



# ROTATORY EVAPORATOR "RS 3000-V"

FOR 1000, 2000 AND 3000 ML. FLASKS.  
MULTIFUNCTIONAL: VACUUM PUMP AND BATH BUILT-IN

*Quality and safety. Rotary speed and bath temperature regulation*

## FEATURES

Compact rotatory evaporator composed of stainless steel AISI 304 case and with an extra-soft manual elevator system and bath made of dur-al alloy chemically treated.

Rotatory speed: from 20 to 120 rpm.

Bath temperature: up to 100 °C.

External probe temperature: up to 100 °C.

Vacuum breaker with air inlet filter.

## CONTROL PANEL



1. Starting main switch ON/OFF.
  2. Digital reading indicator of external probe temperature.
  3. Bath temperature digital regulator.
  4. Rotator pump switch.
  5. Heater bath switch.
  6. Water recirculation pump switch.
  7. Regulator knob of rotating speed.
- Vacuometer built-in the case.

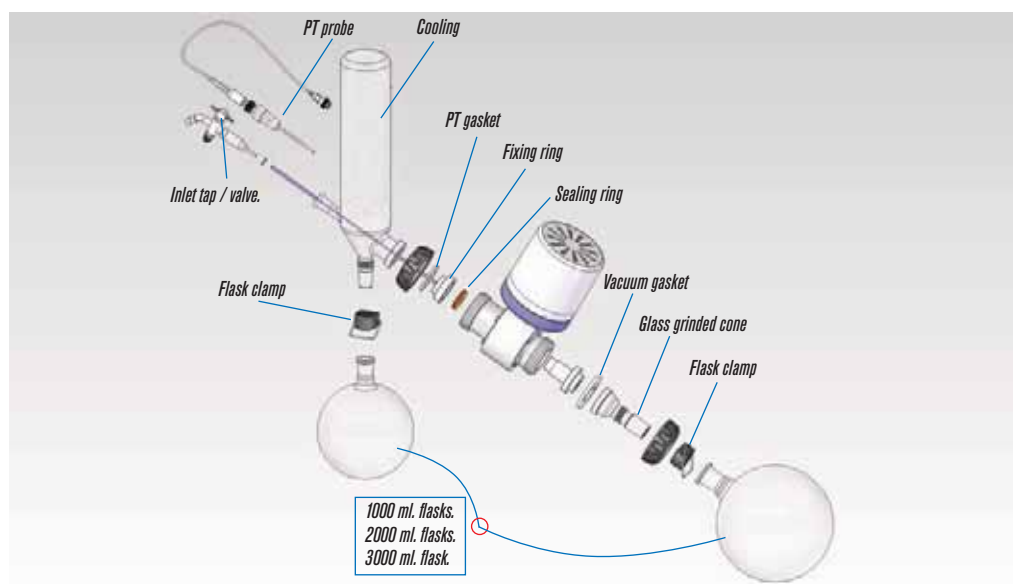


## MODEL

	Part no	Speed Regulation t.p.m.	Height / Width / Depth (extérieur) cm			Power W	Weight Kg
<b>RS 3000-V</b>	<b>6003000</b>	0 a 120	64	74	42	1050	38

It is completely supplied with a tap for solution, a PT100 probe, a coolant, two 3000 ml. flasks, one 2000 ml flask, two 1000 ml. flasks and its accessories.

## GLASS AND ITS ACCESSORIES DIAGRAM SPARE PARTS





**ROTATORY EVAPORATOR**



**PERISTALTIC DOSING PUMP**



**MEMBRANE VACUUM AND PRESSURE PUMP  
"VACUM-PRES"**



**MEMBRANE VACUUM PUMPS**



**ROTARY VANE VACUUM PUMPS**



**WATER RECIRCULATION VACUUM PUMP**



**LIQUID TRANSFER PUMP, ELECTRIC**



**LIQUID TRANSFER PUMP, MANUAL**



**CENTRIFUGAL PUMPS**

**Rotary evaporator**

**Peristaltic dosing pumps**

**Membrane vacuum pumps**

**Vacuum pumps**

**Centrifugal pumps**

**Liquid transfer pumps**

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## Peristaltic pump "Percom N-M"

ELECTRONIC SPEED CONTROL WITH DIGITAL DISPLAY,  
WITH MULTI HEAD ADAPTER FOR TUBES FROM 4 TO 12 mm Ø (ext.). MAXIMUM WALL THICKNESS 1,6 mm.  
ADJUSTABLE FLOW RATES FROM 1080 TO 73800 ml/hr.

