



## UDF – Technical data

Machine types:

UDF3070

UDF3080

Container diameter:

----- 16 – 100 mm -----

Container height:

----- 35 – 320 mm -----

Dosing range:

----- 5 – 550 ml -----

Maximal capacity:

2.000 – 8.000 / h

3.600 – 12.400 / h

Machine weight:

800 kg

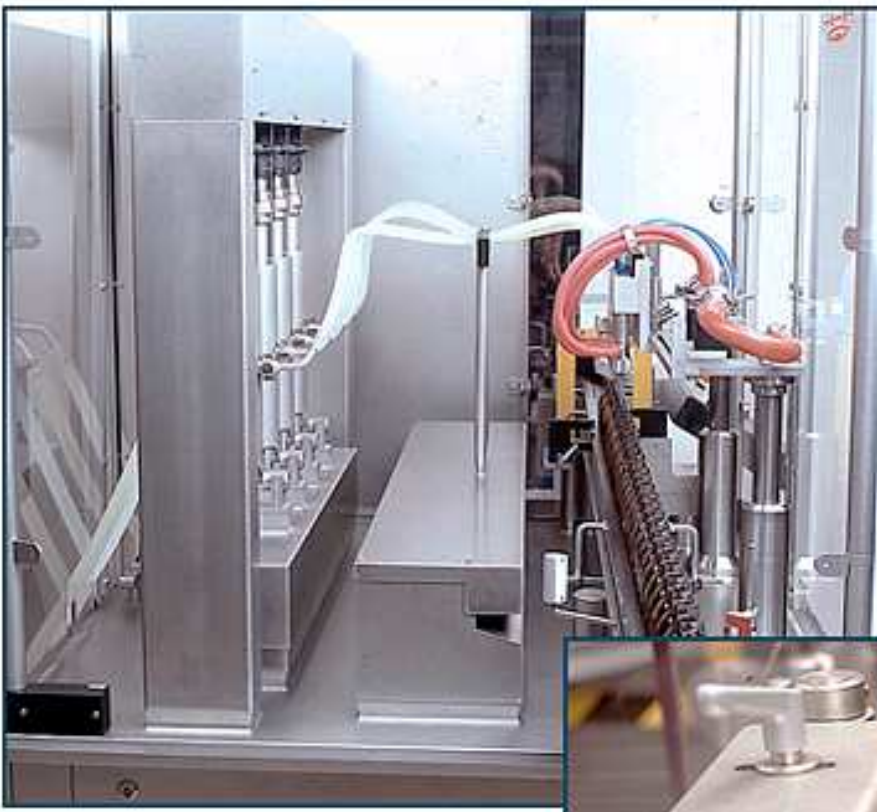
1.200 kg

Dimensions:

2,75 x 1,35 x 1,85 m

3,25 x 1,35 x 1,85 m

(length x width x height)



