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IPC / IP and IPC-N / IP-N

Lowest pulsation, highest accuracy
Ideal for analytical applications

- Very high repeatability on all channels
- Planetary drive



Dispensing and calibrating function see Page 5



Tablet dissolution

IPC (and IP)
0.002–44 ml/min (per channel)

IPC-N (and IP-N)
0.4 µl/min–11 ml/min (per channel)

- 4, 8, 12, 16 or 24 channels
 - 8 actively driven stainless steel rollers
 - Laquered stainless steel housing
 - Membrane key-pad and LED display
 - Click'n'go cassettes with automatic pressure setting
 - Each channel can take various tubing sizes
 - 2-stop tubing
 - Differential pressure 1.0 bar depending on tubing material.
- Tubing with small i.d.'s and/or cassettes with pressure lever (Page 60) may enable higher pressures.

- IPC, IPC-N with dispensing functions**
- Microprocessor controlled
 - Very accurate pumping
 - With stand-by mode (prevents the tubing system from drying out, e.g. over night)



- IP and IP-N without dispensing functions**
- Microprocessor controlled
 - Very accurate pumping
 - Flow rates as IPC and IPC-N

Ordering information

Model	Order No.	Model	Order No.	Flow rates	Channels	Speed
IPC / IPC-N	IPC / IPC-N	IP / IP-N	IP / IP-N	ml/min per channel		rpm
IPC 4	ISM 930	IP 4	ISM 940	0.002 – 44	4	0.4 – 45
IPC 8	ISM 931	IP 8	ISM 941	0.002 – 44	8	0.4 – 45
IPC 12	ISM 932	IP 12	ISM 942	0.002 – 44	12	0.4 – 45
IPC 16	ISM 933	IP 16	ISM 943	0.002 – 44	16	0.4 – 45
IPC 24	ISM 934	IP 24	ISM 944	0.002 – 44	24	0.4 – 45
IPC-N 4	ISM 935	IP-N 4	ISM 945	0.0004 – 11	4	0.11 – 11.25
IPC-N 8	ISM 936	IP-N 8	ISM 946	0.0004 – 11	8	0.11 – 11.25
IPC-N 12	ISM 937	IP-N 12	ISM 947	0.0004 – 11	12	0.11 – 11.25
IPC-N 16	ISM 938	IP-N 16	ISM 948	0.0004 – 11	16	0.11 – 11.25
IPC-N 24	ISM 939	IP-N 24	ISM 949	0.0004 – 11	24	0.11 – 11.25

Foot switch for IPC / IPC-N and IP / IP-N Order No. **IS 10039** see Page 61

CA spare cassettes and adaptors Order No. see Page 60

LabVIEW driver

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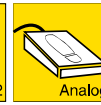


Studies and simulation of the environmental influences of rain water in free-land plants.

Applications

- Toxicological in-vitro use
- Perfusion of animal tissue slices
- Sampling from tablet dissolution systems

Interfaces



IPC, IPC-N

PC-controllable
Analog: same as IP, IP-N



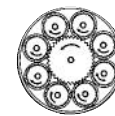
IP, IP-N

- Speed control (0–5 or 0–10 V, 0–20 or 4–20 mA)
- Speed output (0–10 V or 0–11 kHz)
- Start/Stop
- Rotation direction
- Autostart

Flow rates and tubing

Model Channels Rollers	Tubing i.d. (mm)	IPC / IP		IPC-N / IP-N	
		4 / 8 / 12 / 16 / 24	8	4 / 8 / 12 / 16 / 24	8
Speed rpm		0,4	44,0	0,11	11,25
Tygon®ST R-3603/R-3607 Order No.		ml/min per channel min.	ml/min per channel max.	ml/min per channel min.	ml/min per channel max.
SC0188	0.13	0.002	0.15	0.0004	0.039
SC0002	0.25	0.005	0.41	0.001	0.10
SC0005	0.51	0.015	1.5	0.004	0.38
SC0008	0.76	0.032	3.2	0.009	0.81
SC0011	1.02	0.057	5.7	0.014	1.4
SC0014	1.22	0.079	7.9	0.020	2.0
SC0017	1.52	0.12	12	0.030	3.0
SC0020	1.85	0.17	17	0.043	4.3
SC0023	2.54	0.30	30	0.075	7.5
SC0222	3.17	0.44	44	0.11	11

Approx. values: determined with water, at 22°C, no differential pressure, Tygon tubing.



With the planetary drive system each roller is directly driven by the sun wheel. This prevents axial push-pull friction on the tubing. Result: increased service-life of the tubing, lower pulsation, high repeatability.

Ask for our Pump Tubing Selection Guide.
(see also Pages 30 to 39)



Specifications IPC and IPC-N

Motor type	DC motor
Speed IPC	0,4–44 rpm
IPC-N	0,11–11,25 rpm
Speed setting	1–100 %, resolution 0.1%
Flow rate setting	µl/min or ml/min
Power consumption	30 W
Mains connection	230V _{AC} /50Hz, 115V _{AC} /60Hz adjustable
Protection rating	IP 30

Specifications IP and IP-N

Motor type	DC motor
Speed IP	0,4–44 rpm
IP-N	0,11–11,25 rpm
Speed setting	1–100 %, resolution 0.1%
IP	rpm, resolution 0.1 rpm
IP-N	rpm, resolution 0.03 rpm
Power consumption	30 W
Mains connection	230V _{AC} /50Hz, 115V _{AC} /60Hz adjustable
Protection rating	IP 30

Dimensions / Weight

4 channels	
Depth/Width/Height (mm)	180x175x130
Weight (kg)	4.6
8 channels	
Depth/Width/Height (mm)	220x175x130
Weight (kg)	5.1
12 channels	
Depth/Width/Height (mm)	260x175x130
Weight (kg)	5.8
16 channels	
Depth/Width/Height (mm)	300x175x130
Weight (kg)	6.5
24 channels	
Depth/Width/Height (mm)	380x175x130
Weight (kg)	7.9