# FFIRMSMISH



Farmmash, Ltd. specializes in the production of polymer closures and droppers for pharmaceutical, food and chemical industries

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Farmmash, Ltd was established in 1999 as a producer of polymer products. The company has experienced development from being a producer of a simple single-component product to expand as a highly competitive strong market player and the producer of complex multicomponent products.



#### Company's mission

We are a company of dedicated experts bringing to life all your ideas into a finished product.

We use modern technologies and innovations to keep up with your expectations.

#### **Certification goals**

The company has an effective quality management system in compliance with ISO 9001 standard, certified since 2011. Along with the implementation of ISO 9001 standard, company fulfills the requirements of ISO 13485 standard in its management system. The next step is to meet the requirements of the applicable EC directives for the CE marking.

#### **Priorities and goals**



Fulfillment of clients' needs and wants



Usage of modern technologies and high-quality raw materials



Realization of customized packaging projects



Guarantee of on-time delivery





#### **COMPANY STRUCTURE**

# Plastic molds production unit



Product development and molding design are carried out with the use of modern systems of automatic design.

# Injection and blow molding production from thermoplastic materials



Injection and blow molding production is equipped with modern injection molding machinery, such as Engel and Demag.



The company has a rich experience in the production of plastic molds, including complex multi-component systems.

Plastic molds production unit is equipped with highly-accurate metalworking machinery, such as Schaublin, Mikron, Hermle and Charmilles.



The total production space is more than 3000 m<sup>2</sup>.



The company specializes in the production of multi-component products. Assembly processes are automatized. All products are subject to finished-goods inspection.











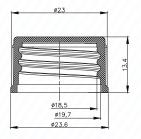
# Screw closures with plastic stoppers and droppers

### Bottleneck diameter Ø 20mm

Closure 1.1 complemented by stoppers 2.1 or 2.1 a



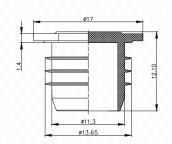
Closure 1.1



Closure complemented by stoppers 2.1 or 2.1 a

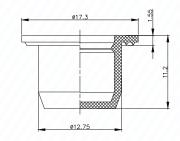


Plastic stopper 2.1





Plastic stopper 2.1 a



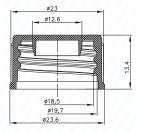
The stopper is used to seal the bottles. Inner diameter of the bottleneck is 12.4mm

# Bottleneck diameter Ø 20mm

Closure 1.1 a (b) complemented by droppers 2.2 a (b)



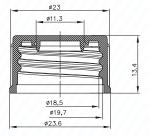
Closure 1.1 a



Closure 1.1 a can seal a glass bottle without a stopper and a dropper, due to a sealing cone



Closure 1.1 a (b)



Closure 1.1 a (b) complemented by horizontal dropper 2.2 a (b)



Dropper 2.2 a (b)

Dropper (horizontal, edge type) Dosing method: the bottle is turned by 120°, drop is formed on the edge of the dropper

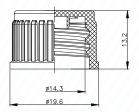


# Bottleneck diameter Ø 16mm

#### Closure 1.3 complemented by a dropper 2.2 or stopper 2.3



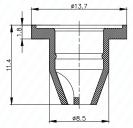
Closure 1.3



Closure complemented by a horizontal dropper 2.2 or a stopper 2.3



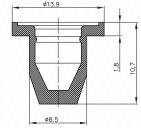
Horizontal dropper 2.2



Edge type dropper complements bottles with the 8.3mm inner diameter of bottleneck



Stopper 2.3



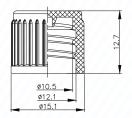
The stopper is used to seal the bottles with the 8.3mm inner diameter of bottleneck

# Bottleneck diameter Ø 12mm

#### Closure 1.4 v



Closure 1.4 v



Closure is used to seal the glass bottles with the 12mm diameter inner of bottleneck





# Tamper evident screw closures of DIN 168 GL 18 standard

#### Bottleneck diameter Ø 18mm

Closure 1.4 k complemented by droppers 2.2 v or 2.2 e



Closure 1.4 k



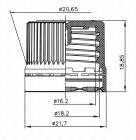
Vertical dropper 2.2 v



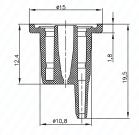
Horizontal dropper 2.2 e



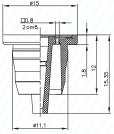
Horizontal dropper 2.2 a (Sp1)



Tamper evident closure guarantees reliable protection of products from counterfeiting



