

## 8. Liquid Handling Pumps/Drum pumps

### 1 Drum pump Pump-it®

For rapid and clean emptying from cans, drums and small barrels up to 60 L.

- Precise dosing, without dripping
- for liquids up to a viscosity of 1500 cPs at 20 °C
- Pump connection suitable for 64mm dia. (BSI) container threads
- stepless length adjustment of immersion tube
- Threaded adapters for most commercially-sold containers available
- Not suitable for HCl

Bürkle

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Immersion depth mm	Flow rate L / min.	Material	PK	Cat. No.
1000	8	PP/FKM	1	9.001 110

### 2 Adapter set for Pump-it® drum pump

Consisting of:

- 2" Coarse thread, Mauser L ring, green
- 2" coarse thread, Leer/Tri-Sure®, brown
- 2" Fine thread steel drum, blue
- DIN 60, Mauser-barrel, black
- DIN 51, black (image in centre)

Bürkle

2



Type	PK	Cat. No.
Adapter set for Pump-it can pump	1	9.001 111

### 3 Hand pumps Otal

For jerry cans and ballons up to 60 l capacity. Universal bungs for container openings of 30 to 70 mm diameter.

PP: weak acids, caustic solutions and detergents

PVDF: chlorine bleaching, not for strongly oxidizing acids and caustic solutions

Stainless steel: solvents and liquids of VbF Hazard Class AIII (not easily flammable)

Bürkle

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Diam. mm	Immersion depth mm	Flow rate L / min.	Material	PK	Cat. No.
10	450	4	PP*	1	9.001 210
12	700	14	PP	1	9.001 112
15	700	20	PP	1	9.001 115
18	700	26	PP	1	9.001 118
16	700	20	PVDF	1	9.001 135
18	900	26	Stainless steel tubing	1	9.001 137
12	700	12	PP / PVC dispensing tube	1	9.001 138

\*Miniature pump for container openings 20 to 36mm.

### 4 Foot pumps Otal

For jerry cans and ballons up to 120l capacity. Universal bungs for container openings of 30 to 70 mm diameter.

PP: weak acids, caustic solutions and detergents

PVDF: chlorine bleaching, not for strongly oxidizing acids and caustic solutions

Stainless steel: solvents and liquids of VbF Hazard Class AIII (not easily flammable)

Bürkle

4



Diam. mm	Immersion depth mm	Flow rate L / min.	Material	PK	Cat. No.
15	700	20	PP	1	9.001 015
18	700	26	PP	1	9.001 018
22	900	30	PP	1	9.001 022
16	700	20	PVDF	1	9.001 130
18	900	26	Stainless steel tubing	1	9.001 132
12	700	12	PP / PVC dispensing tube	1	9.001 133

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## 8. Liquid Handling Pumps/Drum pumps

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### 1 Siphons

Transparent with stopcock. Simple to use, suitable for occasional dispensing of non-aggressive liquids from a higher drum to a lower vessel, following the siphoning principle.

Bürkle

Diam. mm	Immersion depth mm	Flow rate L / min.	Material	PK	Cat. No.
15	1000	9	LDPE/PVC	1	9.001 355

2



### 2 Barrel pumps, stainless steel

Stainless steel V2A and PTFE.

Bürkle

For safe dispensing of liquids with a low flash point. Electrostatic charge can be dissipated through accessories antistatic set and drum screwthread connection. Not suitable for acetone.

Description	Diam. mm	Immersion depth mm	PK	Cat. No.
rigid dispensing tube	32	570	1	9.001 340
rigid dispensing tube	32	910	1	9.001 341
flexible tubing with stopcock	32	570	1	9.001 362
flexible tubing with stopcock	32	910	1	9.001 363
Removable discharge tube	32	360	1	6.083 463
flexible tubing with stopcock	32	360	1	6.802 513

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4



### Barrel pumps, screw joints

Barrel screw joints for stainless steel drum pumps.

Bürkle

Constructed in nickel-plated brass. For containers with R2", internal steel barrel thread.

Description	PK	Cat. No.
Barrel screw joint 2"	1	9.001 345 3
Barrel screw joint, gas-tight 2", hermetic sealing	1	6.090 497 4

5



### 5 Barrel pumps, PP

- For decanting acids, caustic solutions and aggressive detergents
- Excellent recovery of residual liquid in the barrel provided by base-sitting, non-return valve and steplessly adjustable immersion tube
- For barrels and tanks from 60 to 1000l.

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Type A: With rigid, angled, dispensing nozzle.

Type B: With flexible, PVC dispensing hose and stopcock.

Barrel screw joints and thread adapters for standard containers are available as optional accessories. Please order separately.

Immersion tube diam.: 32mm  
Max. pump capacity: up to approx. 12 L/min.

Type	Immersion depth mm	Length mm	PK	Cat. No.
A	500	600	1	9.001 356
B	500	600	1	9.001 366
A	650	740	1	9.001 357
B	650	740	1	9.001 367
A	800	900	1	9.001 358
B	800	900	1	9.001 368
A	1000	1090	1	9.001 359
B	1000	1090	1	9.001 369
A	1250	1340	1	9.001 364
B	1250	1340	1	9.001 370
A	1500	1590	1	9.001 365
B	1500	1590	1	9.001 371

## 8. Liquid Handling Pumps/Drum pumps

### 1 Barrel pump, PTFE

For ultrapure and aggressive liquids. Bürkle  
Made from solid, pure white PTFE, giving an excellent chemical resistance to all media (with the exception of elemental fluorine). With shut-off valve to reliably prevent the escape of harmful or hazardous liquids and unwanted drips.  
Electrostatic charge can be dissipated through the accessory antistatic set and drum screwthread connection.



Description	Tube diam. mm	Immersion depth mm	Flow rate ml / pass	PK	Cat. No.
with discharge tube	32.0	600	270	1	<b>9.001 260</b>
with discharge tube	32.0	950	400	1	<b>6.801 515</b>
with discharge hose	32.0	600	270	1	<b>7.639 613</b>
with discharge hose	32.0	950	400	1	<b>6.255 584</b>

### Screwthread connections for PP and PTFE drum pumps

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Type	Material	PK	Cat. No.
Screwthread connection for R2", internal steel barrel thread	PP	1	<b>9.001 335</b> 2
Drum stoppers for drum openings from 40 to 70 mm	PVC	1	<b>9.001 336</b> 3
Screwthread connection for Mauser 2", internal coarse screwthread	PP	1	<b>9.001 337</b> 4
Screwthread connection for Tri-Sure®, internal coarse screwthread	PP	1	<b>9.001 338</b> 5
Screwthread connection R2" with counter nut, for drum openings of 60mm diam.	PP	1	<b>9.001 347</b> 6



### Mini solvent pump

The self-closing discharge (with auto-stop function) of the Mini solvent pump ensures absolutely precise filling with no dripping at all. Dosing is even easy in very small containers such as test tubes, which present no problems. A hose can optionally be fastened onto the discharge spout (internal Ø 6 mm), thus making it possible to fill the container from a greater distance. Bürkle

The Mini solvent pump is especially compact and very well balanced, which makes it possible to fill without tipping, even from very small containers.