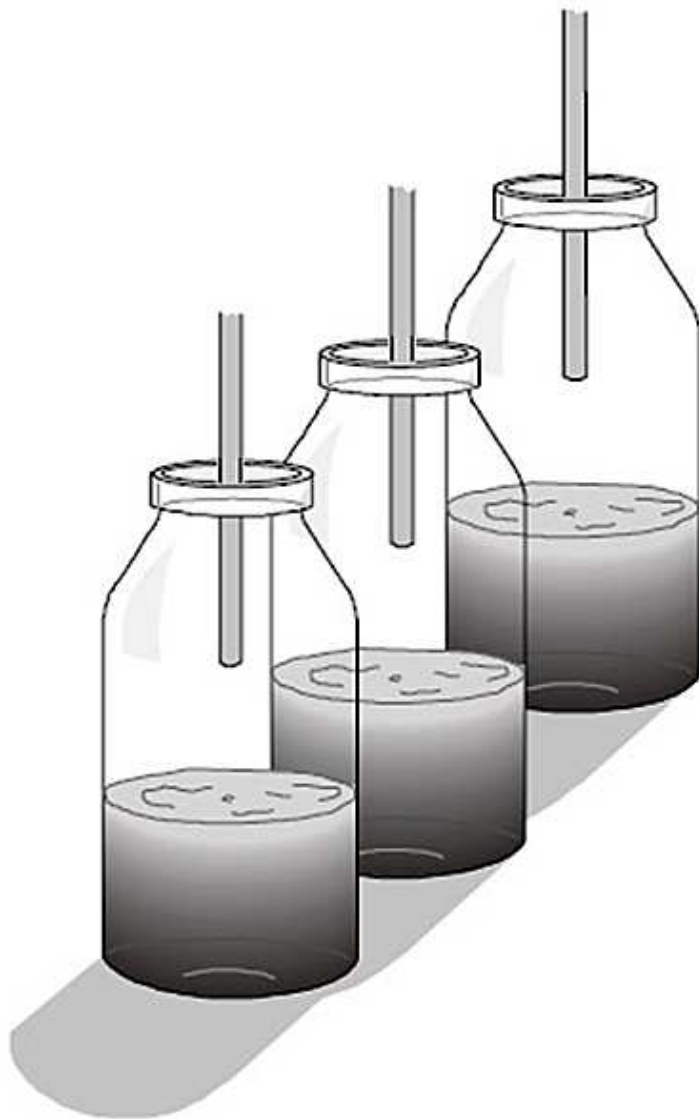


***Technical Specification***

**UDF3070/3071**

Filling machine for bottles

UDF3070



Machine type:	UDF3070, UDF3071	Technical Specification UDF3070
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## 1. General

- This specification refers to the standard design of the machine

### 1.1 Application

- The machines are used for filling stable bottles in the pharmaceutical and cosmetrical industry

## 2. Machine design

### 2.1 Basic construction

- Base and top table plate made of aluminium AlMg3
- Cover plate for top table plate and well as encasing of the base made of non-corrosive stainless steel 1.4404 - AISI 316L, finely ground, surface finish  $Ra \leq 1,6 \mu m$
- Machine guard made of transparent plastic

### 2.2 Container transport with conveyor belt

- Conveyor belt, 100 mm in width, and DELRIN slat belt, 82,5 mm in width
- Total length of conveyor belt: 2750 mm at UDF3070
- Total length of conveyor belt 3250 mm at UDF3071
- Automatic adaptation of the belt speed to the currently adjusted speed of the container indexing system
- Sensor for detection of container shortage at the infeed and sensor for detection of container build-up at the discharge
- Container indexing system with separate drive via servomotor

### 2.3 Dosing station

- Basic equipment for rotary piston pumps for 4, 6, 8 resp. 10 dosing positions, designed for installation of the pumps without tools
- Pump rotation and pump stroke movement, each with separate drive via servomotor
- Adjuster for the central dosing volume adjustment. The dosing volume as well as the dosing speed can be adjusted at the operating terminal
- Filling needle stroke movement with own separate drive via servomotor
- Suction hoses made of silicone
- Valveless rotary piston pumps (rotation through  $90^\circ$ )
- Filling hoses made of silicone
- Stainless steel filling needles AISI 316 L, surface finish  $Ra \leq 1,6 \mu m$ , surface finish of the interior surfaces  $Ra \leq 0,6 \mu m$  - laser weld

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## 2.4 Electrical installation

### 2.4.1 Programmable logic control

- Siemens, type S7

### 2.4.2 Operating terminal

- Siemens touchscreen, type MP377
- Size-related data for at least 100 sizes can be maintained on the memory card
- Password administration with 9 access levels for max. 50 users
- Display of the operational data with capacity display in pcs/min., total number of processed containers (cannot be reset), unit counter by container photoelectric eye and elapsed-hours meter

### 2.4.3 Control cabinet

- Control cabinet made of stainless steel (material: 1.4404 - AISI 316L), attached to the machine, finely ground, with a measured surface quality of  $Ra \leq 1,6 \mu m$  (not applicable for weld seams). System of protection IP54 according to DIN 40050 and IEC 529

## 3. Technical data

### 3.1 Controls and monitors

#### 3.1.1 Monitors with display at the operating terminal

- Set-up mode
- Emergency switch actuated
- Cover open
- Safety circuit not activated
- Protection switch triggered
- Monitor of dosing station (servomotor)
- Overload dosing station (servomotor)
- Limit switch of dosing station (servomotor)
- Monitor filling needle stroke movement
- Overload filling needle stroke movement
- Limit switch filling needle stroke movement
- Monitoring and overload container indexing system