### FEATURES

Small footprint bench top model  
Quiet with minimal vibrations.  
Speed control 20 to 200 r.p.m.

### CONTROL PANEL

Push button Stop/Start/switch.  
Digital speed display.  
Push button increase speed control.  
Push button decrease speed control.

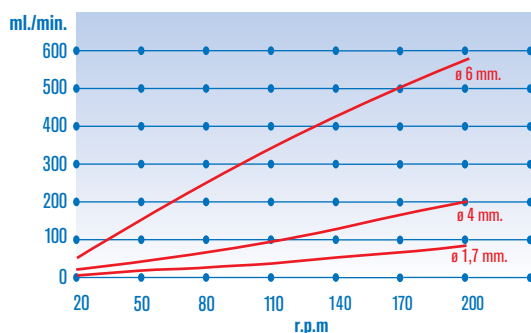
### BACK

External control connection using a foot switch for Start / Stop, supplied as an accessory.

### MODEL

Part No.	Height / Width / Depth (exterior) cm	Pump rate of H <sub>2</sub> O ml/hr	Power W	Weight Kg
<b>3001300</b>	<b>16 12 18</b>	<b>1080 to 73800</b>	<b>12</b>	<b>2.6</b>

Graph of pump rate/r.p.m. dependent on the internal tube Ø.



Graph showing with liquids: Distilled water. These characteristics vary according to the density of the liquid.



## Peristaltic dosing pump "Peristaltic PR-2003"

ELECTRONIC SPEED CONTROL AND DIGITAL DISPLAY.  
MULTI TUBE ADAPTER FROM 4 TO 12 mm Ø (ext.). MAXIMUM WALL THICKNESS 1,6mm.  
ADJUSTABLE DOSING RATE PROGRAMMABLE FROM 10 ML TO 10 LITRES.  
MAXIMUM PUMP RATE 1500 ml / minute.

### FEATURES

Small foot print, bench top.  
Silent and free from vibrations.  
Pump tube held by a simple clamp  
Glass dosing tip "PECIPUMP" provides precise dispensing.  
Dispense rate: The pump can dispense set volumes over a set time period.  
Flow rate: The pump dispenses at a constant rate over a set time or continuous operation.

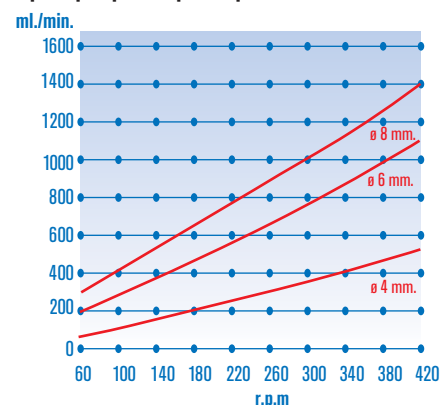
### BACK

Main On/ Off switch.  
Foot switch connection Start - Stop, for operation from a distance, supplied as an accessory.

### MODEL

Part No.	Height/Width/Depth (exterior) cm	Pump rate of H <sub>2</sub> O ml/hour	Power W	Weight Kg
<b>4129050</b>	<b>25 19 23</b>	<b>90,000</b>	<b>65</b>	<b>4</b>

Graph of pump rate/r.p.m. dependent on the internal tube Ø.



Graph showing with liquids: Distilled water. These characteristics vary according to the density of the liquid.



Interior Ø mm	Dose rate (ml/minute)	
	60 r.p.m.	420 r.p.m.
4	80	480
6	140	1100
8	180	1400

### CONTROL PANEL

Numeric keypad to enter values.  
LCD display of 16 x 2 characters.  
Calibration memory.  
Change pump direction, control from the panel.  
Rotation direction indicator  
Foot switch connection for Start/Stop.

### TECHNICAL SPECIFICATIONS

Speed (r.p.m.): ..... 60 - 400  
Resolution (ml): ..... 1 or 0.1  
Dispensing range (ml): ..... 10 - 9999  
Pump rate ..... See table  
N° of programs: ..... 99  
N° of repeat doses: ..... 9999  
Repetition interval: ..... 1 - 9  
Maximum tube wall (mm): ..... 1,6  
Maximum external tube diameter (mm): ..... 12  
Note: The precision depends on the tube Ø and the speed.