Thanks to its sturdy design and high-quality materials, the Mini solvent pump consistently ensures neat and reliable filling throughout its long service life, easily and conveniently.

- Ideal for 1-5 l containers
- Connecting thread GL 45
- Parts in contact with medium made of PTFE and stainless steel (1.4301, 1.4404)
- PTFE hose (6 x 8 mm) 0.4 m
- Including grounding cable 2 m
- Adapters available as accessories for S 40, GL 38 and GL 32



Description	Flow rate l / min.	PK	Cat. No.
Mini solvent pump, GL 45	1.8	1	<b>9.001 351</b> 7
Adapter, PTFE for S 40		1	<b>9.001 352</b>
Adapter, ETFE for GL 38		1	<b>9.001 353</b>
Adapter, ETFE for GL 32		1	<b>9.001 354</b>

## 8. Liquid Handling Pumps/Drum pumps

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9.001 349

### Solvent pump hand operated

- For contamination-free, dispensing of organic solvents and flavouring agents.
- Suitable for all commercially available, stainless steel drums up to 60 L with R2" fine thread necks, hand pump for tinplate canisters incl. adapter for pull-out spouts (immersion depth 600mm - fully adjustable).
- Gas-tight pump can be completely shut-off using two ball valves.
- Medium-contacting parts are made of stainless steel with PTFE-seals.
- Supplied with gas tight, R2" steel barrel internal thread connection.
- Electrostatic charge can be dissipated through the accessory antistatic set (please order separately).

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Description	Immersion depth mm	PK	Cat. No.
Hand pump	600	1	9.001 349 1
Hand pump for tinplate canisters	600	1	6.237 176

2



### Solvent pump foot operated

- for barrels up to 220 L (fully adjustable)
- for dispensing ultrapure solvents
- solvent-wetted materials: Stainless steel and PTFE
- rigid angled tube or flexible tubing with stainless steel/PTFE stopcock
- electrostatic charge can be dissipated through the accessory antistatic set (please order separately)
- supplied with gas tight, R2" steel barrel internal thread connection

Bürkle

Description	Immersion depth mm	Flow rate L / min.	PK	Cat. No.
Foot pump with rigid angled tube	950	30	1	9.001 134
Foot pump with flexible tubing	950	30	1	6.236 800

3



### Drum pumps GLP 25

GLP 25 is your ideal helper for clean and safe liquid transfer from small containers and drums up to 220litres. Various media such as undiluted acids and bases, dyes, emulsions, dispersions and low-viscosity liquids can be measured out without any problems. Wetted materials are PP, stainless steel and Viton®. The pump is therefore additionally media resistant against aggressive liquids. Driveshaft made from stainless steel. Delivery rates from 1 to 20 l/min adjustable. Pump Set supplied with: motor, pump unit, PP, 3/4" dia. inlet tubing (length 500, 700 or 1000 mm), PP discharge tubing, 250 mm long and adapter for drum necks of 40 to 58 mm.

Grün-Pumpen

Description	Length mm	PK	Cat. No.
Pump set	500	1	9.001 410
Pump set	700	1	9.001 411
Pump set	1000	1	9.001 412

### 4 5 Accessories for drum pumps GLP 25

Grün-Pumpen

Description	PK	Cat. No.
Motor for all pump units	1	9.001 400
Pump unit with inlet tubing length 500 mm, incl. discharge tube	1	9.001 401
Pump unit with inlet tubing length 700 mm, incl. discharge tube	1	9.001 402
Pump unit with inlet tubing length 1000 mm, incl. discharge tube	1	9.001 403
Discharge tube PP, length 25 cm	1	9.001 404
Adapter PP, diam. 65 to 70 mm	1	9.001 405
Nozzle PP, reinforced PVC outlet tubing 1.5 m, DN19	1	9.001 406

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## 8. Liquid Handling Pumps/Drum pumps

### 1 2 3 Barrel pumps AccuOne and EnergyOne

Bürkle barrel pumps AccuOne and EnergyOne with the unique hybrid system ensure fast, flexible and convenient filling, whenever and wherever you want. The pumps are equipped with two different power supply systems: AccuOne, driven by a high-performance rechargeable battery or EnergyOne, with a power cable for direct connection to mains electricity. Innovative new feature: The power supply units are interchangeable! The rechargeable battery or the power supply unit are fitted with a clip lock and are removable. They can be exchanged quickly and easily. Thus AccuOne can also be operated with the power supply cable unit and EnergyOne can be operated with the rechargeable battery. With a replacement rechargeable battery as an accessory, you never have to wait for charging. The drive can also be disconnected quickly and easily from the pump station with a clip lock. This makes it possible to use one drive for filling at several stationary pump stations. AccuOne and EnergyOne are designed for applications in which even very small amounts of liquid can be added to small containers with narrow openings. The TouchPanel is sealed against dust, dirt and water. By a foil Keyboard it can be used to regulate the flow rate continuously and precisely from 0.4l/min to 12 l/min. In addition to the discharge tube, a flexible discharge hose (1.2 m) with nozzle (PVC, PP, V2A, FKM) is available as an option. The light and powerful pumps are made of high-quality materials, PP, PVDF and Hastelloy C, to ensure outstanding chemical resistance. This also makes them suitable for dispensing acids and bases. Please make note of detailed information related to chemical resistance!

Bürkle

	<b>AccuOne   EnergyOne</b>
Maximum pumping capacity:	12 l/min
Weight:	750 g   580 g
Discharge connection:	3/4"
Shaft:	Hastelloy C
Pump station, Seals:	PP, PTFE
Power supply:	Battery Li-Ion (up to 600l)   230V incl. international plug adapter

Type	Description	Tube length mm	PK	Cat. No.
AccuOne	with rechargeable battery, rigid discharge tube and charger	500	1	9.001 420
AccuOne	with rechargeable battery, rigid discharge tube and charger	700	1	9.001 421
AccuOne	with rechargeable battery, rigid discharge tube and charger	1000	1	9.001 422
EnergyOne	with power supply unit and rigid discharge tube	500	1	9.001 423
EnergyOne	with power supply unit and rigid discharge tube	700	1	9.001 424
EnergyOne	with power supply unit and rigid discharge tube	1000	1	9.001 425

### 4 Accessories for AccuOne and EnergyOne

Bürkle

Description	PK	Cat. No.
Rechargeable battery without charger	1	9.001 426
Charger	1	9.001 427
Power supply unit incl. connector	1	9.001 428
Drive without rechargeable battery, power supply unit and pump station	1	9.001 429
Discharge tube	1	9.001 430
Discharge hose 1.2 m with nozzle	1	9.001 431
Pump station with immersion pipe length 500 mm	1	9.001 432
Pump station with immersion pipe length 700 mm	1	9.001 433
Pump station with immersion pipe length 1000 mm	1	9.001 434
Barrel screw connection, PP for R2" steel barrel internal thread	1	9.001 335
Drum screwthread connection 2", counter nut	1	9.001 347
Barrel plug, PVC for openings from 40 to 70 mm diameter	1	9.001 336
Barrel screw connection, PP for Mauser 2", coarse internal thread	1	9.001 337
Barrel screw connection, PP for Tri-Sure®, coarse internal thread	1	9.001 338



## 8. Liquid Handling Pumps/Drum pumps-Peristaltic pumps

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### 1 Drum pumps, mains-powered

Lightweight and powerful pump for transferring small amounts of aqueous liquids up to 300 mPas from cans and drums with infinitely variable speed controller.

