



Your quality partner worldwide

Laboratory syringes

The Dosys™ syringes 162, 163, 164, 172, 173, 174

- **The two-ring and pistol grip syringe models**
- **Application overview**
- **Accessories and spares**
- *All-glass syringes*



Laboratory syringes

The Dosys™ syringes

From the basic unit to the corrosion resistant model, the laboratory dedicated syringe line offers precision instruments you can trust. Like a hand-activated pump, with liquid inlet and outlet, the selection of pistol grip and two ring instruments are intended for safe and reliable liquid distribution in a wide volume range.

One-year warranty.

- Optimal hand balance and ergonomics
- Fast and reliable volume setting
- Excellent reproducibility
- Plunger tightness without O-ring
- High chemical resistance
- Fully autoclavable at 121°C / 250°F

162
163
164

Two-ring handle

172
173
174

Pistol-grip handle



Simple, natural movements

Both pistol-grip and two-ring handles fit any hand in a comfortable way. Activation performed with limited effort for efficient work even during long dispensing series.

Syringe stand

Stand holds syringe in ready-to-fetch position. Easy-to-clean polyamid material. Autoclavable (Cat. No. 320.170).



Volume selection - Reliable reproducibility

Volume is set within seconds. It will not vary while activating the syringe, thanks to the safety-locking nut on the micrometric screw. Dose-by-dose reproducibility (CV) is excellent, as witnessed by performance figures.

Plunger tightness without O-ring

Smooth plunger travel and tightness achieved through high-precision stainless steel plunger and ground glass barrel. No O-ring to mess with or replace.

Glass protection

Interchangeable glass barrel is protected by a PVC sleeve (not autoclavable) to prevent breakage.

Few parts assembly - Low maintenance

The automatic syringes are made of only six main parts, easy to disassemble. Fast access to all elements allows rapid and efficient cleaning. Spares are available at reasonable costs.

Laboratory syringes



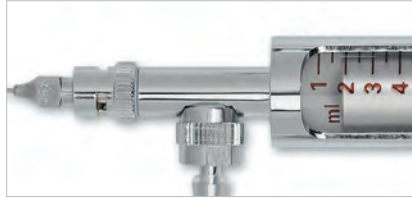
Dosys™ basic syringes 162 / 172



- Fill-by-fill (automatic) through needle or cannula
- Supplied without valve system
- Luer Lock nozzle

Package includes syringe, PVC protection sleeve and operating instructions.

Dosys™ classic syringes 163 / 173



- Self-refilling automatic
- Integrated valve system
- Luer Lock nozzle

Package includes syringe, 1-meter long silicone feed tube, sinker, PVC protection sleeve, aspiration and vent cannulas, set of spares for valve, operating instructions.

Dosys™ premium syringes 164 / 174



- Self-refilling automatic
- Detachable valve system
- Enhanced corrosion resistance
- Luer Lock nozzle

Package includes syringe, 1-meter long silicone feed tube, sinker, PVC protection sleeve, aspiration, vent and dosing cannulas, set of spares for valve, operating instructions.

Ordering information



Volume	Division	Dosys 162 Cat. No.	Dosys 172 Cat. No.
0.1 - 1 mL	0.05 mL	162.0501	172.0501
0.3 - 2 mL	0.1 mL	162.0502	172.0502
0.5 - 5 mL	0.5 mL	162.0505	172.0505
1 - 10 mL	1.0 mL	162.0510	172.0510

Ordering information



Volume	Division	Dosys 163 Cat. No.	Dosys 173 Cat. No.
0.025 - 0.3 mL	0.025 mL	163.05003	173.05003
0.1 - 0.5 mL	0.1 mL	163.05005	173.05005
0.1 - 1 mL	0.05 mL	163.0501	173.0501
0.3 - 2 mL	0.1 mL	163.0502	173.0502
0.5 - 5 mL	0.5 mL	163.0505	173.0505
1 - 10 mL	1.0 mL	163.0510	173.0510
5 - 20 mL	1.0 mL		173.0520

Ordering information



Volume	Division	Dosys 164 Cat. No.	Dosys 174 Cat. No.
0.1 - 1 mL	0.05 mL	164.0501	174.0501
0.3 - 2 mL	0.1 mL	164.0502	174.0502
0.5 - 5 mL	0.5 mL	164.0505	174.0505
1 - 10 mL	1.0 mL	164.0510	174.0510