### ACCESSORIES FOR PERISTALTIC PUMPS "PERCOM N-M" AND "PR2003"

Standard silicon tubing. (see page: 51)

START STOP foot pedal controller. Part No. **1001044**

**Free of lubrication • Free of maintenance • Quiet**

### APPLICATIONS

Vacuum filtration.  
Vacuum distillation.  
Rotating evaporators.  
Gas extraction and transport.  
Vacuum drying.

### COMUN FEATURES

Constructed in aluminium.  
Membrane of polifluoropreno, resistant to the corrosion and long-life.  
Refrigeration system that allows a continuous operation of 24 hours.



MODEL “MV 50”



MODEL “MV 100”

### CONTROL PANEL

Vacuum and pressure gauges.  
Adjustable pressure and vacuum.  
Tensile handle for easy transport.  
Button On-Off.

### CONTROL PANEL

Vacuum indicator.  
Vacuum regulator.  
Button On-Off.

MODELS	Part No.	Vacuum Rate m <sup>3</sup> /h	Vacuum Limit mbar	Pressure bar	Heigh / Width / Depth (exterior) cm	Power W	Weight Kg
MV 50	5910100	1,8	200	2	23,5 16 21	160	8
MV 100	5910101	3,6	200	2,75	23,5 16 30	160	9

They are supplied with a 1 meter of silicone tube Ø 8 x 12mm.

## Vacuum pump

ROTARY VEIN PUMP WITH ANTI RETURN VALVE PREVENTS OIL FLOW BACK, SUITABLE FOR GENERAL LABORATORY APPLICATIONS. OVER TEMPERATURE MOTOR PROTECTION CUT-OUT AND MAIN ON/OFF SWITCH.

### FEATURES

Asbestos veins and internal joints.  
Aspiration connection 16 mm Ø in model 5900620 and 16 mm Ø in model 5900621.  
Analogue vacuum gauge.  
High oil volume and forced lubrication.  
Oil reservoir charge capacity:  
25 cc in model 5900620 and 55 cc in model 5900621.  
Exhaust filter and ballast.  
Shock absorber mounted.  
Low noise level (62db)  
Maximum working temperature 60 °C.  
Portable with lifting handle.



Part No. 5900620



Part No. 5900621

### MODELS

Part No.	Pump rate m <sup>3</sup> /hr	Vacuum limit mbar	Height / Width / Depth (exterior) cm	r.p.m.	Power W	Weight Kg
5900620	3.6	0.1	21 26.5 12	1400	120	7.6
5900621	1.8	0.06	25 32 13	1400	180	11

### ACCESSORY

High pressure **rubber tubes** of 18 x 26 mm Ø. Part No **5900624**  
High pressure **rubber tubes** of 8 x 15 mm Ø. For Vacuum oven connection  
“VACIOTEM”. Part No **5900625**  
**Pump oil** for vacuum pumps, 1 litre bottle. Part No. **5515030**

**SPARE Vacuum gauge** (Fits both models). Part No. **5515031**



# Membrane vacuum pump

SUITABLE FOR AIR, GAS AND VAPOURS.

## FEATURES

Transfer, evacuation and compression, free from contamination. The models N-86 and N-022 of 2.5 and 4 bar of relative pressure, can be used also as a compressor.

Can be operated dry.

No lubrication required.

Maintenance free.

Silent.

The double head models are made with linear two phase membranes.

All Models (except model N-022), are made with a patented system of diaphragms manufactured with optimum tension, that results in a smaller more durable pump.

Approximate loss  $6 \times 10^{-3}$  mbar x L/s

Complete with thermal breaker and fuse.

Medium to high resistance to chemicals, (model dependant).

We advise that you check the compatibility of the pump performance with the materials that will be in contact with the pump parts (see table).