Lutz Pumpen

- Motor 230 V, 200 W (IP 24)
- Seal less pump tube
- Suitable accessory flow meter required
- Pump with tubing connection

Two options:

- Polypropylene version for acids and alkalis
- Stainless steel version for low-viscosity lubricants

Available as a set (9.880 310-9.880 315) with 1.5 m PVC tubing, nozzle in polypropylene, wall bracket

Type	Immersion tube diam.	Immersion depth	Delivery head	Flow rate	Material	PK	Cat. No.
	mm	mm	mWS	l / min.			
Pump	32	500	7.0	75	PP	1	9.880 300
Pump	32	700	7.0	75	PP	1	9.880 301
Pump	32	1000	7.0	75	PP	1	9.880 302
Pump	28	500	6.5	68	stainless steel	1	9.880 303
Pump	28	700	6.5	68	stainless steel	1	9.880 304
Pump	28	1000	6.5	68	stainless steel	1	9.880 305
Pump set	32	500	7.0	75	PP	1	9.880 310
Pump set	32	700	7.0	75	PP	1	9.880 311
Pump set	32	1000	7.0	75	PP	1	9.880 312
Pump set	28	500	6.5	68	stainless steel	1	9.880 313
Pump set	28	700	6.5	68	stainless steel	1	9.880 314
Pump set	28	1000	6.5	68	stainless steel	1	9.880 315

2



### 2 Anti-static set

When dispensing combustible/explosive liquids pump, both dispensing and filling drum involved in the process must be sufficiently earthed, in order to prevent ignition or explosion through electrostatic discharges. Antistatic set, includes three colour-coded connecting cables with clamps, supplied complete in plastic case.

Bürkle

Type	PK	Cat. No.
Antistatic set	1	9.001 346

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9.880 360

### Horizontal centrifugal pumps, magnetically coupled

These new magnetic drive pumps are designed for pumping acids, bases, mixtures of acids and bases, solvents, photochemicals into alkali stripping baths, galvanic baths, as well as radioactive, sterile, expensive or highly corrosive liquids. The pumps are sealless. The impeller is driven by the magnetic force of the outer magnets, therefore no mechanical seal is required. As the pump housing is hermetically sealed no leaks can occur. The use of high performance, permanent magnets, ensures high transmission forces even at elevated temperatures.

Lutz Pumpen

- viscosity up to 20 mPas
- pump complete with flanged-to motor

Magnetic drive pump 15 Watt: Motor 230 V, material PP (fibre-glass reinforced), stainless steel (shaft), Viton® (O-ring), tubing connection 14 mm

Magnetic drive pump 29 Watt: Motor 230 V, material PP (fibre-glass reinforced), ceramics (shaft), Rulon (guide bearing), Viton® (O-ring), suction/discharge G 3/4" OT (BSP)

4



9.880 361

Description	Delivery head mWS	Flow rate L / min.	PK	Cat. No.
15 Watt, without thread	2.0	12	1	9.880 360 <sup>3</sup>
29 Watt, with 3/4" outer thread	3.0	24	1	9.880 361 <sup>4</sup>

## 8. Liquid Handling Pumps/Peristaltic pumps

### 1 Laboratory peristaltic pumps, PLP

The Peristaltic Pumps PLP are suitable for conveying flowable and gaseous substances. Depending on the tube material, they are also suitable for different chemicals, corrosive, aggressive or sterile media. The Peristaltic Pumps PLP are used in the laboratory, in technical analysis, in medical technology, in biotechnology, in industry and food industry. The peristaltic pump is made entirely of motor and mounted pump head, it is infinitely variable. The tubing is fitted to the angled connection of the pump head. For tubing with 5 mm inner diameter.

Type	Flow rate ml/min.	Weight g	PK	Cat. No.
PLP 33	7 - 33	1300	1	9.700 420
PLP 66	17 - 66	1300	1	9.700 421
PLP 330	66 - 400	1300	1	9.700 422
PLP 1000	250 - 1000	1440	1	9.700 423



### Laboratory peristaltic pumps PLP 38

The Peristaltic Pumps PLP are suitable for conveying flowable and gaseous substances. Depending on the tube material, they are also suitable for different chemicals, corrosive, aggressive or sterile media.

The peristaltic pump is made entirely of motor and mounted pump head. By switching pump heads the user can adjust the delivery rate over a wide range.

The Peristaltic Pumps PLP are used in the laboratory, in technical analysis, in medical technology, in biotechnology, in industry and food industry.

#### Specifications:

Speed:	0.1 to 100 rpm, reversible
Speed precision:	0.1 rpm
Speed control:	Membrane keypad
Display:	3-digit LED displays current rpm
Communication interface:	RS485
Power supply:	90 bis 260 V <sub>ac</sub> 50/ 60 Hz
Power consumption:	< 30 W
Operating condition:	0 to 40 °C
Relative humidity:	< 80 %
Dimensions (L x W x H in mm):	232 x 142 x 149
Drive weight (without Pump Head):	2.3 kg
IP rating:	IP 31

Type	Description	Flow rate ml/min.	PK	Cat. No.
PLP 38_103	Laboratory peristaltic pump with pump head	0,07 / 380	1	6.287 159 <b>2</b>
PLP 38_5061	Laboratory peristaltic pump with pump head	0,00025 / 41	1	6.287 160 <b>3</b>



6.287 159



6.287 160

### 4 Peristaltic Pump PLP 60

#### Specifications:

Speed:	60 to 600 rpm
Speed precision:	±1 %
Resolution:	1 rpm
Torque:	>=1.60 Nm
Speed control:	Start/stop switch and rotary encoded switch
Display:	3-digit LED displays current rpm
Communication interface:	RS485
Power supply:	176 to 264 V <sub>ac</sub> 50/ 60 Hz
Power consumption:	< 200 W
Operating condition:	0 to 40 °C
Relative humidity:	< 80 %
Dimensions (L x W x H in mm):	285 x 207 x 180
Drive weight (without Pump Head):	5.2 kg
IP rating:	IP 31

Type	Description	Flow rate ml/min.	PK	Cat. No.
PLP 60_603	Peristaltic Pump with pump head	180 / 6000	1	6.287 161



## 8. Liquid Handling Pumps/Peristaltic pumps

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### 1 Peristaltic Pump VLP

NEW

Compared to the PLP peristaltic pump the speed band of the VLP peristaltic laboratory pump is broader. Moreover the VLP model offers additional programming like fixed pumping volume and time, a timer function and much more.