Performance all models

Volume	Imprecision (CV%)		
	Min. vol.	Mid. vol.	Max. vol.
0.025 - 0.3 mL	< 1.8 % ¹	< 1.2 %	< 0.5 %
0.1 - 0.5 mL	< 1.2 %	< 0.9 %	< 0.4 %
0.1 - 1 mL	< 0.7 %	< 0.6 %	< 0.4 %
0.3 - 2 mL	< 0.6 %	< 0.5 %	< 0.4 %
0.5 - 5 mL	< 0.5 %	< 0.4 %	< 0.2 %
1 - 10 mL	< 0.5 %	< 0.4 %	< 0.2 %
5 - 20 mL	< 0.5 %	< 0.4 %	< 0.4 %

Tests performed with bidest. water, using stainless steel cannula (1.2 x 50 mm), at constant working speed. ¹ Measured at 0.075 mL

Liquid path materials (for chemical resistance)

Parts	basic / classic models	premium models
Feed tubing	Silicone	Silicone
Barrel	Glass AR-Glas®	Glass AR-Glas®
Washer, barrel	FPM	FPM
Plunger	Stainless steel DIN 430F	Stainless steel DIN 316L
Valve system	Ni-Cr Brass	Stainless steel DIN 304
Washer, valve	PTFE	PTFE
Spring and balls, valve	Stainless steel, DIN 304	Stainless steel, DIN 304
Sinker, feed cannula	Ni-Cr Brass	Ni-Cr Brass

Dosys™ laboratory syringes - Unlimited applications



Dose-by-dose distribution

The 162 and 172 syringe models without valve system (or 164 / 174 models after removing the detachable valve assembly) enable liquid sampling. Both spring-assisted aspiration and distribution occur through the cannula. Choosing different cannula sizes allows samples to be taken from deep containers.



Repeat dispensing

Spring-loaded plunger and three-way valve system allow for trouble free distribution of a large variety of liquids in various containers. Spring loaded plunger rod enables liquid aspiration and distribution. The use of optional manifold changes the syringe into a 4 or 8-channel device to fill microplates.



Sterile work

Syringes and accessories are autoclavable fully assembled (121°C). This is particularly adapted for sterile distribution such as hot agar in Petri dishes. Precise dosing of culture media and supplements in tissue culture flasks is another easy task for the Dosys syringes.



Filter fits Luer Lock nozzle

A sterile filter disk set on the Luer Lock outlet valve turns the instrument into a filtration syringe. Optional enhanced tightness kit improves efficiency of long filtration series or when using small pore sizes.



Aspiration with reverse modus valve

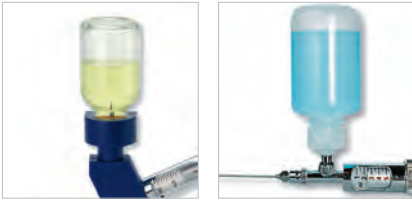
The reverse modus valve set is meant for precise and safe liquid aspiration (ex. waste collection in separate container). Vented waste collector cap and enhanced tightness set are recommended for trouble free work.



Laboratory animal feeding or injection

The Dosys syringes are also suitable for safe and stress free feeding or injections of laboratory animals. Select a suitable needle and drenching cannula listed in the accessory section.

Accessories for self-refilling syringes



Alternative feed sources

Optional vial holder conversion set and autoclavable reagent reservoirs for additional liquid feeding possibilities.

Description	Packaging	Cat. No.
Vial holder conversion set for 163 and 173 models (except 20 mL), without vial	1 / pk	1.187.1C
PP bottle, 60 mL	1 / pk	1.187.060*
PP bottle, 125 mL	1 / pk	1.187.150*
PP bottle, 250 mL	1 / pk	1.187.250*

*Use with Rotlauf inlet valve only (Cat. No. 187613), to be ordered separately.



Enhanced tightness set

The special clear glass barrel / X-ring fitted plunger enhance tightness when demanded by application (ex. filtration, aspiration, etc.).

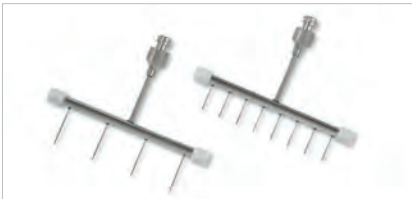
Description	Packaging	Cat. No.
Set includes one each plunger, X-ring, 5 mL barrel and grease	1 / pk	1.170.205
Spare barrel for tightness set, 5 mL	6 / pk	0187.05T
Set includes one each plunger, X-ring, 10 mL barrel and grease	1 / pk	1.170.210
Spare barrel for tightness set, 10 mL	6 / pk	0187.10T



Aspiration valve

Reverse modus valve set for liquid aspiration (ex. waste collection in separate container). Vented waste collector cap and enhanced tightness set recommended.

