and engineering fluids
(without abrasive inclusions).

List of packed up fluids:

- Paints, varnishs, the dissolvents correcting liquids and others.;
- Ink, pastes, adhesive PVA, 88 and others;
- Shampoos, flints and others.



#### **VOLUMETRIC PACKING**







Semi-automatic machine PRK.04B-00.00.2050.00

Semi-automatic machine PRK.04B-00.00.2020.00





#### Separate selffeeding of container by a comb, for filling and corking

Maintenance staff		1 opera	ator	
Consumption of compressed air, not more	m <sup>3</sup> /h	3-20	)	
Pressure of compressed air, kg/sm <sup>2</sup>	5–6	5–6	5-6	5-6
Dosing error, %	$\pm 0,5$	±0,5	±0,5	±0,5
Volume of dose*, sm3	3-16	12-100	35-500	75-1000
TECHNICAL CHARACTERISTICS	PRK.02	PRK.03	PRK.04	PRK.06

<sup>\* -</sup> continuously adjustable

#### REDUCED PRODUCTIVITY OF PACKING

Type PRK	Product	Container	Packing	Inner ∅ of nesk	doses (litres) /hour, no more
	Cor. liquid	p/e вottle	20 ml.	8 mm	1500 (301.)
PRK.03	Acetone	p/e вottle	50 ml.	18 mm	1140 (571.)
Works in Company	Glue PVA	p/e вottle	50 ml.	18mm	1080 (541.)
DDIC 04	Glue PVA	p/e вottle	250 ml.	11mm	720 (180 1.)
PRK.04	Shampoo	p/e Bottle	500 ml.	16mm	900 (450 1.)





# Volumetric

### DOSING AND FILLING SEMI-AUTOMATIC MACHINE

Series PRK. Type PRK.08; PRK.08M; PRK.50; PRK.50M





PRK.50B-00.00.0010.0R





PRK.08B-SP.SN.101(2)1.00

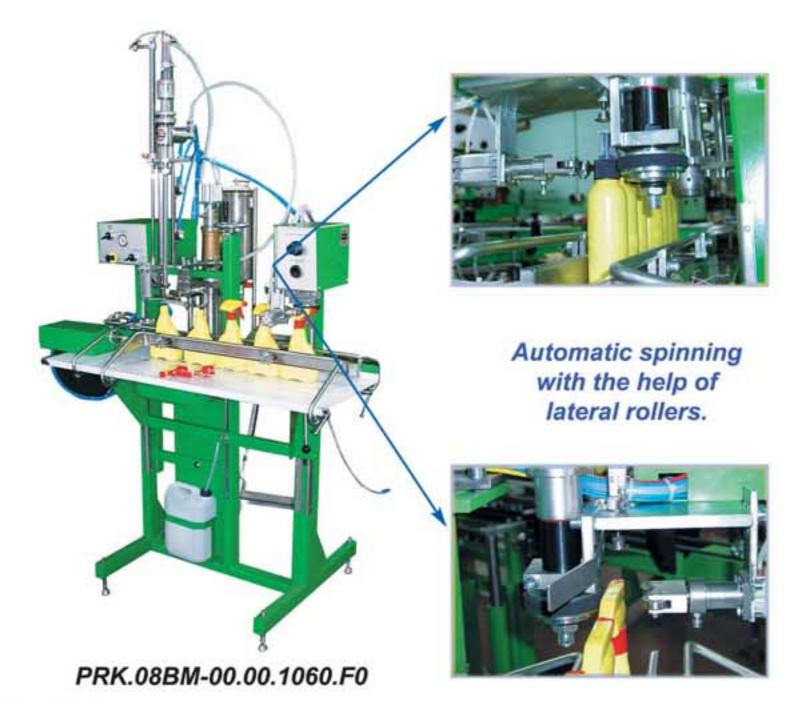








PRK.08BM-00.00.1020.F0



#### INTENDED USE

For filling and closing of various containers:

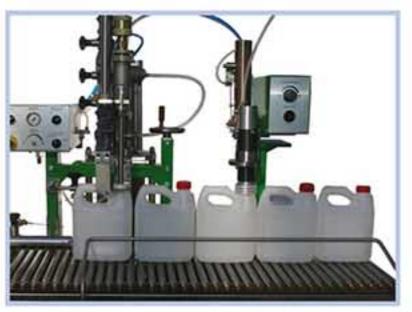
PRK.08, PRK.50 - of liquid and low-viscosity chemical and technical liquids, such as primers, pentaphthaline, melamine-alkyd enamels, water-dispersed paint, polyvinylacetate glue, technical oils, etc. PRK.08M, PRK.50M - especially foamy liquid chemical and technical products.

















PRK.08BM-02.00.102(6)0.00







For dosing products of low and medium viscosity, from 0,25l to 5l

- Totally pneumatic driving
- Compact design
- Parts contacting with product are made of steel AISI-304
- Volume dosage in continue regulation
- Independent suction and driving speed adjustment
- Capillary nozzles 'non dropping type' available in different sizes
- Centering can under all the working station by means of a manual system
- Closing station to the pressure lids with max diameter 300 mm
- Safety system 'no can no moving', 'no can no filling' and emergency push-button
- Ergonomic and simple to use

Volume dosage (Liters)	Dosing error.	Productivity* cans per hour			Air consumption	Air pressure	Power
	not more	1 liter	2.5 liters	3 liters	(m³/h)	(bar)	(V/Hz)
0.250-5.0	±0,5 %	1300	800	720	30	6	380/50

<sup>\*</sup> Depending on product characteristics and feeding system



#### LINES FOR FILLING AND CLOSING

Line LR series, type LR.1









#### INTENDED USE

Complex automatic line LR.1 is intended for filling and corking of low-viscosity liquids (dissolvers, drying oil, ets.) in glass and polyethylene bottle in automatic mode.

