



**Chiyoda's
High-Pressure Gas
Control System
and Equipment**

2012

HIGH PURITY GAS REGULATORS FOR GAS CYLINDER

"EXCELLENT MARK II " SERIES



Applications

Instrument Analysis Carrier Gases
Semiconductor Manufacturing Gases
Poisonous & corrosive gases

Quality & Grade

Ex-mk II Series are consisted in three grades, such as G1, G2 and G3.
Each grade product is constructed under careful consideration about the construction, materials, cleaning, assembly, performance, inspection and packing.

Grade	G1	G2	G3
Helium leak rate	$\leq 1 \times 10^{-8}$ Acc/sec.	$\leq 1 \times 10^{-7}$ Acc/sec.	Compressed He 12hours
Connections	1/4VCR or Tube	Screw in	Screw in
Cleaning	Two-steps ultrasonically cleaning In a Class 1000 Clean room Stainless steel 316 Packed in a polyethylene film under N ₂		
Assembling			
Material			
Packaging			

Single Stage Regulators

EX-20mk II G1



EX-100mk II G3



Two Stage Regulators

EX-300mk II G2



EX-400mk II G3



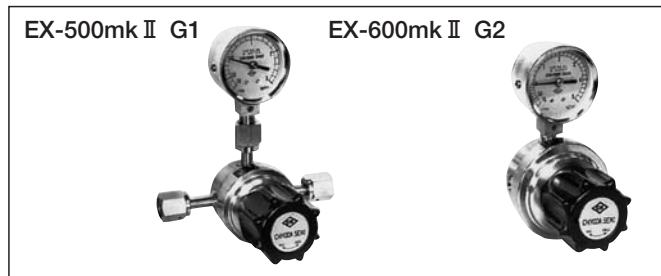
Specifications

Models	EX-20mk II	EX-100mk II	EX-300mk II	EX-400mk II
Max. Inlet Pressure (kgf/cm ²)	220	220	220	220
Max. Delivery Pressure (kgf/cm ²)	10	10	6	6
Normal Flow Rate (NL/min)	20	100	20	100
Max. Flow Rate (NL/min)	50	150	30	150
Flow Coefficient (CV=)	0.05max	0.05max	0.05max	0.05max
Temperature Range (°C)	-10~60	-10~60	-10~60	-10~60
Dew Point (°C)	-70	-70	-70	-70
Helium Leak Rate (Acc/sec)	$\leq 1 \times 10^{-8}$	$\leq 1 \times 10^{-8}$	$\leq 1 \times 10^{-8}$	$\leq 1 \times 10^{-8}$
Weight (kg)	1.2	1.3	1.9	2.0

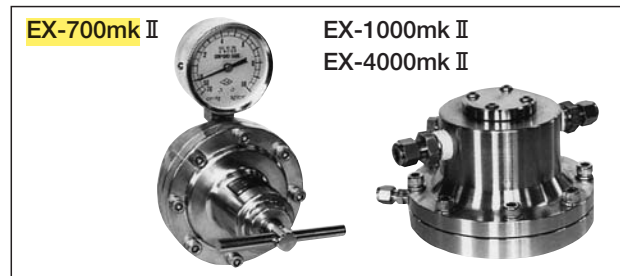
"EXCELLENT MARK II" SERIES



Station line regulators



High flow line regulators



Specifications

Models	EX-500mk II	EX-600mk II	EX-700mk II	EX-1000mk II	EX-4000
Max. Inlet Pressure (kgf/cm ²)	30	30	20	10	10
Max. Delivery Pressure (kgf/cm ²)	10	10	10	8	8
Normal Flow Rate (NL/min)	20	100	300	1000	4000
Max. Flow Rate (NL/min)	50	150	450	2000	5000
Flow Coefficient (CV=)	0.17	0.17	0.60	1.75	3.58
Temperature Range (°C)	-10~60	-10~60	-10~60	-10~60	-10~60
Dew Point (°C)	-70	-70	-70	-70	-70
Helium Leak Rate (Acc/sec)	$\leq 1 \times 10^{-8}$	$\leq 1 \times 10^{-8}$	$\leq 1 \times 10^{-7}$	$\leq 1 \times 10^{-6}$	$\leq 1 \times 10^{-6}$
Weight (kg)	0.9	1.0	3.5	6.0	16

ULTRA HIGH PURITY GAS REGULATORS

"EXCELLENT-MEGA" SERIES



EX-M (Excel Mega) Series single stage stainless steel regulators are designed for Instrument Analysis or Semiconductor Manufacturers where high purity must be maintained. This series regulators are more accuracy than our EX-mk II series and have been founded to have a leakage rate of less than 1×10^{-10} Acc/sec.of helium.

Single Stage Regulators



Pipeline Regulators



Specifications

Models	EX-M-20	EX-M-100	EX-M-500	EX-M-600
Max. Inlet Pressure (kgf/cm ²)	220	220	30	30
Max. Delivery Pressure (kgf/cm ²)	10	10	10	10
Normal Flow Rate (NL/min)	20	100	20	100
Max. Flow Rate (NL/min)	50	150	50	150
Flow Coefficient (CV=)	0.05	0.05	0.17	0.17
Temperature Range (°C)	-10~60	-10~60	-10~60	-10~60
Dew Point (°C)	-74	-74	-74	-74
Helium Leak Rate (Acc/sec)	$\leq 1 \times 10^{-10}$	$\leq 1 \times 10^{-10}$	$\leq 1 \times 10^{-10}$	$\leq 1 \times 10^{-10}$
Connections	1/4 VCR or Tube	1/4 VCR or Tube	1/4 VCR or Tube	1/4 VCR or Tube
Weight (kg)	1.2	1.3	0.9	1.0
Surface Finish	Electropolished Rmax. 0.7 μ m			

※EX-M-700, EX-M-1000, EX-M-4000 regulators available for large flow.