

VM-G Series
Specifications : Basic model

Item	Basic model	
Model name of robot set (Note 1)	VM-6083G	VM-60B1G
Model name of robot unit	VM-6083GM	VM-60B1GM
Overall arm length	385(first arm)+445(second arm)=830mm	520(first arm)+590(second arm)=1,110mm
Arm offset	J1(swing) : 180mm J3(front arm) : 100mm	
Maximum motion area	R=1,111mm(end-effector mounting face) R=1,021mm(Point P : J4, J5, J6 center)	R=1,388mm(end-effector mounting face) R=1,298mm(Point P : J4, J5, J6 center)
Motion angle	J1 : $\pm 170^\circ$ J2 : $+135^\circ, -90^\circ$ J3 : $+165^\circ, -80^\circ$ J4 : $\pm 185^\circ$ J5 : $\pm 120^\circ$ J6 : $\pm 360^\circ$	J1 : $\pm 170^\circ$ J2 : $+135^\circ, -90^\circ$ J3 : $+168^\circ, -80^\circ$ J4 : $\pm 185^\circ$ J5 : $\pm 120^\circ$ J6 : $\pm 360^\circ$
Maximum payload	10kg	
Maximum composite speed	8300mm/s(at the center of an end-effector mounting face)	
Position repeatability (Note 2)	In each of X, Y and Z directions : ± 0.05 mm (at the center of an end-effector mounting face)	In each of X, Y and Z directions : ± 0.07 mm (at the center of an end-effector mounting face)
Maximum allowable inertia moment	Around J4, J5 : 0.36kgm^2 Around J6 : 0.064kgm^2	
Position detection	Absolute encoder	
Drive motor and brake	AC servomotors for all joints, Brakes for joints J2 to J6	
User air piping (Note 3)	7 systems($\phi 4 \times 6$, $\phi 6 \times 1$), 3 solenoid valves (2-position, double solenoid)	
User signal line	10(for proximity sensor signals, etc.)	
Air source	Operating pressure	$1.0 \times 10^5\text{Pa}$ to $3.9 \times 10^5\text{Pa}$
	Maximum allowable pressure	$4.9 \times 10^5\text{Pa}$
Degree of protection	IP40	
Weight	approx. 80kg (176 lb)	approx. 82kg (180 lb)

Note 1 : The model name of robot set refers to the model name of a complete set including a robot unit, controller.

Note 2 : Position repeatability is the value at constant ambient temperature.

Note 3 : Only the $\phi 4 \times 6$ air piping system can be controlled by built-in solenoid valves.