The line performs the following operations:

- clearing from admixtures;
- four bottle positionig;
- simultaneous filling of 4 cans;
- calculation of the filling bottles;
- screwing of covers;
- accumulation of finished products on a stacker.





#### LINES FOR FILLING AND CLOSING

Line LR series, type LR.2M

Line LR.2M



Complex automatic line LR.2M is intended for filling and corking of various containers low-viscosity chemical and technical liquids without abrasive inclusions automatically, such as primers, enamels, paints, dissolvers, polyvinylacetate glue, technical oils, ets. Line performs the following operations:

- clearing from admixtures;
- can feed from the store to the conveyor;
- simultaneous filling of two cans;
- cover feed to filled cans (is set to customer's order);
- closing of cans;
- color marking of cans with blocking of work in case of absence of a cover;
- calculation of the closed cans.

TECHNICAL CHARACTERISTICS	LR.1	LR.2M
Volume of dose (continuously adjustable), sm <sup>3</sup>	250-1000	250-2820
Dosing error, % not more	± 0,5	± 0,5
Pressure of compressed air, kg/sm <sup>2</sup>	5÷6	5÷6
Consumption of compressed air, not more m3/h	30	30
Installed power of electric motor, kW	0,37	0,37
Overall dimensions, mm at most	4300×1300×2500	4000×1400×1700
Weight, kg, not more	570	700



# Volumetri

#### LINES FOR FILLING AND CLOSING

Line LR series, type LR.2



#### INTENDED USE

Automatic line LR.2-01 (one dosator). It is designed for packing and sealing of water acrylic paints, crack fillers and pigment paste into polypropylene buckets with the volume from 0.28 up to 1.0 l.







#### INTENDED USE

Automatic line LR.2-02 (two dosators). It is designed for packing and closing of water acrylic paints, crack fillers and pigment paste into polypropylene buckets with volume from 0.28 up to 1.0 l.