Dülabo Laborgeräte

#### Specifications

Speed:	1 to 600 rpm, reversible
Speed precision:	1 rpm
Speed control:	4.3" Farb Touchscreen
Communication interface:	RS232/485 MODBUS
Power supply:	220V, 60 Hz
Power consumption:	< 50 W
Operating condition:	0 ... 40 °C
Relative humidity:	< 80 %
Dimensions (L x W x H):	261 x 187 x 237 mm
IP rating:	IP 31

Type	Description	Flow rate ml/min.	PK	Cat. No.
VLP 61_103	Peristaltic Pump with pump head	0,00025 / 2280	1	6.287 162

2



### 2 Compact peristaltic pumps MS-CA

Flow rate 0.021 to 26 ml/min. Simple Click'n'go mini tubing assembly cartridges.

Cole-Parmer GmbH

- 3-stop colour-coded tubing
- fixed-speed motor
- Dimensions MS-CA2 (W x D x H): 88 x 135 x 125mm
- Dimensions MS-CA4 (W x D x H): 88 x 135 x 145mm

Type	Rotation speed rpm	Flow rate ml/min.	Channels	Rollers	PK	Cat. No.
MS-CA 2/620	20	0.028 - 8.5	2	6	1	9.828 142
MS-CA 2/660	60	0.083 - 26.0	2	6	1	9.828 146
MS-CA 2/640	40	0.055 - 17.0	2	6	1	9.828 144
MS-CA 2/840	40	0.043 - 14	2	8	1	9.828 154
MS-CA 2/820	20	0.021 - 7.1	2	8	1	9.828 152
MS-CA 2/860	60	0.064 - 21.0	2	8	1	9.828 156

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### 3 Pumps, peristaltic, Reglo-Analogue

For high precision pumping in the ml-range and below (0.002 to 68 ml/min). Simple Click'n'go mini tubing assembly cartridges. With remote control for on/off and speed.

Cole-Parmer GmbH

- speed setting: 2-99 %, resolution: 1 %
- power consumption 20 W
- overload control
- analogue interface
- for 0.13 to 3.17 mm tubing i.d.
- 3-stop, colour-coded tubing

Dimensions (W x D x H)

2-channel versions:	100 x 178 x 143 mm
4-channel versions:	100 x 190 x 143 mm

Type	Rotation speed rpm	Flow rate ml/min.	Channels	Rollers	PK	Cat. No.
MS-2/6-160	3.2 - 160	0.005 - 68	2	6	1	9.828 470
MS-2/8-160	3.2 - 160	0.004 - 57	2	8	1	9.828 471
MS-2/12-160	3.2 - 160	0.003 - 38	2	12	1	9.828 474
MS-4/6-100	2,0 - 100	0.003 - 43	4	6	1	9.828 472
MS-4/8-100	2,0 - 100	0.003 - 35	4	8	1	9.828 473
MS-4/12-100	2,0 - 100	0.002 - 24	4	12	1	9.828 475

## 8. Liquid Handling Pumps/Peristaltic pumps

### 1 Pumps, peristaltic, Reglo-Digital

For high precision pumping in the ml-range and below (0.001 to 68ml/min). Simple Click'n'go mini tubing assembly cartridges. Microprocessor controlled, with RS232 interface and can be calibrated. Programmable flow rates, dispensing volume and pause times. Digital LED display. For: 0.13 to 3.17mm i.d. tubing.

Cole-Parmer GmbH

Programmable functions:

- ml/min
- the drive speed (rpm)
- drip-free by rolling back steps
- calibration: ml/min (flow rate); ml (volume)
- power ON/OFF

Dosing by:

- volume ml
- volume/unit time
- metering (0.1 sec to 999 hours)
- interval metering with preset pause
- selectable number of dispensing

Type	Rotation speed rpm	Flow rate ml/min.	Inputs	Rollers	PK	Cat. No.
MS-2/6-160	1.6 - 160	0.003 - 68	2	6	1	9.828 480
MS-2/8-160	1.6 - 160	0.002 - 57	2	8	1	9.828 481
MS-2/12-160	1.6 - 160	0.002 - 38	2	12	1	9.828 484
MS-4/6-100	1.0 - 100	0.002 - 43	4	6	1	9.828 482
MS-4/8-100	1.0 - 100	0.002 - 35	4	8	1	9.828 483
MS-4/12-100	1.0 - 100	0.001 - 24	4	12	1	9.828 485

### 2 Peristaltic pumps, Reglo ICC

**Independent 4-Channel Control Pump**

Cole-Parmer GmbH

- Increased efficiency
- Control of complex pump applications with only one pump
- Controlled by computer or directly through the control panel on the pump
- Continuous pumping and precise dosing
- Flexible bi-directional flow direction in each channel
- Self-priming
- Especially for viscous or foaming liquids, also when containing particles or live cells
- Contamination-free pumping even under sterile conditions

Flow rate: 0.0001 to 43 ml/min  
 Differential Pressure: Max. 1.0 bar (14.5 psi)  
 Tubes: 3 stoppers 0.13 to 3.17 mm ID

Type	Channels	Rollers	Flow rate ml / min.	PK	Cat. No.
Reglo-ICC	2	6	0.0002 - 43	1	6.287 569
Reglo-ICC	3	6	0.0002 - 43	1	6.287 570
Reglo-ICC	4	6	0.0002 - 43	1	6.287 571
Reglo-ICC	2	8	0.0002 - 35	1	6.264 156
Reglo-ICC	3	8	0.0002 - 35	1	9.828 487
Reglo-ICC	4	8	0.0002 - 35	1	4.012 977
Reglo-ICC	2	12	0.0001 - 24	1	6.283 719
Reglo-ICC	3	12	0.0001 - 24	1	6.287 572
Reglo-ICC	4	12	0.0001 - 24	1	6.282 379

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## 8. Liquid Handling Pumps/Peristaltic pumps

GENERAL CATALOGUE EDITION 20

### Pumps, peristaltic, Ecoline

Flow rate 0.003 to 5400 ml/min. Robust and economical tube pump with a large flow rate range. Stainless steel housing. Easy handling. For all applications in laboratory and industry. Microprocessor-controlled drive and 2-digit digitpot for precise speed adjustment. Analogue interface for start/stop and direction of rotation (potential-free contact) as well as speed (0 to 5 V, 0 to 10 V or 0 to 20 mA, 4 to 20 mA). Variable speed drive.

Cole-Parmer GmbH

#### Ecoline VC-280:

Economical, basic, single-channel drive model for flow rates up to 5.4 l/min with variable speed.

#### Ecoline VC-280, Ecoline VC-360 and VC-380:

1-channel tubing pumps, for 1.6 mm wall thickness tube.

#### Ecoline VC-281 and VC381:

1-channel tubing pumps, for 2.4 mm wall thickness tube.

#### Ecoline VC-drive without pump heads:

- combinable with Easy-Load®, MS/CA 8-6 and MS/CA 4-12 pumpheads.