Description	Packaging	Cat. No.
Reverse modus aspiration valve unit for 164 / 174 models	1 / pk	1.170.952
Screw cap ø 45 mm, with tubing connection and filtered air outlet	1 / pk	1.170.945



Multiple dispensing manifolds

For convenient distribution in 24- and 96-well plates. Tight-fitting Luer and Luer Lock syringe nozzles. Stainless steel with PTFE stoppers, autoclavable.

Description	Packaging	Cat. No.
4-channel manifold, 20 mm spacing	1 / pk	1.170.054
8-channel manifold, 9 mm spacing	1 / pk	1.170.058



Dispensing cannulas & needles

Luer Lock, stainless steel, autoclavable. Needles supplied 12 / pack.

Size (ø x L)	Packaging	Cat. No.
Lab cannulas, blunt end		
0.8 x 40 mm	12 / pk	370.0840
1.2 x 50 mm	1 / pk	370.1250
2.2 x 100 mm	1 / pk	370.22100
2.2 x 150 mm	1 / pk	370.22150
Superior quality needles, beveled		
1.2 x 10 mm	1 / pk	371.1210UN
1.6 x 20 mm	1 / pk	371.1620UN
2.0 x 30 mm	1 / pk	371.2030UN
2.0 x 40 mm	1 / pk	371.2040UN



Drenching cannulas

For safe animal mouth and nose feeding. Stainless steel, autoclavable.

Size (ø x L)	Packaging	Cat. No.
Drenching cannulas, straight		
0.9 x 25 mm	3 / pk	376.0925S
1.2 x 51 mm	3 / pk	376.1251S
1.6 x 102 mm	2 / pk	376.16102S
3.0 x 203 mm	2 / pk	376.30203S
Drenching cannulas, bent		
0.9 x 25 mm	3 / pk	376.0925B
1.2 x 51 mm	3 / pk	376.1251B
1.6 x 102 mm	2 / pk	376.16102B
3.0 x 203 mm	2 / pk	376.30203B

Injection needles, beveled

ø x L, mm	Cat. No.	ø x L, mm	Cat. No.	ø x L, mm	Cat. No.	ø x L, mm	Cat. No.
0.7 x 13	371.0713	1.4 x 10	371.1410	1.0 x 20	371.1020	1.6 x 100	371.16100
0.8 x 10	371.0810	1.4 x 20	371.1420	1.0 x 30	371.1030	1.8 x 10	371.1810
0.8 x 25	371.0825	1.6 x 13	371.1613	1.0 x 40	371.1040	1.8 x 20	371.1820
0.8 x 30	371.0830	1.6 x 20	371.1620	1.2 x 10	371.1210	2.0 x 30	371.2030
0.8 x 40	371.0840	1.6 x 25	371.1625	1.2 x 20	371.1220	2.0 x 40	371.2040
1.0 x 10	371.1010	1.6 x 30	371.1630	1.2 x 50	371.1250	2.0 x 50	371.2050

Additional sizes available

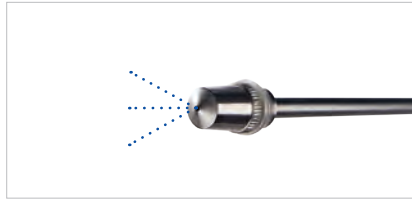
Accessories and spare parts



Anti-blocking factor (ABF™)

Premium non-oily, non-sticky, non-toxic, silicone-free lubricant. It reduces instrument wear and provides efficient metal protection.

Description	Packaging	Cat. No.
Lubricant spray 70 mL	1 / pk	1.170.705
	6 / pk	1.170.906
	12 / pk	1.170.912
Lubricant spray refill bottle, 500 mL	1 / pk	1.170.755
	6 / pk	1.170.956
	12 / pk	1.170.962



Cannula with sprayer nozzle

Usable in versatile applications where spraying and nebulizing liquids are required. Available in short (180 mm) and long (500 mm) sizes. Made of chrome plated brass, Luer Lock, autoclavable.

Size Ø x L, mm	Packaging	Cat. No.
3.0 x 180 mm	1 / pk	370.30180
3.0 x 500 mm	1 / pk	370.30500



Cleaning brushes

Heavy duty nylon brushes with tufted end and plastic handle for barrel cleaning.

