

TUBING PUMPS-4 TO 24 CHANNELS IPC/IP and IPC-N / IP-N

분석적용을 위한 Pulse는 최소, 정밀성은 최상의 펌프

- Very high repeatability on all channels
- Planetary drive



IPC, IPC-N

with dispensing functions

- Microprocessor controlled
- Very accurate pumping
- Stand-by mode (tubing system이 밤새 건조해 지는 것을 방지)

IPC (and IP)

2µl/min-44 ml/min (per channel)

IPC-N (and IP-N)

0.4µl/min-11 ml/min (per channel)

- 4, 8, 12, 16, 24 채널
- 8개의 stainless steel rollers
- Stainless steel housing
- Membrane key-pad와 LED display
- 자동 압력 세팅의 Click'n'go cassettes
- 각 채널별 다양한 tubing size 사용 가능
- 2-stop tubing 사용
- Differential pressure 1.0 bar
- Differential pressure는 tubing의 재질에 따라 좌우되며, 작은 ID size일수록 높은 압력이 가능

IP and IP-N

without dispensing functions

- Microprocessor controlled
- High accurate pumping
- IPC와 IPC-N과 같은 flow rate

Ordering information

Model IPC / IPC-N	Order No. IPC / IPC-N	Model IP / IP-N	Order No. IP / IP-N	Flow rates ml/min per channel	Channels	Speed 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

CA spare cassettes and adaptors

Order No. IS 10039 see page 65

Order No. see page 64

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

0.4 µl/min - 44ml/min



Tablet dissolution



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

Flow rates and tubing guide



Model		IPC / IP		IPC-N / IP-N	
Channels		4 / 8 / 12 / 16 / 24		4 / 8 / 12 / 16 / 24	
Rollers		8		8	
Speed rpm		0.4	44.0	0.11	11.25
Tygon®ST	Tubing	ml/min	ml/min	ml/min	ml/min
R-3603/R-3607	i.d.(mm)	per channel	per channel	per channel	per channel
Order No.		min.	max.	min.	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	11.0

Approx. values: determined with water, at 22°C, no differential pressure, Tygon tubing
Ask for our Pump Tubing Selection Guide (see also Page 34 to 43)

Applications

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



톱니바퀴 Type으로 중심 Wheel에 의해 각 롤러가 회전하므로 tubing의 뒤틀림이나 찌그러짐을 막아줌. 따라서 tubing의 사용 수명을 증가시키고 낮은 pulsation, 높은 재현성을 실현할 수 있음

Dimensions / Weight



Model	4 Channels	8 Channels	12 Channels	16 Channels	24 Channels
Depth/Width/Height (mm)	180×175×130	220×175×130	260×175×130	300×175×130	380×175×130
Weight (kg)	4.6	5.1	5.8	6.5	7.9

Specifications IPC and IPC-N

Motor type	DC motor
Speed IPC IPC-N	0.4-44 rpm 0.11-11.25 rpm
Speed setting Flow rate setting	1-100%, resolution 0.1% 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 IP-N	0.4-44 rpm 0.11-11.25 rpm
Speed setting IP IP-N	1-100%, resolution 0.1% rpm, resolution 0.1 rpm rpm, resolution 0.03 rpm
Power consumption	30 W
Mains connection	230V _{AC} /50Hz, 115V _A /60Hz adjustable
Protection rating	IP 30