Type	To fit tubing mm	Flow rate ml / min.	Channels	Rollers	PK	Cat. No.
VC-280 II	1.6 - 11.1	1.7 - 5400	1	2	1	9.828 513
VC-360 II	0.8 - 6.4	0.25 - 1300	1	3	1	9.828 514 <sup>1</sup>
VC-380 II	1.6 - 11.1	1.6 - 5000	1	3	1	9.828 515 <sup>2</sup>
ECOLINE VC-drive	-	-	-	-	1	9.828 516
Easy-Load®	0.8 - 8.0	0.23 - 1600	1	3	1	9.828 391
MS/CA 8-6	0.13 - 3.17	0.005 - 150	8	6	1	9.828 376
MS/CA 4-12	0.13 - 3.17	0.003 - 83	4	12	1	9.828 378
VC-281	4.8 - 9.5	13 - 4600	1	2	1	6.287 568
VC-381	4.8 - 9.5	12 - 4200	1	3	1	7.621 423

1



9.828 514

2



9.828 515

3



### 3 Peristaltic pump tubing, Tygon® LMT-55

With 2 colour-coded bridges (international standards).

Saint Gobain

Shore: 55. Fits most common peristaltic pump models, e.g. Verder, Ismatec, Watson-Marlow, IKA and Heidolph. Standard tubing, transparent. Length 380 mm. Long working lifespan. Good resistance to acids and alkalis. Suitable for general use and with food.

Colour	Int. diam. mm	Wall thickness mm	PK	Cat. No.
orange-black	0.13	0.90	12	9.208 201
orange-blue	0.25	0.90	12	9.208 203
orange-green	0.38	0.90	12	9.208 204
orange-yellow	0.51	0.90	12	9.208 205
black-black	0.76	0.85	12	9.208 207
orange-orange	0.89	0.85	12	9.208 208
orange-red	0.19	0.90	12	9.208 202
white-white	1.02	0.85	12	9.208 209
red-red	1.14	0.85	12	9.208 210
grey-grey	1.30	0.85	12	9.208 211
yellow-yellow	1.42	0.85	12	9.208 212
yellow-blue	1.52	0.85	12	9.208 219
blue-blue	1.65	0.85	12	9.208 213
green-green	1.85	0.85	12	9.208 214
purple-purple	2.06	0.85	12	9.208 215
purple-black	2.29	0.85	12	9.208 216
purple-orange	2.54	0.85	12	9.208 217
purple-white	2.79	0.85	12	9.208 218
black-white	3.18	0.85	12	9.208 222

➔ More tubings please see chapter 1.

## 8. Liquid Handling Pumps/Peristaltic pumps

### 1 Pumps, peristaltic, multichannel, precision, IPC, IPC-N-IP and IP-N

#### IP and IP-N series, without dispensing features

- Microprocessor controlled
- very precise pumping

#### IPC and IPC-N series, with dispensing features

- Microprocessor controlled
- very precise pumping
- with "standby-mode" (prevents draining the tubing line e.g. overnight)
- with dispensing and calibration functions

#### IPC-N and IP-N series

- 4, 8, 12, 16 or 24 channels
- 8 actively driven stainless steel rollers
- Transparent keyboard and LED-display
- Clickánágo cassettes providing defined and repeatable occlusion conditions.
- different tube sizes can be inserted in each channel.
- 2 Stopper tubes
- Differential pressure: 1.0 bar

Cole-Parmer GmbH

#### Specifications IPC and IPC-N:

Motor type:	d.c. motor
Flow rates:	IPC: 0.4 up to 44 l/min IPC-N: 0.11 up to 11.25 l/min
Speed range:	1 to 100 %, resolution 0.1 % in µl/min to ml/min
Input:	30 W
Supply requirements:	230V 50 Hz, 115V 60 Hz (selectable)
Protection class:	IP 30

#### Specifications IP and IP-N:

Motor type:	d.c. motor
Flow rates:	IP: 0.4 up to 44 l/min IP-N: 0.11 up to 11.25 l/min
Speed range:	1 to 100 %, resolution 0.1 % IP; rpm, resolution 0.1 l/min IP-N: rpm, resolution 0.03 l/min
Input:	30W
Supply requirements:	230 V 50 Hz, 115 V 60 Hz a.c. (selectable)
Protection class:	IP 30

Type	Dimensions (W x D x H) mm	Flow rate ml/min.	Inputs	PK	Cat. No.
IP-4	175 x 180 x 130	0.002 - 44	4	1	9.828 346
IP-8	175 x 220 x 130	0.002 - 44	8	1	9.828 347
IP-12	175 x 260 x 130	0.002 - 44	12	1	9.828 348
IP-16	175 x 300 x 130	0.002 - 44	16	1	9.828 349
IP-24	175 x 380 x 130	0.002 - 44	24	1	9.828 350
IP-N-4	175 x 180 x 130	0.004 - 11	4	1	9.828 356
IP-N-8	175 x 220 x 130	0.0004 - 11	8	1	9.828 357
IP-N-12	175 x 260 x 130	0.0004 - 11	12	1	9.828 358
IP-N-16	175 x 300 x 130	0.0004 - 11	16	1	9.828 360
IP-N-24	175 x 380 x 130	0.0004 - 11	24	1	9.828 370
Foot switch	-	-	-	1	9.828 476
IPC-4	175 x 180 x 130	0.002 - 44	4	1	9.828 351
IPC-8	175 x 220 x 130	0.002 - 44	8	1	9.828 352
IPC-12	175 x 260 x 130	0.002 - 44	12	1	9.828 353
IPC-16	175 x 300 x 130	0.002 - 44	16	1	9.828 354
IPC-24	175 x 380 x 130	0.002 - 44	24	1	9.828 355
IPC-N-4	175 x 180 x 130	0.0004 - 11	4	1	9.828 361
IPC-N-8	175 x 220 x 130	0.0004 - 11	8	1	9.828 362
IPC-N-12	175 x 260 x 130	0.0004 - 11	12	1	9.828 363
IPC-N-16	175 x 300 x 130	0.0004 - 11	16	1	9.828 364
IPC-N-24	175 x 380 x 130	0.0004 - 11	24	1	9.828 365



## 8. Liquid Handling Pumps/Peristaltic pumps

GENERAL CATALOGUE EDITION 20

### 1 Pump, peristaltic, Flowmaster FMT 300

Offers high flow rates from 37 ml/min to 13 l/min for industrial applications. Protection level IP65, sterile tube insertion without priming. Simple detachable pumphead makes cleaning easy, no tools required. Dispensing in intervals possible.

*Cole-Parmer GmbH*

**Specifications:**

Pumping speed: 5 to 500 rpm, accuracy 0.1 rpm, waterproof keypad, LED readout  
 Power consumption: 500 W  
 Power supply: 115/230V 60 Hz a.c., switchable  
 Protection: IP 65  
 Dimensions (HxWxD): 220 x 500 x 262 mm  
 Weight: 26 kg  
 Flowrate: 37 ml/min - 13 l/min  
 Pumphead: Comprises a 3-roller pumphead for tubing with a thickness of 3.2 mm

Type	PK	Cat. No.
Flowmaster FMT 300	1	9.828 541

### Peristaltic pump drives, BVP-Standard/BVP-Process

Can be combined with over 20 pump-heads for flow rates of 0.01 to 3700 ml/min (depending on pump-head).