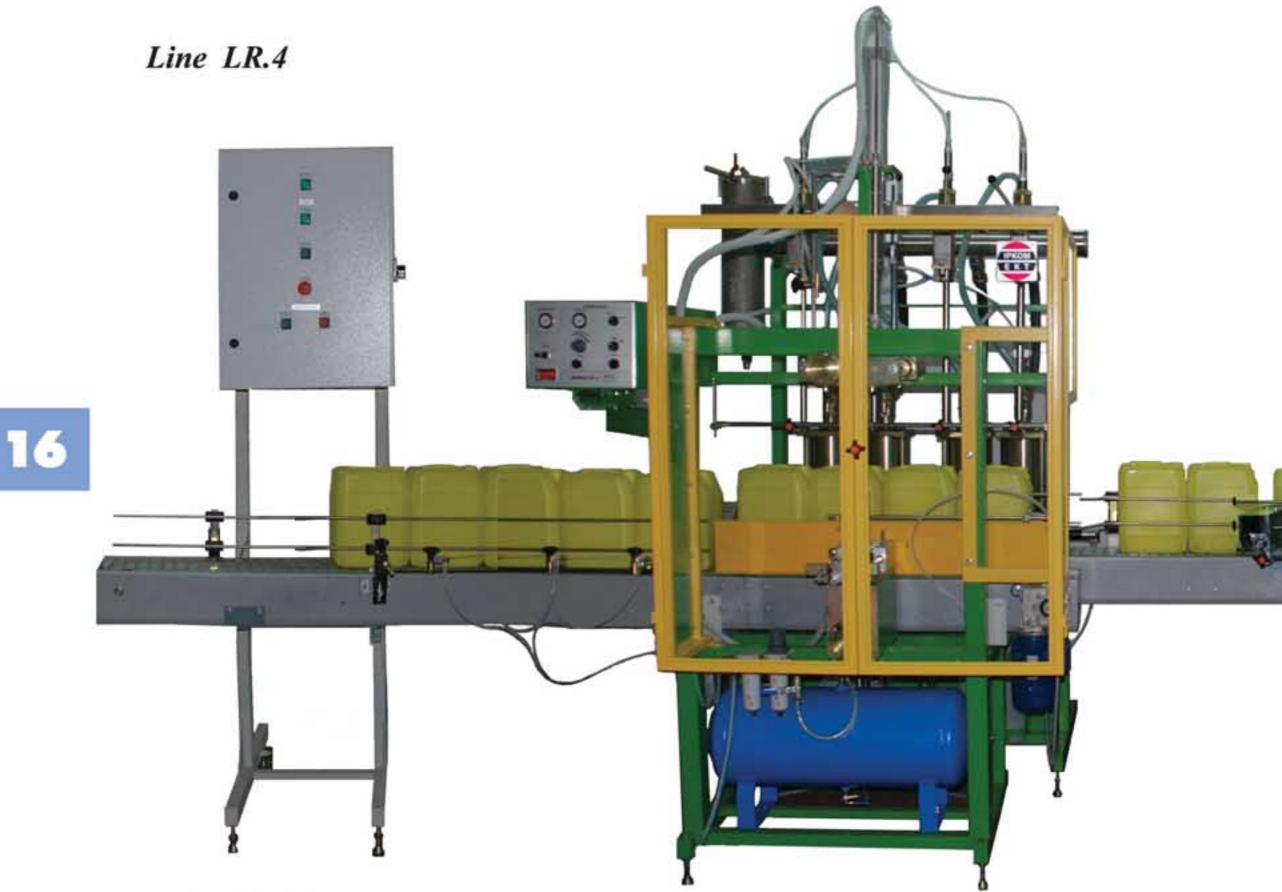






#### LINES FOR FILLING AND CLOSING

Line LR series, type LR.4



#### INTENDED USE

Line LR.4 is intended for automatic filling up and closing of polyethylene fuel cans  $V = 1-10 \text{ }\pi$ . chemical and technical, quiet and especially foaming liquids.

Line performs the following operations:

- clearing from admixtures;
- simultaneous filling up of 4 fuel cans;
- automatic stacking and twisting of polyethylene covers;
- induction soldering of a mouth;
- labeling on two sides.

TECHNICAL CHARACTERISTICS	LR.4	
Volume of dose (continuously adjustable), sm <sup>3</sup>	1000-10000	
Dosing error, % not more	$\pm 0.5$	
Pressure of compressed air, kg/sm <sup>2</sup>	5÷6	
Consumption of compressed air, not more m³/h	82	
Installed power of electric motor, kW	0,99	
Overall dimensions, mm at most L*xBxH(*depends on length of the conveyor)	Lx1800x2260	
Weight, kg, not more	1500	
Reduced productivity (canister V=4l.) l./hour	4000	

SERVICE CONDITIONS: Machine is completely adapted for EX



# Volumetric

#### Induction soldering of a mouth



#### Device for labeling on two sides (Self-pasted labels in a roll)





Station dosing and filling (four nozzles)



Device of automatic stacking and twisting of polyethylene covers





### DOSING AND FILLING SEMI-AUTOMATIC MACHINE

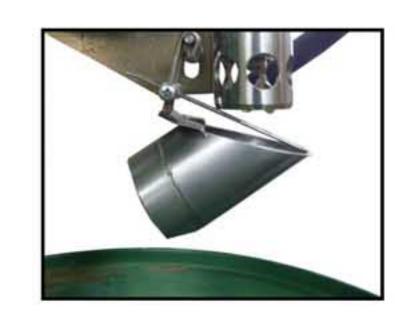
PRK Series, type PRK.11











#### Semi-automatic filling machine PRK.11

(barrel-packing machine) - -



#### Features:

For gravimetrical filling of liquid products low and medium viscosity into containers, drums and tanks with narrow openings. For cans from 10 to 300 kg

- Filling device with roller conveyor L = 1200 mm
- Weight platform is equipped with roller conveyor too
- The drive system of adjustment and releasing of dose with visual indicator of weight
- Movable filling nozzle
- Product flow by gravity or by gear-type pump
- Counting of the filled containers

#### Technical specification:

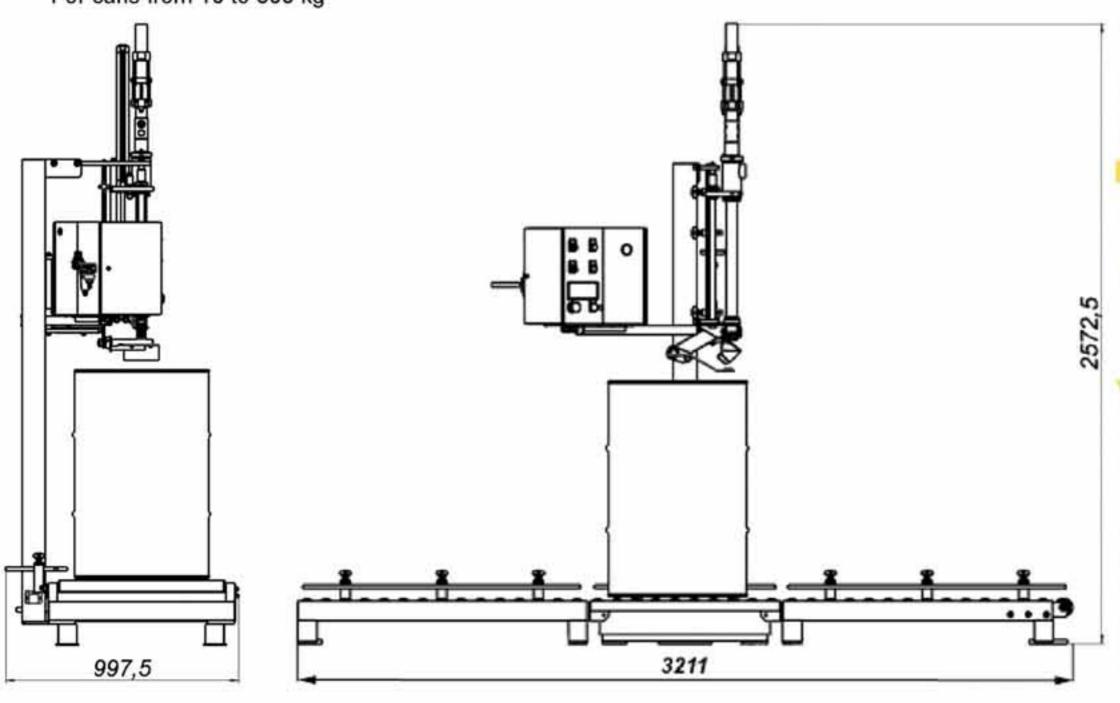
Way of filling	gravimetrically
2. Output value (drums V=200,0l), I/h	
(depends on product viscosity and passing	
by gear-type pump)	5000 - 12000
<ol><li>Overall dimensions of cans, mm</li></ol>	
- drums Ø	600±20
- height, (min/max)	850/900
4. Min Ø of fill opening, mm	56
<ol><li>Input product's pressure, bar (min/max)</li></ol>	0,05/0,4
6. Compressed air, bar	0,6-1,0
7. Free air consumption, m3/h	4,0
8. Power supply	220V, 50 Hz
9. Watts input, kW	0,7
10. Weight, kg	380