## MODELS / SPECIFICATIONS

	N-86	N-022	N-816	N-820	N-840
Part No.	5910106	5910107	5910108	5910009	5910110
Vacuum pump rate (to 1 Atm, of pressure)	5.5 l/min	13 l/min	16 l/min	20 l/min	34 l/min
	0.33 m <sup>3</sup> /h	0.78 m <sup>3</sup> /h	0.96 m <sup>3</sup> /h	1.2 m <sup>3</sup> /h	2.04 m <sup>3</sup> /h
Vacuum limit (mbar) absolute	160 mbar	100 mbar	20 mbar	8 mbar	8 mbar
Pressure (bar) relative	2.5 bar	4 bar	0.5 bar	1 bar	1 bar
Tube connection, Ø interior	4 mm	6 mm	6 mm	10 mm	10 mm
Number of heads and phases	1	1	2	2	2
Head material	PPS	Aluminium	PPS	PTFE	PTFE
Membrane material (diaphragms)	PTFE	PTFE	PTFE	PTFE	PTFE
Valve material	FFPM	Stainless steel	FFPM	FFPM	FFPM
Motor protection level	IP-20	IP-20	IP-20	IP-44	IP-44
Gas operating temperature and permissible ambient			5 to 40 °C		
Current (A) / Power (W)	0.63 / 65	0.7 / 100	0.6 / 100	0.7 / 120	1.5 / 245
Dimensions height x width x depth (cm)	14 x 9 x 17	19 x 15 x 20	14 x 9 x 36	21 x 15 x 31	23 x 17 x 34
Weight (Kg)	1.9	4	3.95	9.3	12.6

## APPLICATIONS AND CHEMICAL RESISTANCE

	N-86	N-022	N-816	N-820	N-840
Chemical resistance (depends on medium being pumped.)	medium-high	medium-high	medium-high	medium-high	medium-high
For gasses and vapours very aggressive or corrosive	-	-	-	✓	✓
For gasses and vapours slightly aggressive or corrosive	✓	✓	✓	✓	✓
For liquid transfer and evacuation	✓	✓	✓	✓	
For liquid transfer, evacuation and as a compressor	✓	✓	-	-	-
Ideal for vacuum filtration	✓	✓	✓	✓	✓
Ideal for vacuum filtration, evaporation, drying and gel drying	-	-	-	✓	✓

## SPARE PARTS

	N-86	N-022	N-816	N-820	N-840
Spares Kit: 1 membrane +2 valves + 2 gaskets	5910120	-	-	-	-
Spares Kit: 1 membrane +2 valves + 1 gasket	-	5910121	-	-	-
Spares Kit: 2 membrane +4 valves + 4 gaskets	-	-	5910122	5910123	5910124



## Silicon tube for peristaltic and membrane pumps

### MODELS

	Part No.	interior Ø mm	exterior Ø mm
Standard tube*	8991202*	4	7
	8991201*	6	9
	8991200*	8	11



(\* ) Tubing supplied in 1 meter lengths.

(\* ) Part Numbers with asterisk\* are adaptables to peristaltic pumps "Percom N-M" and "PR-2003". See page 48

	Part No.	interior Ø mm	exterior Ø mm
Calibrated tubing*	5253300*	0.8	4
	5253400*	1.7	4.9
	0686203	3	7
	5253600*	3.1	6.3
	5253500	4.8	9.8
	0686210	5	9
	5253900	6.3	11.3
	0686216	8	12



## Sink weights and glass connections

FOR CENTRIFUGAL AND PERISTALTIC PUMPS.

### FEATURES

Made of glass.

Adapters for centrifugal and peristaltic pumps.

For better aspiration and dispensing.



#### A. Sink weight "ASPIPUMP"

Surface olive that fixes to the tube. The sink weight maintains the tube at the bottom of the vessel being used for the aspirant liquid.

Part No. Tube size

5991204 4 mm Ø interior.

5991206 6 mm Ø interior.

5991208 8 mm Ø interior.



#### B. Spout "PECIPUMP"

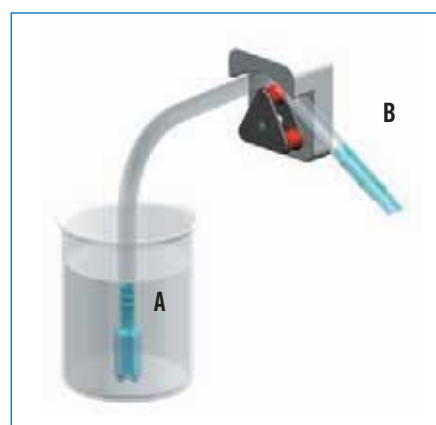
Surface olive is pushed onto the inside of the dispensing end of the tube, liquids can then be dispensed easily and accurately.