*Cole-Parmer GmbH*

For the continuous pumping of liquids and suspensions with up to 60 % solids content according to capacity or time. Analogue interface for Start/Stop, rotation direction, autostart. LED display on BVP Process. Stainless steel housing, dust-tight and water-proof. Dimensions (W X D x H): 155 x 220 x 260mm (without pump-head). Power supply: 230 V/50 Hz, 115 V/60 Hz

**Specifications: BVP Standard**

- speed 3.8 to 240 rpm
- speed setting: 1-99.9 %, resolution 0.1 %
- protection rating: IP30
- power supply: 100 - 230 VAC/50 - 60 Hz
- weight: 5.7 kg (without pump head)

**Specifications: BVP Process**

- speed 1 to 240 rpm
- speed setting: rpm, resolution: 0.1 rpm
- LED display
- protection rating: IP65
- power supply: 100 - 230 VAC/50 - 60Hz (autom. switching)
- weight: 6.9 kg (without pump head)

Type	Flow rate ml / min.	PK	Cat. No.
BVP-Standard	0.003 - 3700	1	9.828 366 2
BVP-Process	0.001 - 3700	1	9.828 512 3

1



2



9.828 366

3



9.828 512

## 8. Liquid Handling Pumps/Peristaltic pumps

### 1 Peristaltic pump drives, MCP standard/MCP process

1

Can be combined with over 20 pumpheads for flow rates of 0.01 to 3700 ml/min (depending on pump-head).

Cole-Parmer GmbH

Combined peristaltic pump and precise dispenser. Microprocessor controlled, with precise controlled rotation speed and metering unit for 1 to 24 pump channels. The speed (1 rpm to 240 rpm) is adjustable to 0.1 rpm, key-pad with LED-display, programmable. Different dosing modes supply very exact and reproducible results. With RS232 interface, tubing valve operation, dosing handle and foot switch. Can be used for sterile dosing up to 135 °C (with adequate tubing). Dimensions (W x D x H): 155 mm x 220 mm x 260 mm (without pumphead).

**Programmable functions:**

- ml/min
- drive speed
- drop-free (roller reverse step)
- calibration ml/min in ml (volume)
- drive unit on/off

**Dosing:**

- volume ml
- volume/time unit
- dosing time (0.1 to 999 h)

**Additional functions MCP process:**

- programmable sequences
- dust-tight and water-proof

**Specifications**

<b>Motor type:</b>	<b>MCP-Process</b> d.c. motor
<b>Speed:</b>	1 to 240 rpm
<b>Speed setting:</b>	rpm, resolution 0.1 rpm
<b>Flow rate setting:</b>	ml/min, ml/min, l/min
<b>Power consumption:</b>	100W
<b>Power supply:</b>	100 to 230 V, 50 to 60 Hz a.c.
<b>Protection rating:</b>	IP65
<b>Weight:</b>	6.9 kg (without pumphead)

<b>Motor type:</b>	<b>MCP-Standard</b> d.c. motor
<b>Speed:</b>	1 to 240 rpm
<b>Speed setting:</b>	rpm, resolution 0.1 rpm
<b>Flow rate setting:</b>	ml/min, ml/min, l/min
<b>Power consumption:</b>	100 W
<b>Power supply:</b>	230 V 50 Hz; 115 V, 60 Hz a.c. selectable
<b>Protection rating:</b>	IP30
<b>Weight:</b>	6.4 kg (without pumphead)

Type	PK	Cat. No.
MCP-Process	1	9.828 510
MCP-Standard	1	9.828 367



### 2 Single-channel-pumpheads for peristaltic pumps BVP-Standard (-Process) and MCP-Standard (-Process) drive units

Cole-Parmer GmbH

Pumphead type	Flow rate ml / min.	Inputs	Rollers	PK	Cat. No.
Easy-Load**	0.07 - 1100	1	3	1	9.828 391
Easy-Load removable plate	-	-	-	1	9.828 530
PTFE tubing pumphead*	0.07 - 45	1	6	1	9.828 395

\* Removable plate 9.828 530 is required for operation.



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## 8. Liquid Handling Pumps/Peristaltic pumps



### 1 Single-channel pumpheads for BVP-Standard (-Process) and MCP-Standard (-Process) peristaltic pump drive units

For tubing with max. wall thickness: 1.6 mm

Cole-Parmer GmbH

Pumphead type	Flow rate ml / min.	Inputs	Rollers	PK	Cat. No.
360	0.072 - 530	1	3	1	9.828 371
380	0.44 - 2800	1	3	1	9.828 372
380 AD**	0.41 - 3600	1	3	1	9.828 373
Pro 280	0.49 - 3700	1	2	1	9.828 520
Pro 380	0.45 - 3400	1	3	1	9.828 521
Pro 281*	3.6 - 3100	1	2	1	9.828 394
Pro 381*	3.3 - 2900	1	3	1	9.828 396

\*Tubing wall thickness 2.4 mm

\*\*Pump head for tubing wall thickness of 1.6 to 2.4 mm

### 2 Multichannel pumpheads for BVP-Standard/Process and MCP-Standard/Process drive units

Cole-Parmer GmbH

Pumphead type	Flow rate ml / min.	Inputs	Rollers	PK	Cat. No.
SB removable plate	-	-	6	1	9.828 533
SB-3V*	0.09 - 530	3	6	1	9.828 216
SB-2V*	1.1 - 1100	2	6	1	9.828 215

\* Removable plate 9.828 533 is required for operation.

### 3 4 Multichannel pumpheads for BVP-Standard/Process and MCP-Standard/Process drive units

Cole-Parmer GmbH

Pumphead type	Flow rate ml / min.	Inputs	Rollers	PK	Cat. No.
CA4	0.002 - 230	4	8	1	9.828 379
CA8	0.002 - 230	8	8	1	9.828 380
CA12	0.002 - 230	12	8	1	9.828 381
MS/CA8-6*	0.002 - 100	8	6	1	9.828 375
MS/CA4-12**	0.001 - 57	4	12	1	9.828 377
MS/CA8 cartridge block	0.002 - 100	8	6	1	9.828 376
MS/CA4-12 cartridge block	0.001 - 57	4	12	1	9.828 378

\*extendible to 24 channels

\*\*extendible to 16 channels



## 8. Liquid Handling Pumps/Peristaltic pumps

### Peristaltic pump rotarus® standard and volume

Peristaltic pumps for continuous delivery in speed ranges from 0.2 to 100 revolutions per minute (rotarus® standard 50/50i) and 5 to 500 revolutions per minute (rotarus® Volume 100/100i). Hirschmann

**rotarus® standard 50** is the powerful basic model in the peristaltic pump series. The cost-effective, precise delivery pump for small delivery volumes and high viscosities is ideal for flexible applications, thanks to the use of diverse pump heads and hoses. The control panel on the housing enables simple and rapid configuration of the most important parameters, and the speed can be programmed directly on the unit. Performance class with 50 Watt ensures exact delivery in speed ranges from 0.2 to 100 revolutions per minute.