#### Additional:

- gear-type pump control module

#### Application:

The semi-automatic device PRK.11 is intended for filling, gravimetrically, liquid products low and medium viscosity (enamels, varnishes, oils etc.) into containers, drums and tanks with narrow openings. For cans from 10 to 300 kg



eat volume

#### LABELING EQUIPMENT

Labeling device, ETM type



Labeling device, ETM type







**SERVICE CONDITIONS:** Machine is completely adapted for EX explosive environment operation (Russian GOZGORTECHNADZOR Certificate)

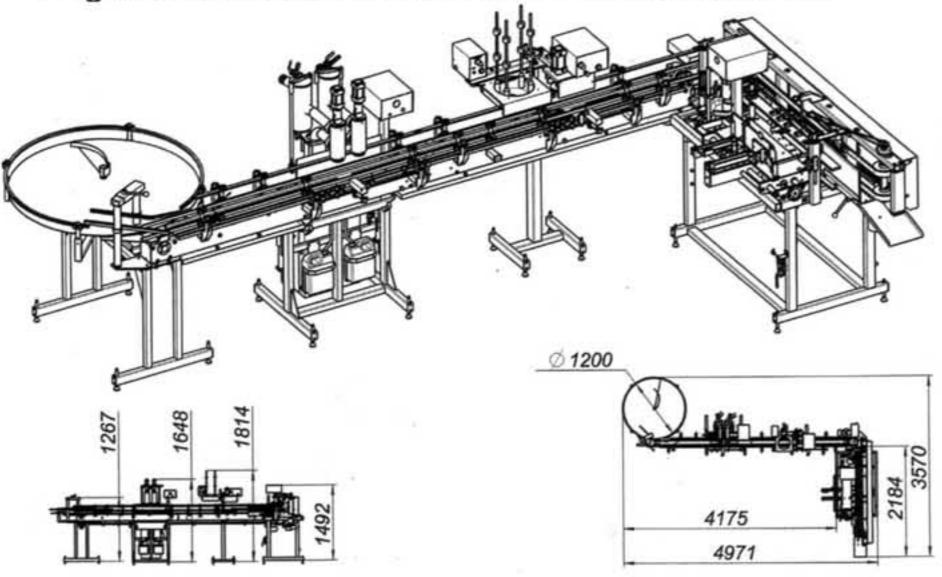


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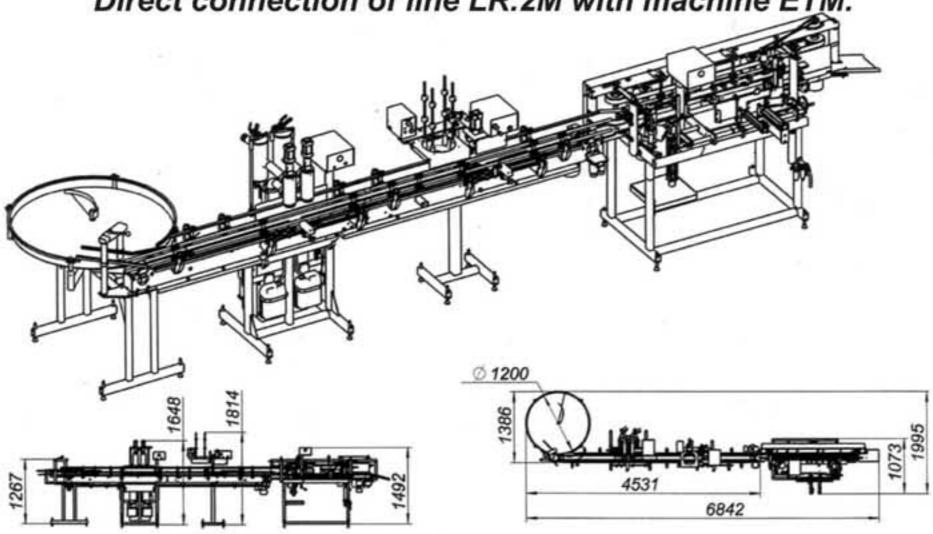
abeline

#### Angular connection of line LR.2M with machine ETM.





Direct connection of line LR.2M with machine ETM.