#### 3.1.2 Input of size dependent machine and process data

- Filling needle stroke movement
- Dosing speed
- Metered quantity
- Container indexing system
- Reversal Speed

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### 3.2 Machine data

UDF		3070 4 Pos.	3070 6 Pos.	3071 8 Pos.	3071 10 Pos.
<b>Stable cylindrical containers</b>					
Min. container diameter	(mm)	16	16	16	16
Max. container diameter	(mm)	100	100	100	100
<b>Stable flat containers</b>					
Min. container length	(mm)	16	16	16	16
Max. container length	(mm)	150	100	125	100
Min. container width	(mm)	16	16	16	16
Max. container width	(mm)	100	100	100	100
Min. container height	(mm)	35	35	35	35
Max. container height	(mm)	320	320	320	320
Set output (Qest.) according to DIN 8743	(pc/h)	6.500	8.600	10.600	13.200
<b>Dosing range:</b>					
Rotary piston pumps made of stainless steel and oxide ceramic (ml)		5 - 26 15 - 110 20 - 150 40 - 260 70 - 550			
Rotary piston pumps made of stainless steel in CIP-SIP version and rotary piston pumps made of oxide ceramic in CIP-SIP version (ml)		5 - 26 15 - 110 20 - 150 40 - 260			
Number of dosing positions	(pcs)	4	6	8	10
Working height	(mm)	~ 900 ± 30			
Connected load machine	(kw)	~ 6	~ 6	~ 6,5	~ 6,5
Standard cable length f. separate control cabinet	(m)	5	5	5	5
Compressed air connection (control air)	(bar)	~ 6	~ 6	~ 6	~ 6
Noise level <sup>1</sup>	dB(A)	~ 76	~ 76	~ 76	~ 76
Heat emission to the room (machine)	(kw)	~ 0,7	~ 0,7	~ 0,7	~ 0,7
Heat emission to the room (control cabinet)	(kw)	~ 0,5	~ 0,5	~ 0,5	~ 0,5
<b>Machine dimensions</b>					
Length	(mm)	~ 2750	~ 2750	~ 3250	~ 3250
Width	(mm)	~ 1300	~ 1300	~ 1300	~ 1300
Height	(mm)	~ 2000	~ 2000	~ 2000	~ 2000
Weight of machine	(kg)	~ 800	~ 800	~ 1200	~ 1200
<b>Dimensions of control cabinet (only required if machine is equipped with CIP-SIP system)</b>					
Length	(mm)	~ 1200	~ 1200	~ 1200	~ 1200
Width	(mm)	~ 500	~ 500	~ 500	~ 500
Height	(mm)	~ 2060	~ 2060	~ 2060	~ 2060
Net weight of control cabinet	(kg)	~ 350	~ 350	~ 350	~ 350

<sup>1</sup> average value of the machine series, measured according to DIN 45635 Part 1 and part 28 during production conditions

Subject to technical modifications

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#### 4. Capacity

- The following capacity indications are approximate values and based on the use of DIN containers with product water.

Metered quantity in ml (Container diameter in mm)	4 Pos.	6 Pos.	8 Pos.	10 Pos.
	Max. capacity in pcs/h (infinitely variable)			
20 ml (28 mm)	6.500	8.600	10.600	12.400
50 ml (46 mm)	4.800	6.550	8.000	9.200
100 ml (49 mm)	3.800	5.250	6.400	7.500
250 ml (68 mm)	2.770	3.850	4.800	5.620
500 ml (86 mm)	2.000	2.850	3.600	4.300

#### 5. Options

- Centering of containers at the dosing station, suitable for all sizes
- Drip retraction system
- cut-off needle
- Dosing vessel made of stainless steel, located next to the machine
- Manifold
- Stations for gas flushing before, during and after filling
- Check for gas-flushing station, with function machine stop
- Wire numbering
- Adaptation of the supply voltage with mains isolation transformer
- Separate control cabinet
- Qualification package 1
- Qualification package 2
- Qualification package 3

#### 6. Abbreviations

- AISI American Iron and Steel Institute
- CPU Central Processing Unit
- DIN Deutsches Institut für Normung  
(≅ German Institute for Standardization)
- EN Europäische Normung (≅ European Standardization)
- IEC International Electrotechnical Commission
- UDF Universal dosing machine for bottles

Subject of modifications