**rotarus® volume 100** is a comfortable, rapid dispensing pump for high flow rates with control options for velocity, flow rate, dispensing duration and total volume. Variable cycles and graduated pump speeds can be controlled reliably and precisely. Performance class with 100 Watt ensures rapid delivery in speed ranges from 5 to 500 revolutions per minute. RFID technology is used in the rotarus® volume to automatically detect the pump head and hose. The model also has automatic blockage detection and hose rupture monitoring as well as a method memory. In addition, rotarus® volume is equipped with an external control unit with touchscreen.

**Overview of details:**

- Housings with a white powder coating (rotarus® 50/100; protection class IP54) or inox stainless steel design (rotarus® 50i/100i, protection class IP65).
- Pump head connection technology for rapid handling.
- For pump drive a choice of two different motors with 50 or 100 watt is available to suit the application, flow rate and fluid.
- Changeable pump heads, single and multichannel design.
- Rapid tool-free changing of pump heads.
- Control panel located directly on pump housing.
- Calibratable.
- Operation with 24 V DC.
- USB and RS232 interface for PC link using interface (available as accessory).
- Pump heads from other manufacturers can be fitted without difficulty using an adapter.
- Comprehensive accessory range.

**Supplied with:**

- rotarus® standard 50/50i, external power supply unit, junction cable for EU, UK, US.
- rotarus® volume 100/100i, external power supply unit, junction cable for EU, UK, US, control unit.

Type	PK	Cat. No.
standard 50	1	6.258 629 <b>1</b>
standard 50i	1	6.258 630
volume 100	1	6.257 247
volume 100i	1	6.256 566 <b>2</b>



6.258 629



6.256 566

### Rotarus® pump heads

Hirschmann

Type	Description	Channels	Rollers	PK	Cat. No.
PK 10-16	Single channel pump head for tube with WT 1.6 mm	1	3	1	9.880 380
PK 10-24	Single channel pump head for tube with WT 2.4 mm	1	3	1	9.880 381
MKF 4-8	4 Channel pump head for stopper tubes	4	8	1	9.880 382
MKF 8-4	8 Channel pump head for stopper tubes	8	4	1	9.880 383
MKF 12-8	12 Channel pump head for stopper tubes	12	8	1	9.880 384

## 8. Liquid Handling Pumps/Dosing pumps

GENERAL CATALOGUE EDITION 20

1



### 1 Chemically-resistant Liquid Pumps LIQUIPORT®

- Application: Transferring liquids
- Flow rate from 0.2 up to 3 l/min/Pressure head 10 mWg, suction head 3 mWg
- Self priming, dry running
- Pump heads available in your choice of PP, PVDF or PTFE-diaphragms available in PTFE, valves in FFKM
- Pressure head also available for 60 mWg on request
- Flow rate can either be set manually (Version S) or both manually and via an external control device (Version RC)

KNF

#### Specifications

Suction head:	3 mWS
Pressure head:	10 mWS
Ambient temp.:	+5 to +40 °C
Liquid temp.:	+5 to +80 °C
Pump head:	optional PP, PVDF or PTFE
Diaphragm:	PTFE
Valves:	FFKM
Supply requirements:	100-230 V, 50/60 Hz

Type	Int. diam. mm	Width mm	Height mm	Depth mm	Flow rate l / min.	Rating W	Weight kg	PK	Cat. No.
NF 100 KT.18 S	8	99	177	130	0.2 to 1.3	12	1.0	1	9.880 597
NF 100 TT.18 S	8	99	177	130	0.2 to 1.3	12	1.0	1	9.880 598
NF 300 KT.18 S	12	104	188	160	0.5 to 3.0	24	1.5	1	9.880 599
NF 300 TT.18 S	12	104	188	160	0.5 to 3.0	24	1.5	1	9.880 600

Further designs available on request.

2



### 2 3 Chemically-resistant Diaphragm Dosing Pumps SIMDOS®

- Application: Metering liquids
- Flow rate from 0.03 up to 100 ml/min/Pressure head 60 mWg, suction head 2 mWg and 3 mWg respectively
- Pump heads available in your choice of PP, PVDF or PTFE-diaphragms available in PTFE, valves in FFKM
- Flow rate can either be set manually (Version S) or both manually and via an external control device as well as with interface RC 232 (Version RCP)
- Additional safety diaphragm for maximum security
- Easy exchange of the transfer diaphragm by activating the maintenance command in the operating program

KNF

#### Advantages:

- Intuitive operation, easy calibration
- Adjustable to liquid characteristics
- Self-priming and dry-running
- Spray water protected IP 65
- Small size

3



#### Specifications

Pressure:	6 bar
Allowed ambient temperature:	+5 to +40 °C
Allowed liquid temperature:	+5 to +80 °C
Dimensions (WxDxH):	93 x 150 x 144 mm
Pump head:	optional PP, PVDF or PTFE
Diaphragm:	PTFE
Valves:	FFKM
Power supply:	100 - 240 V; 50 - 60 Hz
Weight:	0.9 kg

Type	Head	Control	Flow rate	Dosing volume	Max. suction height	PK	Cat. No.
FEM 1.02 KT.18 S	PP	S-Version (manual)	0.03 ml - 20 ml/min	30 µl - 999 ml	2 m	1	9.880 565
FEM 1.02 TT.18 S	PVDF	S-Version (manual)	0.03 ml - 20 ml/min	30 µl - 999 ml	2 m	1	9.880 567
FEM 1.02 FT.18 S	PTFE	S-Version (manual)	0.03 ml - 20 ml/min	30 µl - 999 ml	2 m	1	9.880 569
FEM 1.02 KT.18 RC	PP	RC-Version (man./extern)	0.03 ml - 20 ml/min	30 µl - 999 ml	2 m	1	9.880 566
FEM 1.02 TT.18 RC	PVDF	RC-Version (man./extern)	0.03 ml - 20 ml/min	30 µl - 999 ml	2 m	1	9.880 568
FEM 1.02 FT.18 RC	PTFE	RC-Version (man./extern)	0.03 ml - 20 ml/min	30 µl - 999ml	2 m	1	9.880 570
FEM 1.10 KT.18 S2	PP	S-Version (manual)	1 ml - 100 ml/min	1 - 999 ml	3 m	1	6.268 391
FEM 1.10 TT.18 S2	PVDF	S-Version (manual)	1 ml - 100 ml/min	1 - 999 ml	3 m	1	6.268 393
FEM 1.10 FT.18 S2	PTFE	S-Version (manual)	1 ml - 100 ml/min	1 - 999 ml	3 m	1	6.268 389
FEM 1.10 KT.18 RC2	PP	RC-Version (man./extern)	1 ml - 100 ml/min	1 - 999 ml	3 m	1	6.268 392
FEM 1.10 FT.18 RC2	PTFE	RC-Version (man./extern)	1 ml - 100 ml/min	1 - 999 ml	3 m	1	6.268 390
FEM 1.10 TT.18RC2	PVDF	RC-Version (man./extern)	1 ml - 100 ml/min	1 - 999 ml	3 m	1	6.268 369

The pump is also available with an RS 232 port on request (RC Plus).