#### INTENDED USE

Labeling device, ETM type, is designed for affixing of circular labels on circular round cans according to GOST 6128-81 and includes:

- automatic can feeding;
- automatic label feeding;
- automatic label affixing;
- convenient reset to a different container and label type;
- use of glues capable of drying out at normal temperature.

#### TECHNICAL CHARACTERISTICS

Container diameter, mm	100÷160
Container height, mm	75÷190
Label width, mm	75÷190
Label length, mm	300÷520
Output of cans 103 mm in diameter, labels/hour, not exceeding	3000
Device electrical energy use (3-phase alternating current)	380±38 V, 50Hz
Installed capacity, kWt	0,74
Pressure of compressed air, mPa	0,4÷0,6
Consumption of compressed air, not more m³/h	3,0
Overall dimensions, mm at most	2500×1120×1600
Weight, kg, not exceeding	400

21

900



#### **DEVICE OF GLUEING OF LABELS**

series UNE



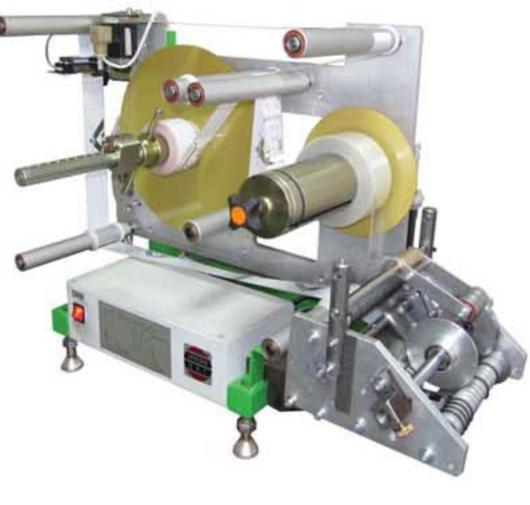
#### UNE.0100-00

For automatic separating self adhesive labels from base paper and passing to special table for high quality labeling on different type of cans and packing.



#### UNE.0100-01

This model is equipped with a thermal device to print automatically the number and letter information on self-adhesive label.



#### UNE.0200-00

For automatic separating self adhesive labels from base paper and automatically labeling on different type of cylindrical cans.

additional equipment

#### **EQUIPMENT FOR GLUEING LABELS**

1	
IPK	OM
E	KT

Technical specification:	UNE.0100-00	UNE.0200-00
	UNE.0100-01	
1. Width of label (with paper base), mm		
- max	190	190
- min	40	40
2. Roll diameter, mm	300	300
3. Sleeve diameter, mm	40	40
4. Diameter of cans, max, mm		155
5. Height of cans, max, mm		160
6. Unwind speed, m/min	10-22	10-22
7. Power supply	220V.	50Hz











#### **PUMP FILTER STATION**

#### series FNS

#### INTENDED USE

Pump filter station FNS series is designed for pumping, filtration and supply for filling of technical, chemical and food products. For pumping of products pneumatic bi-diaphragm pump is used. Depending on the sort of pumping products pumps are completed by membrane and holding valve made of different materials: santoprene, teflon, neoprene



FNS.01 - For gravimetric packing Is designed for pumping and filtration of liquids, operates with semi-automatic devices PRK.01, PRK.02 series and others. FNS.02 - For volumetric packing Is designed for pumping and filtration of liquids, operates with semi-automatic devices PRK.06, PRK.08, PRK.50 series and others.

#### **Technical characteristics**

Max air comsumption: Pump 1" (Pump 1 ½") — 68 m3/hour (85 m3/hour)

Max productivity (on water) Pump 1" (Pump 1 ½") — 170 L/min(401 L/min)

Max operation pressure — 8 bar

Max size of pumping hard particles(depends on pump's mark) — 3-6 mm

Product supply (D 50) — 2"

Weight, not more, kg — 80

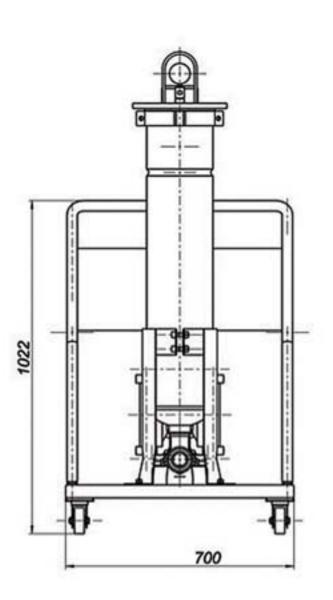
SERVICE CONDITIONS: Machine is completely adapted for EX

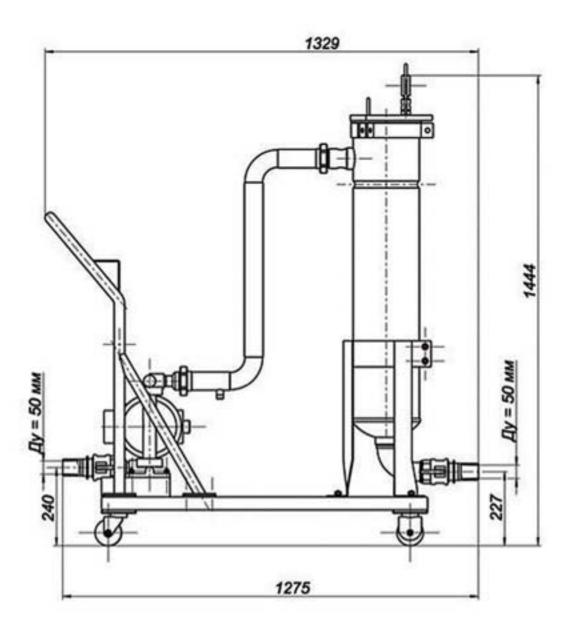
(£x)



At the request FNS can be completed by SandPiper and Yamada pumps.