Dosing method: the bottle is turned by 180°



Dosing method: the bottle is turned by  $120^{\circ}$  Drop is formed on the edge of the dropper

# Posing method: the hottle is turned by 15

## Assembled products supply



Closure 1.4 k complemented by the dropper 2.2 v



Closure 1.4 k complemented by the dropper 2.2 e



Closure 1.4 k complemented by the dropper 2.2 a (Sp1)



## Bottleneck diameter Ø 18mm

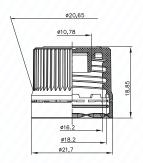
#### Closure 1.4 m



Closure 1.4 m



Closure 1.4 m complemented by the spatula



Tamper evident closure 1.4 m, can seal a glass bottle without a stopper and a dropper due to a sealing cone



Note	25
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# Tamper evident screw closures of DIN 6094 standard

#### Bottleneck diameter Ø 28mm

Closure 1.4 d / 1.4 d (cone)

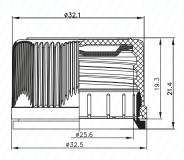


Closure 1.4 d



Closure 1.4 d

Tamper evident multicomponent screw closures
Closures quarantee reliable protection of products from counterfeits



25.6 432.5

Final product can consist of maximum three components:

- 1. Closure
- 2. Liner

3. Tamper evident ring

(material: PE HDPE) (material: PE LDPE)

(material: PE LDPE)

The following variations are offered:

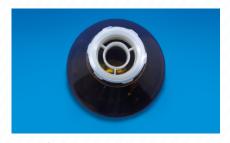
- (1) Screw closure (complemented by a pourer)
- (2) Tamper evident screw closure (complemented by a pourer)
- (3) Tamper evident screw closure with a LDPE liner
- (4) Tamper evident screw closure with a sealing cone



Closure 1.4 d can be complemented by the measuring cup

The diameter of the closure allows you to attach the measuring cup

Cup provides measurement readings of: 20; 15; 12.5; 10; 7.5; 5; 2.5 ml



Closure can be complemented by the pourer 2.5 b

This closure can be adapted as per client requirement to be complemented by:

- pourers
- droppers
- spray inserts
- plugs for dispensing syringes



# Tamper evident child resistant closures (CRC) of DIN 6094 standard

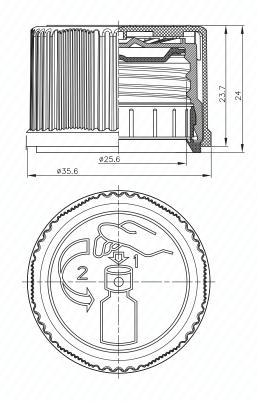
#### Bottleneck diameter Ø 28mm

**Closure 1.4 CRC (Child resistant closure)** 



Closure 1.4 CRC

Tamper evident child resistant closure 1.4 CRC (Child resistant closure) for bottles of DIN 6094 standard



#### The following variations are offered:

- (1) Child resistant closure (complemented by a pourer)
- (2) Tamper evident child resistant closure (complemented by a pourer)
- (3) Tamper evident child resistant closure with a LDPE liner
- (4) Tamper evident child resistant closure with a sealing cone

#### Material:

Cap PP
Closure PE HDPE
Liner PE LDPE
Tamper evident ring PE LDPE





# PET bottles with closures and droppers for 18mm diameter

## Bottleneck diameter Ø 18mm



PET bottles 10 ml, 25 ml and 50 ml

The following variations are offered:

- \* Tamper evident closure 1.4 k complemented by the dropper 2.2 a (Sp1)
- \* Tamper evident closure 1.4 m complemented by a spatula
- \* Tamper evident closure 1.4 m can seal a PET bottle without a stopper and dropper, due to a sealing cone



Closure 1.4 k for PET bottle



Dropper 2.2 a (Sp1) for PET bottle



Closure 1.4 m for PET bottle



Spatula





# PET bottles with closures for 28mm diameter

### Bottleneck diameter Ø 28mm



PET bottles 100 ml, 125 ml

PET bottles can be complemented by:

- \* Tamper evident closure 1.4 d
- \* Tamper evident closure 1.4 d (cone)
- \* Tamper evident closure K 28 complemented by the spray insert P 28
- \* Child resistant closure