Part No. Tube size

5991203 4 mm Ø interior.

5991205 6 mm Ø interior.

5991207 8 mm Ø interior.



A. Sink weight "ASPIPUMP" an efficient way to aspirate to the last drop.

B. Spout "PECIPUMP" an exact way to dispense.



## Membrane vacuum pump "Vacum-Sel"

### FEATURES

Small footprint, bench top.

Quiet and vibration free.

Maximum working temperature: 40 °C.

### CONTROL PANEL

Mains power switch.

Vacuum gauge, scale 0 to -1 bar.

Vacuum in.

Air out.

### MODEL

Part No.	Pump Rate litres/min.	Vacuum limit	Height / Width / Depth (exterior) cm	Power W	Weight Kg
3001001	1.08	-0.6 bar = 440 mm Hg	19 14 19	35	3



## Membrane vacuum and pressure pump "Vacum-Pres"

### FEATURES

Small footprint, bench top.

Quiet and vibration free.

Maximum working temperature: 40 °C.

### CONTROL PANEL

Mains power switch.

Vacuum gauge, scale 0 to -1 bar.

Pressure gauge, scale 0 to 2.5 bar.

Control for pressure/vacuum.

Vacuum in.

Pressure out.

### MODEL

Part No.	VACUUM		Pressure		Height / Width / Depth (exterior) cm	Power W	Weight Kg
	Pump Rate /min.	Vacuum limit	Pressure Rate /min.	Max. Pressure			
3001002	1.08	-0.6 bar = 440 mm Hg	1.3	1.2 bar	19 14 19	35	3.2





## Water recirculation vacuum pump

### DESCRIPTION

Made from a centrifugal pump that pulses water at a high velocity through suction aspirators, creating a pump rate of 10 litres/min from each pump connection. The vacuum achieved, 5 to 40mbar is dependent on the water temperature in the reservoir. Aspirated gasses from both inputs mix in the 10 litre reservoir. Although the interior of the pump is made from stainless steel and polypropylene it is a requirement to change the water in the pump to limit any attack of any chemicals or vapours absorbed in the water. For better protection of equipment it is recommended to connect a "Scrubber" to wash and neutralise any corrosive gasses. The pump includes an exit valve that allows the water to be circulated externally. This can be used to empty and change the water in the reservoir to form an external re-circulation of water.

### FEATURES

- Reduced water consumption.
- 2 independent connections, aspiration pump vacuum rate 10 litres/min.
- Vacuum limit: 5 and 40 mbar (dependent on water temperature).
- Capacity: 10 litres.
- Low noise level (<65dBA).
- Valve connections for entrance and exit of vacuum and external water recirculation.

### CONTROL PANEL

- 2 vacuum connections.
- 2 analogue vacuum gauges.
- Illuminated mains switch.

### ACCESSORY

#### Extraction system and neutralisation of vapours.

Made up of a "Scrubber" unit that blocks the passage of condensed acid vapours and neutralises the gas vapour in NaOH, and a recirculating water pump that provides an adequate pump rate to aspirate vapours.

It is supplied with 3 Kg. acid vapours neutralizer solution.

#### "Scrubber" unit

Part No.	Height / Width / Depth (exterior) cm	Weight Kg
<b>4001611</b>	<b>32 31 16</b>	<b>2</b>

#### Spare part:

3 Kg. acid vapours neutralizer solution. **Part No. 4001610**



### MODEL

Part No.	Height / Width / Depth (exterior) cm	Vacuum limit mbar	Pump rate litre/minute	Power W	Weight Kg
<b>4001612</b>	<b>44 39 28</b>	<b>between 5 and 40</b>	<b>10</b>	<b>280</b>	<b>10</b>



Complete unit image for a Kjeldahl distillation block.

**SEI-**

## Centrifugal pumps "MP"



### FEATURES

Centrifugal pump for re-circulating and transferring of liquids.

A selection of models with pump rates of 8 to 60 litres/min.

The motor power to the turbine is transmitted via a magnetic coupling.