For product filtration it is used filtration system BMF.1.2.304.045.1. of Ircom-EKT production.





#### Liquid filtration systems

#### **INTENDED USE**

chemical industry, paint and coatings industry, food industry, clearing and treatment of water (liquids)

#### **Completing units**

Ballon model BMF.1.2.304.045.1

Filter bag № 2 (mm) Ø=180, L=810
Filter area (m2) 0.45
Volume of filter element (dm3) 17.3
Max operating pressure (bar) 10
Material of ballon, filter basket and pressing – steel
Overall dimentions, mm 1360/400/400
Weight, kg 25

#### Additional completing units

- Indicator of filter dirtiness
- Displacer
- Connection elements (collars and others)

#### Filter element

Filter bags

size: N02 (Ø=180mm, L=810mm) material: nylon, polyether felt selectability, micron

- nylon: 25; 50; 100; 200; 250; 300; 400; 600
- polyether felt: 1; 3; 5; 10; 25; 50; 100; 200

O-ring – made of galvanized steel (S)
Max operating temperature: nylon 200°C, polyether felt 190 °C
Depending on filter product material of filter bag

can be: polypropylene, NOMEX, viscose, wool Changeable filter element can be:

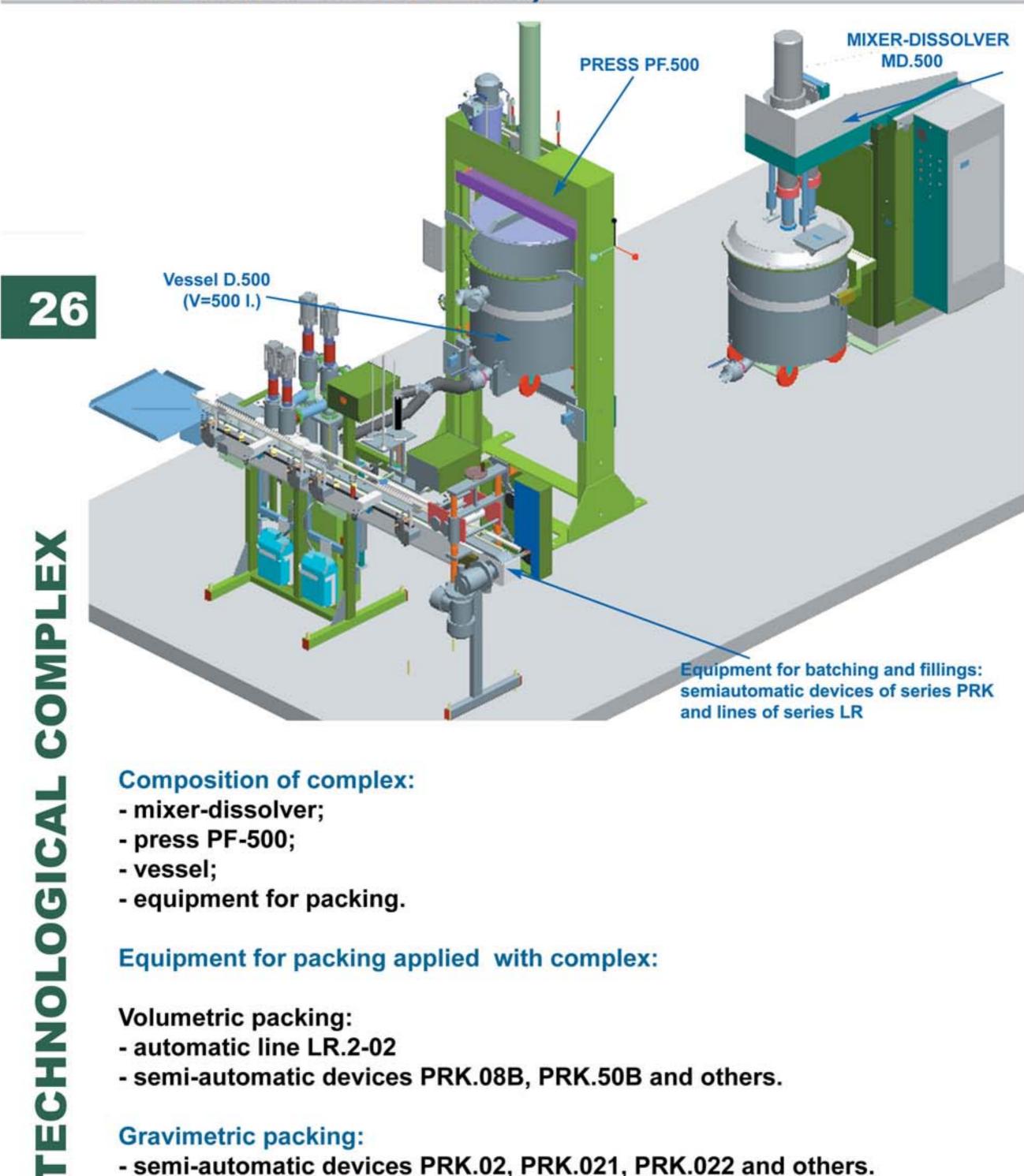
Eaton Filtration LLC, Амафильтр ИСТ,

FSI Filter Specialists, INC





#### TECHNOLOGICAL COMPLEX FOR MANUFACTURING, DOSING AND PACKING PRODUCTS OF HIGH **VISCOSITY (FRONT PUTTY, JOINT SEALANTS, PIGMENTARY PASTES ets.)**



#### Composition of complex:

- mixer-dissolver;
- press PF-500;
- vessel;
- equipment for packing.