Description	Packaging	Cat. No.
For 0.3, 0.5, 1 mL barrels	6 / pk	1.170.301
For 1, 2, 5 mL barrels	6 / pk	1.170.305
For 5, 10, 20 mL barrels	3 / pk	1.170.320
Set of 6 nylon brushes, 2 each	6 / pk	1.170.300

Spare parts for self-refilling syringes



Ground glass barrels

Description	Packaging	Cat. No.
Barrel, syringe 0.3 mL	6 / pk	0187.003
Barrel, syringe 0.5 mL	6 / pk	0187.005
Barrel, syringe 1 mL	6 / pk	0187.01
Barrel, syringe 2 mL	6 / pk	0187.02
Barrel, syringe 5 mL	6 / pk	0187.05
Barrel, syringe 10 mL	6 / pk	0187.10
Barrel, syringe 20 mL	3 / pk	0187.20

Spare bags

Description	Packaging	Cat. No.
Kit for valve, syringe 0.3 mL	1 bag	1.187.72003
Kit for valve, syringe 0.5 mL	1 bag	1.187.72005
Kit for valve, syringe 1 mL	1 bag	1.187.7201
Kit for valve, syringe 2 mL	1 bag	1.187.7202
Kit for valve, syringe 5 mL	1 bag	1.187.7205
Kit for valve, syringe 10 mL	1 bag	1.187.7210
Kit for valve, syringe 20 mL	1 bag	1.187.7220

Includes springs, balls, cleaning rod, washers for valve and barrel washer.

Vent and feed cannulas

Description	Packaging	Cat. No.
Short vent cannulas		
Plastic / SS, syringes 0.3 to 5 mL	1 / pk	187.933
Chrome plated, syringe 10 mL	1 / pk	187.591
Chrome plated, syringe 20 mL	1 / pk	187.593

Long feed cannulas

Chrome plated, syringes 0.3 to 10 mL	1 / pk	187.592
Chrome plated, syringe 20 mL	1 / pk	187.594

PVC protection sleeves

Description	Packaging	Cat. No.
Sleeve, 0.3, 0.5 mL barrels	6 / pk	1.170.4005
Sleeve, 1 mL barrels	6 / pk	1.170.401
Sleeve, 2 mL barrels	6 / pk	1.170.402
Sleeve, 5 mL barrels	6 / pk	1.170.405
Sleeve, 10 mL barrels	6 / pk	1.170.410
Sleeve, 20 mL barrels	3 / pk	1.170.420

Feed tubing (medical quality silicone)

Description	Packaging	Cat. No.
Tube, syringes 0.3 to 10 mL, cut	1 m / pk	187.705
Tube, syringes 0.3 to 10 mL, cut	3x 1 m / pk	187.905
Tube, syringes 0.3 to 10 mL, cut	10 m / pk	187.910
Tube, syringes 0.3 to 10 mL, uncut	by the meter	187.710
Tube, syringe 20 mL, cut	1 m / pk	187.707

Other spare parts

Refer to separate list for exhaustive selection.

All-glass syringes

The Dosys™ all-glass syringes

The reusable borosilicate glass syringes offer superior chemical and heat shock resistance. A precious, low-cost alternative to disposable plastic syringes in any applications involving liquids. Also suited for handling various oils, petroleum derivatives, glues, dyes, perfumes, essential oils and organic chemicals (except HF acid).

- Precision-machined plunger and barrel
- Interchangeable parts
- Excellent fitting and liquid tightness (not gas tight)
- Permanent, high visibility graduations
- Instant disassembling and cleaning
- Autoclavable at 121°C / 250°F

See cannulas and needles page [48](#)



155

1 to 250 mL



Nozzle types

Two versions available with either glass Luer or metal Luer Lock nozzle.



Interchangeable parts

Barrel and plunger are precision machined and fully interchangeable.



Convenient packaging

Blister-style transparent rigid packaging offers optimal protection.

Dissolved gas analysis

Large volume models perform excellently in dissolved gas analysis (DGA) of mineral oil in cooling system of power plant transformers.

Ordering information

Volume	Division	Packaging	Glass Luer nozzle Cat. No.	Metal Luer Lock nozzle Cat. No.
0.1 - 1 mL	0.05 mL	3 / pk	155.0301	155.0501
0.5 - 2 mL	0.1 mL	3 / pk		155.0502
0.2 - 5 mL	0.2 mL	3 / pk	155.0305	155.0505
1 - 10 mL	0.2 mL	3 / pk	155.0310	155.0510
1 - 20 mL	1 mL	2 / pk	155.0320	155.0520
1 - 30 mL	2 mL	2 / pk	155.0330	155.0530
1 - 50 mL	2 mL	1 / pk		155.0550
10 - 100 mL	10 mL	1 / pk	155.03100	155.05100
10 - 150 mL	10 mL	1 / pk		155.05150
10 - 200 mL	10 mL	1 / pk		155.05200
10 - 250 mL	10 mL	1 / pk		155.05250



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