Closure 1.4 d for PET bottles



Closure 1.4 d (cone) for PET bottles



Closure K 28 complemented by the spray insert P 28 for PET bottles



Child resistant closure for PET bottles

Notes			

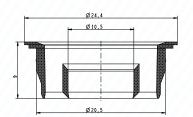


# Pourer, spray insert, measuring spoon and cup

# Pourer and spray insert

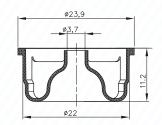


Pourer 2.5 b



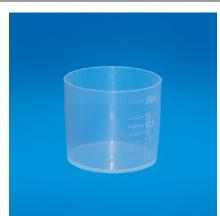


Spray insert P 28 complemented by the closure K 28



#### Notes

# Measuring spoon and cup



measurement readings of: 20 ml; 15 ml; 12.5 ml; 10 ml; 7.5 ml;

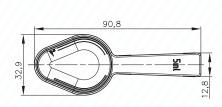
5 ml; 2.5 ml.

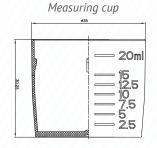
Cup provides

Spoon provides measurement readings of: 5 ml; 2.5 ml; 2 ml; 1.25 ml; 1 ml.



Measuring spoon







# **Tamper evident pipettes**

# Bottleneck diameter Ø 17mm (Press on)

The pipette

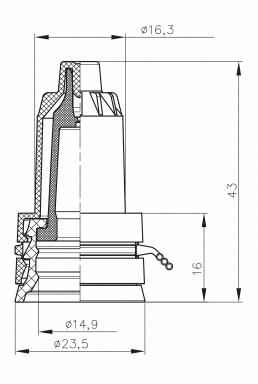


The pipette is used for dosing liquids.

The pipette consists of three components:

- 1. Holed closure
- 2. Pipette
- 3. Tamper evident cap

Tamper evident cap complemented by the dosing pipette 5.1



Notes			



# **Tamper evident dropper bottles**

# Dropper bottles Fk1 (10 ml; 15 ml; 30 ml)







Droppers Fk 1.2 (A)/(B)



Tamper evident closure Fk 1

Material:

Closure: HDPE Dropper: LDPE

Bottle: HDPE; LDPE; PP

Bottles are made from polymers, which are permitted for use in the pharmaceutical industry

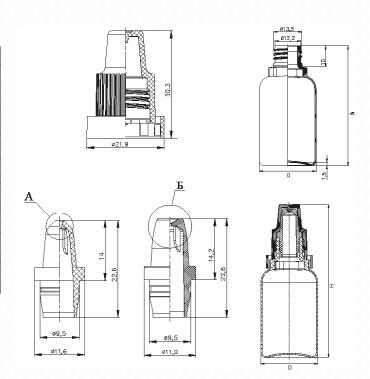
Bottles can be produced without color-additives

Closures can be produced in different colors

#### Sizes / Dosing

Bottle		Bottle			
		Fk 1 (10 ml)	Fk 1 (15 ml)	Fk 1 (30 ml)	
Height in assembly	H, mm	65	73	89	
Height, h	49	57	73		
Diameter, D		25	27	30	
Nominal capacity, ml		10	15	30	
Actual capacity, ml		15	20	35	
<b>Dosage:</b> Number  Fk 1.2a			40		
of drops in 1 ml ± 5%	Fk 1.2b		27		

SL - Sample liquid: ethanol 50 % - water 50 %





# Dropper bottles Fk 1 (5 ml; 10 ml)



Set Fk 2 (5 ml; 10 ml)



Dropper Fk 2.2



Tamper evident closure Fk 2

Advantages of using the following technology:

- TThe exact diameter of the bottleneck, which provides tightness on the landing diameter of a dropper
- The bottle is stable on the conveyor, thus doesn't rollover
- The bottleneck is aligned with the diameter of the bottle
- Does not require additional washing
- It is manufactured from primary raw materials

#### Material:

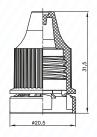
Closure: HDPE Dropper: LDPE

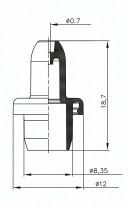
Bottle: HDPE; LDPE; PP

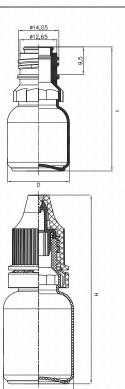
#### Sizes / Dosing

		Bottle		
Bottle		Fk 2 (5 ml)	Fk 2 (10 ml)	
Height in assembly	H, mm	55,1	64,5	
Height, h		42,3	51,6	
Diameter, D		21,2	24	
Nominal capacity, ml		5	10	
Actual capacity	7,5	12,5		
<b>Dosage:</b> Number of drops in 1 ml ± 5%	Fk 2.2	Fk 2.2 40		