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## 8. Liquid Handling Pumps/Dosing pumps-Gear pumps

### 1 Double diaphragm pumps, oil-free

1

Oil-free, air-operated, double diaphragm pumps are an ideal solution for handling viscous, corrosive, abrasive and flammable liquids. The pumps are available in Polypropylene (PP), PVDF and PA. The diaphragms, balls and valve seats are available in TPV (NBR-PP) and PTFE. Solids up to 1.6 mm diameter can be pumped.

Lutz Pumpen



#### Specifications

Flow rate:	16 L/min
Suction lift dry:	6 m
Operating pressure:	min. 1.4 bar/max. 6.8 bar
Temperature max:	66 °C
Suction/ Discharge:	¼" BSP female

Description	Material	Membrane	PK	Cat. No.
For liquids based on water, lubricant, mineral oil	PP	TPV	1	9.880 350
For corrosive liquids, inorganic alkalis and acids	PP	PTFE	1	9.880 351
For concentrated alkalis and acids with higher temperature	PVDF	PTFE	1	9.880 352
For solvents, paints, fuel	PA	PTFE	1	9.880 353

### Gear pump drives, MCP-Z-Standard, MCP-Z-Process

2

**Flow rate 1 to 7241 ml/min (depending on pump-head).** 2 drive units can be combined with 20 interchangeable magnetically-coupled pumpheads. Flow rates of 1 to 7241ml/min. are attainable with pulse-free flow. Up to 5.6 bar differential pressure and 21 bar system pressure.

Cole-Parmer GmbH



9.828 308

#### MCP-Z-Standard

Microprocessor controlled. Digital display of rotation speed, flow rate, dispensing volume or dispensing time. 4 programme memory and 6 programmable pumping or dispensing functions with calibration mode. Flow rates stored for 20 pumpheads. With RS232 and analogue interfaces.

#### MCP-Z-Process

Industrial process-adapted drive, dust and watertight, washdown (IP 65) capability through completely sealed stainless steel housing. PC programmed processes can be stored in the pump memory and operated without PC. Other specifications are as MCP-Z-Standard.

#### Specifications: MCP-Z Standard

- speed: 60-6000 min<sup>-1</sup>
- speed setting: 1-99.9 %, resolution 0.1 %
- power supply: 230 V/50 Hz - 115 V/60 Hz
- weight: 6.4 kg (without pump head)
- protection rating: IP 30

#### Specifications: MCP-Z Process

- speed: 60-6000 min<sup>-1</sup>
- speed setting: min<sup>-1</sup>. resolution: 0.1 min<sup>-1</sup>
- power supply: 100-230 V/50-60 Hz
- weight: 6.9 kg (without pump head)
- protection rating: IP 65

3



9.828 309

Type	PK	Cat. No.
MCP-Z-Standard	1	9.828 308 <b>2</b>
MCP-Z-Process	1	9.828 309 <b>3</b>
Spare magnet for MCP-Z-Standard	1	9.828 344
Spare magnet for MCP-Z-Process	1	9.828 345

Please order two tubing connectors separately.  
Tubing connectors - see Gear pump heads.

## 8. Liquid Handling Pumps/Gear pumps-Rotary piston pumps

1



### 1 Gear pump drive BVP-Z

Flow rates of 1 to 7241ml/min. Motor speed: 60 to 6000 rpm, adjustable in 0.1 % steps. *Cole-Parmer GmbH*  
Up to 5.2 bar differential pressure and 21 bar system pressure,  
Rotation speed adjustable via 2 or 3-digit, mechanical push-button potentiometer, with analogue interface and double overload protection. With magnet.  
- Weight 5.7 kg  
- 155 x 220 x 260 mm  
- Supply requirements: 230 V 50 Hz, 150 W

Type	PK	Cat. No.
BVP-Z	1	9.828 307
Spare magnet for BVP-Z	1	9.828 344

Please order two tubing connectors separately.  
Tubing connectors - see Gear pump heads.

2



### 2 Pumps, liquid, ceramic piston, MCP-CPF Process and Reglo-CPF Digital

Flow-rate from 0.025 to 2300 ml/min (depending of the pump head). *Cole-Parmer GmbH*  
Operate on a valveless rotating piston principle with liquid pathway materials made of sapphire-hard, chemically inert ceramic (99.7 % Al<sub>2</sub>O<sub>3</sub>). Ideal for chemically aggressive and viscous or crystallizing materials. Differential pressure up to 6.9 bar.  
Industrial process-adapted drive, dust- and water-tight, with washdown (IP 65) capability due to completely sealed stainless steel housing. PC-programmed routines can be stored in the pump memory and run without needing a PC.

Specifications	MCP-CPF Process // Reglo-CPF Digital
Motor:	d.c. motor
Rotation speed:	10 to 1800 rpm. // 40 to 1800 rpm
Speed resolution:	1rpm, 0.1 rpm selectable.
Flowrate setting:	µl/min, ml/min, l/min // µl/min, ml/min
Power rating:	100 W // 50 W
Overall (W x D x H):	155 x 220 x 260 mm* // 100 x 175 x 135 mm*
Safety protection:	IP 65 // IP 30
Weight:	6.9 kg*
Supply requirements:	100 to 230 V a.c. 50/ 60 Hz

\* without pumphead

Type	Width	Depth	Height	Flow rate	PK	Cat. No.
	mm	mm	mm	ml / min.		
MCP-CPF-Process	155	220	260	0.025 - 2300	1	9.828 511
Reglo-CPF Digital	100	175	135	0.08 - 180	1	9.828 368

3



### 3 Gyro flask pumpheads for MCP-CPF-Process and Reglo-CPF Digital

Gyro flask pumpheads for the RH series: *Cole-Parmer GmbH*  
Housing: Kynar (on request also Tefzel possible)  
Connection: union nut for 6 - 6.4 mm AD tube/LF = UNF 1/4 "-28  
Max. Temperature: 100 °C  
Bushing and piston: Ceramic

Type	To fit tubing mm	Flow rate ml / min.	Working vol. µl	Pump head	PK	Cat. No.
RH00SKY-LF	i.d. 1.5	0.025 - 45	2.5 - 25	steel SS316	1	9.828 423
RH00CKC-LF	i.d. 1.5	0.025 - 45	2.5 - 25	ceramic	1	9.828 422
RH0CKC	o.d. 6.4	0.050 - 90	5 - 50	ceramic	1	9.828 420
RH1CKC	o.d. 6.4	0.10 - 180	10 - 100	ceramic	1	9.828 421

Alternative Gyro flask pumpheads RH... and QP... available on request !

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