

## Customized combination of modules and sampling units satisfies diverse measurement needs.

Module	Analyzer		NDIR1	NDIR2	NDIR3	CLA	MPA	Galvanic	Zirconia	PMA	Sampling Unit			
			CO·CO <sub>2</sub> ·CH <sub>4</sub> ·N <sub>2</sub> O·NO·SO <sub>2</sub> ·NH <sub>3</sub>			NO <sub>x</sub>	O <sub>2</sub>				VS-5001	VS-5002	VS-5003	VS-5004
1	VA-5001	VA-5001WM	•								•			
	VA-5002	VA-5002WM				•							•	
	VA-5003	VA-5003WM					•					•		
	VA-5004	VA-5004WM						•			•			
	VA-5005	VA-5005WM							•		•			
	VA-5006	VA-5006WM								•	•			
2	VA-5011	VA-5011WM	•	•							•			
	VA-5012	VA-5012WM	•			•							•	
	VA-5013	VA-5013WM	•				•					•		
	VA-5014	VA-5014WM	•					•			•			
	VA-5015	VA-5015WM	•						•		•			
	VA-5016	VA-5016WM	•							•	•			
	VA-5023	VA-5023WM				•	•							•
	VA-5024	VA-5024WM				•		•					•	
	VA-5025	VA-5025WM				•			•				•	
	VA-5026	VA-5026WM				•				•			•	
3	VA-5111	VA-5111WM	•	•	•						•			
	VA-5112	VA-5112WM	•	•		•							•	
	VA-5113	VA-5113WM	•	•			•					•		
	VA-5114	VA-5114WM	•	•				•			•			
	VA-5115	VA-5115WM	•	•					•		•			
	VA-5116	VA-5116WM	•	•						•	•			
	VA-5123	VA-5123WM	•			•	•							•
	VA-5124	VA-5124WM	•			•		•					•	
	VA-5125	VA-5125WM	•			•			•				•	
	VA-5126	VA-5126WM	•			•				•			•	
4	VA-5111G	VA-5111GWM	•	•	•			•			•			
	VA-5112G	VA-5112GWM	•	•		•		•					•	

\*Please consult us about Sampling Unit for VA-5000WM and further information.

## Wide selection for the multiple measurement ranges included in each module

Measurement method	Component	Option range	Standard range		Zero drift		Span drift*1		Repeatability
		High Sensitive Min. range	Min. range	Max. range	Standard range	High Sensitive	Standard range	High Sensitive	
NDIR	CO	0-50 ppm	0-200 ppm	0-100 vol%	±2.0%/week of F.S.	±2.0%/day (CO : 0-50-99 ppm range, CO <sub>2</sub> : 0-50-99 ppm range, SO <sub>2</sub> : 0-100-199 ppm range)	±2.0%/week of F.S.	±2.0%/day (CO : 0-50-99 ppm range, CO <sub>2</sub> : 0-50-99 ppm range, SO <sub>2</sub> : 0-100-199 ppm range)	±0.5% of F.S.
	CO <sub>2</sub>	0-50 ppm	0-100 ppm	0-100 vol%					
	CH <sub>4</sub>	0-100 ppm	0-200 ppm	0-100 vol%					
	N <sub>2</sub> O	NA	0-100 ppm	0-5000 ppm					
	NO	NA	0-500 ppm	0-1 vol%					
	SO <sub>2</sub>	0-100 ppm	0-200 ppm	0-10 vol%					
NDIR	NH <sub>3</sub>	NA	0-100 ppm	0-1000 ppm					
CLA	NO/NO <sub>x</sub>	NA	0-20 ppm	0-5000 ppm	±2.0%/week of F.S.			±0.5% of F.S. (Range is more than 0 ppm to 100 ppm) ±1.0% of F.S. (Range is less than 0 ppm to 100 ppm)	
MPA	O <sub>2</sub>	NA	0-5 vol%	0-100 vol%	±2.0%/week of F.S.		±2.0%/week of F.S.		±0.5% of F.S.
Galvanic		NA	0-5 vol%	0-25 vol%	±1.0%/day of F.S.		±1.0%/day of F.S.		±0.5% of F.S.
Zirconia		NA	0-5 vol%	0-25 vol%	±1.0%/week of F.S.		±2.0%/week of F.S.		±0.5% of F.S.
PMA		NA	0-5 vol%	0-100 vol%	±2.0%/week of F.S.		±2.0%/week of F.S.		±0.5% of F.S.

Note 1: Select multiple measurement ranges within the above minimum and maximum range table in accordance to the following conditions.

[NDIR] Five (5) ranges; the highest range must be within the maximum limit ratio of 10x the lowest range. Maximum limit of 20x the lowest range is also an available option, which may be limited by the cell length.

[CLA] Eight (8) ranges; the highest range must be within the maximum limit ratio of 100x the lowest range. If the maximum range exceeds 2000ppm, the minimum range should be at least 50ppm or more.

[MPA] Five (5) ranges; the highest range must be within the maximum limit ratio of 10x the lowest range.

[Galvanic] Five (5) ranges; the highest range must be within the maximum limit ratio of 5x the lowest range.

[Zirconia] Five (5) ranges; the highest range must be within the maximum limit ratio of 5x the lowest range.

[PMA] Three (3) ranges; the highest range must be within the maximum limit ratio of 10x the lowest range.

Note 2: Contact HORIBA if you require measurement of special gases or ranges.

\*1% of span drift for NDIR is achievable with special adjustment at factory. Please contact the HORIBA team for further details.