#### Equipment for packing applied with complex:

#### Volumetric packing:

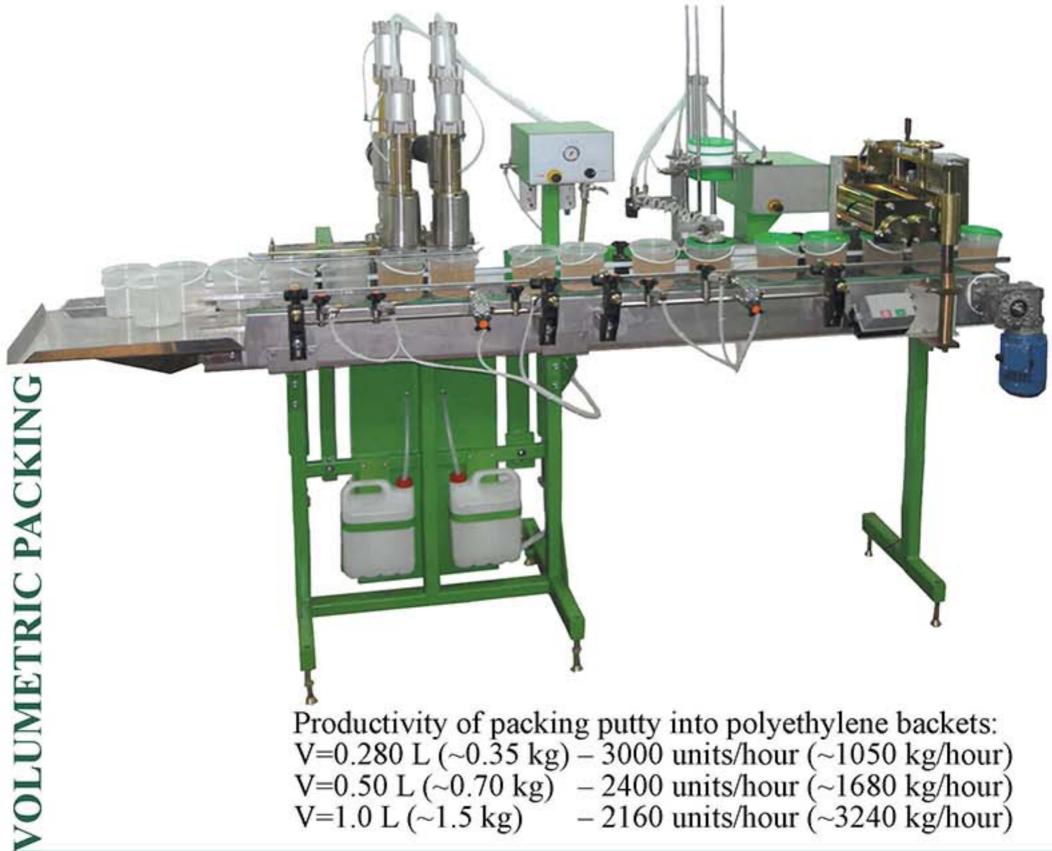
- automatic line LR.2-02
- semi-automatic devices PRK.08B, PRK.50B and others.

#### Gravimetric packing:

- semi-automatic devices PRK.02, PRK.021, PRK.022 and others.

#### TECHNOLOGICAL COMPLEX - equipment for batching and filling

#### Automatic line LR.2-02 (two dosators)



Productivity of packing putty into polyethylene backets: V=0.280 L (~0.35 kg) – 3000 units/hour (~1050 kg/hour) V=0.50 L (~0.70 kg) – 2400 units/hour (~1680 kg/hour) V=1.0 L (~1.5 kg) – 2160 units/hour (~3240 kg/hour)

## Semiautomatic devices of PRK.02 Productivity of packing putty into polyethylene backets - 2000÷6000 kg/hour.



#### **MIXER-DISSOLVER MD** series

#### INTENDED USE

Mixers - dissolvers of MD.1-500 series are designed to mix and disperse pigments, dyes and other materials of average solidity in liquid environment. MD.1-500 is equipped with two mixers: low speed gate and high speed tooth ones, and it may be used to produce crack fillers, sealants, glues, pigment pastes, mastics, etc.