SL - Sample liquid: ethanol 50 % - water 50 %







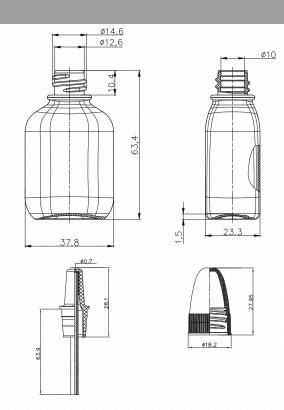


# Nasal spray bottle

## Bottle Fs 2-20



Bottle Fs 2-20 volume 20 ml The bottle is designed for spraying liquids Spraying is carried out by pressing the center of the bottle For functional spraying, the volume should be



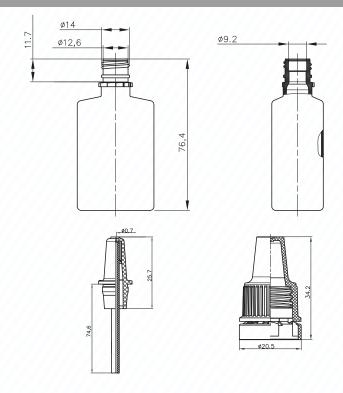
# Tamper evident nasal spray bottle

# Bottle Fs 2-30

no more than 15 ml



Bottle Fs 2-30 volume 30 ml The bottle is complemented by a dropper and a tamper evident closure For functional spraying, the volume should be no more than 20 ml



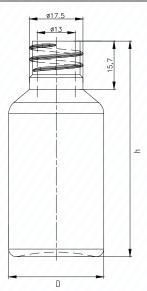


# **Bottles for pump system**

# Bottle Fr 4-10/Fr 4-30



Bottle with a screw neck Diameter Ø 18 mm The bottle is designed to be complemented by a screw pump dispenser and used together

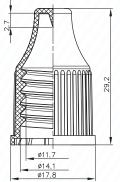


	D	h
Fr 4-10	24	46
Fr 4-30	31	70,5

# **Bottlepack closures (Blow-Fill-Seal)**

Cap 3.1 A (A) Cap 3.1 A (B)



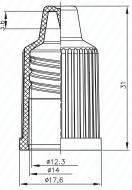


This type of caps is specially designed for polymer bottles made by the Blow-Fill-Seal method

On the inside of the bottle there is a needle, which is designed to press the bottle for getting a pinhole and consequently seal the product

The technology allows packing products in completely aseptic conditions in a single cycle (manufacturing-filling-sealing)







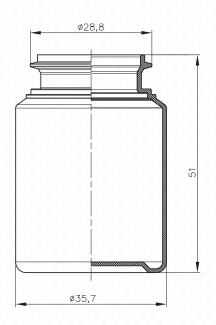
# Containers and bottles for liquids

# Container Kp 5-45 complemented by a closure (Press on)



The container is sealed by a temper evident single-component closure

Material: HDPE PP



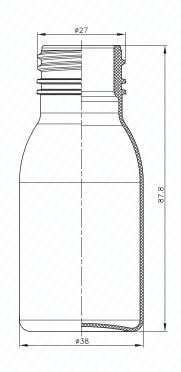
# Bottle for liquids Kp 4-75



Bottle with a screw neck is complemented by: 1.4 d, 1.4 CRC, pourer, spray insert Volume capacity of the bottle is 60 ml Advantages of using the bottle for liquids Kp 4-75:

- 1. Shatterproof
- 2. It is manufactured from primary raw materials
- 3. Ease of use

Material: HDPE PP





### **Labware**

# Containers 30 ml, 60 ml, 120 ml



30 ml

- Without a spoon;
- With a spoon (single-component)
- With a spoon (insert type)
   Measurement readings
   are absent



60 ml

- Without a spoon;
- With a spoon (insert type)
  Measurement readings:
  10; 20; 30; 40; 50; 60 ml



120 ml

- Without a spoon;
- Measurement readings: 20; 40; 60; 80; 100; 120 ml

Containers are manufactured in cleanrooms on modern equipment from primary raw materials

They are intended for sampling of biomaterial, its storage and transportation

#### The following variations are offered:

- Assembled
- In an individual packaging
- Microbiologically pure
- Sterile
- Complemented by a sticker (on request)

Notes			





Notes



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