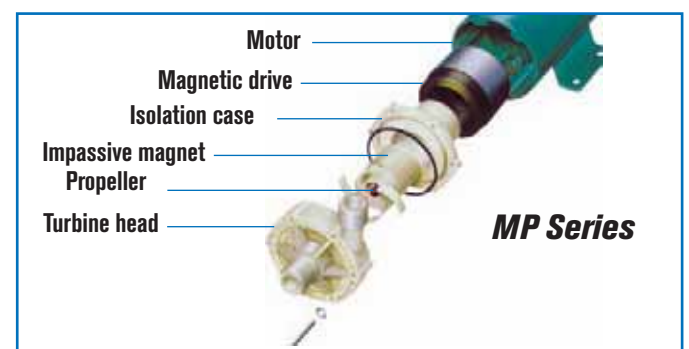
All parts in contact with liquids are chemically resistant materials.

Manual priming.

### SERIES MP

Dimensions per model in mm.

MODEL	Depth	Height	Width	Ø
<b>MP-15R</b>	<b>129</b>	<b>82</b>	<b>74</b>	<b>60</b>
<b>MP-20R</b>	<b>210</b>	<b>108</b>	<b>116</b>	<b>92</b>
<b>MP-40RX</b>	<b>277</b>	<b>130</b>	<b>122</b>	<b>102</b>
<b>MP-100R</b>	<b>322</b>	<b>175</b>	<b>150</b>	<b>110</b>



### TECHNICAL DATA

	MP-15R	MP-20R	MP-40Rx	MP-100R
Part No.	<b>5900610</b>	<b>5900611</b>	<b>5900612</b>	<b>5900613</b>
Pump rate (max) P (pressure) =0 (litres/min)	<b>8</b>	<b>17</b>	<b>47</b>	<b>60</b>
Precision (min) Q (pump rate)=0 (bar)	<b>0.21</b>	<b>0.37</b>	<b>0.40</b>	<b>0.50</b>
Tube connection (aspiration)	<b>14 mm Ø</b>	<b>18 mm Ø</b>	<b>26 mm Ø</b>	<b>26 mm Ø</b>
Tube connection (output)	<b>14 mm Ø</b>	<b>18 mm Ø</b>	<b>26 mm Ø</b>	<b>26 mm Ø</b>
Normal working temperature (°C)	<b>0 - 80</b>	<b>0 - 80</b>	<b>0 - 80</b>	<b>0 - 80</b>
Function cycle	<b>continuous</b>	<b>continuous</b>	<b>continuous</b>	<b>continuous</b>
Power consumption (W)	<b>10</b>	<b>20</b>	<b>65</b>	<b>250</b>
Pump material: Body	<b>Polypropylene with a mixture of fibre glass</b>			
Turbine material:	<b>Polypropylene with a mixture of fibre glass</b>			
Pump spindle/axle material:	<b>ceramic aluminium oxide</b>			
Seals and junctions material:	<b>EPDM</b>	<b>EPDM</b>	<b>EPDM</b>	<b>EPDM</b>
Voltage:	<b>220-240V 50-60Hz</b>			



## Liquid transfer pump, manual “RP-90P”

MADE FROM CHEMICALLY AND CORROSION RESISTANT POLYPROPYLENE. ROTARY MOVEMENT.

### FEATURES

Manual rotary suction movement that extracts liquid or sucks up liquid from a drum, composes of a pump handle, dip tube 1.2 M long by 1 inch Ø, with adjustable clamp that fastens to the barrel and an outlet tube of 3/4". Easy to use, light weight and very robust.

### MODEL

Part No.	Pump rate litres/min.	Weight Kg
<b>5252040</b>	20	1.6



## Liquid transfer pump, electric “FA-100”

SUITABLE FOR NON CORROSIVE AND NON FLAMMABLE LIQUIDS.

### FEATURES

All metal with electric air displacement motor drive, with steel suction tube 1 m long and 38 mm Ø. Maximum height 13 m.

### MODEL

Part No.	Pump rate litres/min.	R.p.m.	Power W	Weight Kg
<b>5929041</b>	86	10000	120	6.6



### SPARES

**1. Drum faucet:** 2" in diameter.

Made of brass.

Part No. **5252038**

**2. Drum Plug key** for opening drum, standard model.

Made of brass.

Part No. **5252039**

**3. Air bleed drum cap** 2" in diameter.

Made of brass.

Part No. **5252037**