Volume of barrel, M



nominal	0,500
working	0,450
Preparation time of a pigmentary putty	
(a portion of 600 kg.), minutes	20÷30
Over-all power MD.500, kW	40
Drive of high speed cutter:	5 To 2
power of electric motor, kW	30
rotational frequency of mixer's frame, rev./min	300-1500
Drive of low speed gate mixer:	
power of electric motor, kW	7,5
rotational frequency of mixer's frame, rev./min	38.3
Hydraulic drive of the rise,	
installed power of the electric motor, kW	0,55
Mass in working order *, kg, no more	1600
Depends on performances of raw material	
Overall dimensions, m length x width x height (height at lifting slide)	2,4x1,3x2,8(3,7
Weight, not more, kg	1900

TECHNOLOGICAL COMPLEX



# TECHNOLOGICAL COMPLEX

### INDUSTRIAL ASSEMBLY FOR PACKING VISCOUS TECHNICAL AND CHEMICAL PRODUCTS series PF (PRESS PF.500)



#### INTENDED USE

PF.500 is designed to pack (to deliver) high viscosity technical and chemical products from kneading troughs D.1-500, such as crack filler, mastic, glue, sealant and others, into various tare. PF.1-500 may be used for combined operation with semiautomatic devices of PRK series and lines of LP series.





#### TECHNICAL CHARACTERISTICS

Productivity, m/min*	0.03÷0.3
Drive – hydraulic	C 07
installed capacity, kW	2,5
maximum pressure, MPa	17,5
Pressure of compressed air, MPa, not more	0,4-0,6
Consumption of compressed air, l/hour, not more	10
Volume of barrel D500, M	
nominal	0,500
working	0,450
Overall dimensions, mm (length x width x height)	1200x1800x3900
Weight, not more, kg	1300
*depends on viscosity of a product	



#### LINES FOR FILLING AND CLOSING

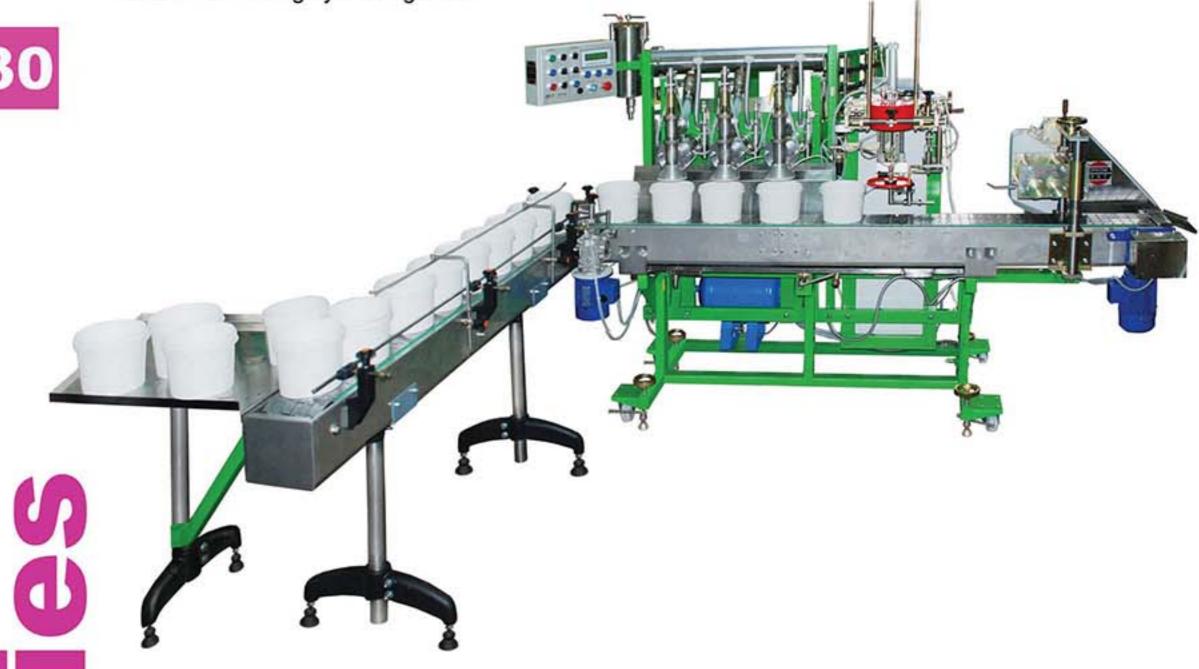
Line LR series, type LR.7

#### INTENDED USE

The high-speed line LR.7 is intended for volumetric automatic filling up of acrylic water-based foaming primers and color impregnation into plastic containers volume V=1.0I up to 3,0I.

- Input conveyer for empty cans
- "Step by step" conveyor moving provides smooth moving preventing splashing of product.
- Filling station consists of three batchers. One batcher gives max 1 liter dose.
- The volume of dose of each batcher remotely controlled by one common control panel.
- Automatic stacking station

- Automatic closing by rotating rollers



Volume dosage (Liters)	Dosing error, not more	Productivity* cans per hour			Air consumption	Air pressure	Power supply
		1.01	2.01	3.01	(m³/h)	(bar)	(V/Hz)
1.0-3.0	±0.25%	2500	1600	850	45	6	220/50

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Gravimetric packing Dosing and filling semi-automatic machines Series PRK, type PRK.01, PRK.02
Volumetric packing Batchers series PRK, type PRK.02, PRK.03, PRK.04, PRK.06
Lines LR series such as LR.1, LR.2, LR.2M,
Dosing and filling semi-automatic machine PRK.11
Labeling equipment Labeling device, ETM type
Device of glueing of labels Series UNE
Pump filter station Series FNS
Technological complex
Technological complex on manufacturing, the dosing and packing of especially viscous products
Novelties LINES LR.7, FOR FILLING AND CLOSING

