

VS Series

RC8A ▶P.42

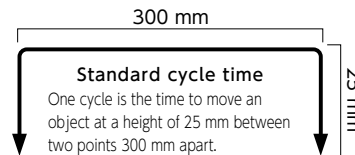
VS-6556 / 6577

The VS series 6556 / 6577 provides high speed and high power in a compact, slim body. A wide range of options are also available that allow operation in a wide range of environments.



VS-6556-B

Maximum arm reach	653 / 854 mm
Maximum payload	7 kg
Standard cycle time	0.49 / 0.59 sec
Position repeatability	±0.02 / 0.03 mm

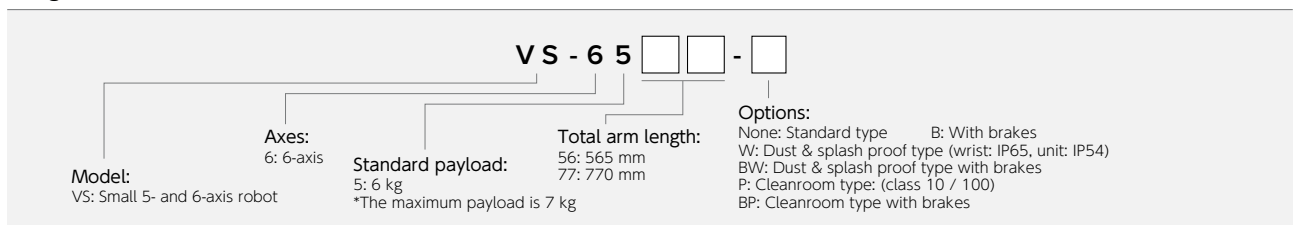


Specifications

Item	Specifications	
Model	VS-6556	VS-6577
Axes	6	
Position detection method	Absolute encoder	
Drive motor / brake	All-axis AC servo motor / J2 to J4 with brakes (Brake expansion type: J2 to J6 with brakes)	
Total arm length (No. 1 arm + No. 2 arm)	565 (270 + 295) mm	770 (365 + 405) mm
Arm offset	J1 (rotation)	75 mm
	J3 (forearm)	90 mm
Maximum motion area (Point P)	653 mm	854 mm
Motion range	J1 (No. 1 axis)	±170°
	J2 (No. 2 axis)	+135°, -100°
	J3 (No. 3 axis)	+166°, -119°
	J4 (No. 4 axis)	±190°
	J5 (No. 5 axis)	±120°
	J6 (No. 6 axis)	±360°
Maximum payload	7 kg (Wrist downward movement is within ±45°) *4	
Maximum joint speed	J1	262.5 deg/sec
	J2	240 deg/sec
	J3	300 deg/sec
	J4	300 deg/sec
	J5	300 deg/sec
	J6	480 deg/sec
Standard cycle time *1	0.49 sec	0.59 sec
Position repeatability (center of end-effector mounting face) *1,2	±0.02 mm	±0.03 mm
Maximum allowable moment of inertia	J4, J5	0.413 kgm ²
	J6	0.063 kgm ²
User air pipe(s) *3	7 systems (ø4 × 6, ø6 × 1) 3 × solenoid valves (2 position, double solenoid) Cleanroom type: 6 systems (ø4 × 6)	
User signal line(s)	10 (for proximity sensor signals, etc.)	
Air source	Normal pressure	0.10 to 0.39 MPa
	Maximum allowable pressure	0.49 MPa
Airborne noise (equivalent continuous A-weighted sound pressure level)	80 dB or less	
Protection grade	Dust & splash proof type: wrist IP65 / unit IP54 (option) Cleanroom type: class 10/100 (Option)	
Weight	Approx. 35 kg	Approx. 36 kg

*1: Time required for a robot to move a 1 kg payload between two points 300 mm apart at a height of 25 mm. *2: Position repeatability is the precision at constant ambient temperature. *3: Controllable by use of the embedded solenoid valve only for ø4×6. *4: If wrist downward movement exceeds ±45°, the maximum payload is 6 kg.

Legend



The data listed on this page is for the standard type. For other options, see our website.

Main features

Model	VP		VS				VM		VMB		VLA						
	5243	6242	050	060	068	087	6556 ^{*7}		6577 ^{*7}		050S2 (Pharmaceutical /medical)	6083 ^{*8}	60B1 ^{*8}	2515	2518	4025	6022
							Standard	With brake	Standard	With brake							
Maximum arm reach	430 mm	432 mm	505 mm	605 mm	710 mm	905 mm	653 mm		854 mm		520 mm	1,021 mm	1,298 mm	1,506 mm	1,804 mm	2,503 mm	2,257 mm
Maximum payload	3 kg ^{*3}	2.5 kg ^{*4}	4 kg		7 kg		7 kg ^{*5}				4 kg	13 kg ^{*6}		25 kg		40 kg	60 kg
Standard cycle time ¹	0.99 sec (for 1 kg payload)		0.35 sec (for 1 kg payload)		0.31 sec (for 1 kg payload)	0.34 sec (for 1 kg payload)	0.49 sec (for 1 kg payload)		0.59 sec (for 1 kg payload)		0.35 sec (for 1 kg payload)	0.89 sec (for 5 kg payload)	0.95 sec (for 5 kg payload)	—	—	—	—
Position repeatability ^{*2}	±0.02 mm		±0.02 mm		±0.02 mm	±0.03 mm	±0.02 mm		±0.03 mm		±0.02 mm	±0.05 mm	±0.07 mm	±0.05 mm		±0.06 mm	
Standard type	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓	✓	✓	✓	—	—
Protected type (IP67)	—	—	✓	✓	✓	✓	—	—	—	—	—	—	—	✓	✓	✓ wrist: IP67 / unit: IP65	✓ wrist: IP67 / unit: IP65
Dust & splash proof type (wrist: IP65 / unit: IP54)	—	—	✓	✓	✓	✓	✓	✓	✓	✓	—	✓	✓	—	—	—	—
Cleanroom type	—	—	✓ ISO Class 3/5	✓ ISO Class 3/5	✓ ISO Class 3/5	✓ ISO Class 3/5	✓ Class 10/100	✓ Class 10/100	✓ Class 10/100	✓ Class 10/100	—	✓ Class 100	✓ Class 100	✓	✓	—	—
UL specifications	—	—	✓	✓	✓	✓	—	—	—	—	✓	—	—	—	—	—	—
H ₂ O ₂ -resistant	—	—	—	—	—	—	—	—	—	—	✓	—	—	—	—	—	—

*1: One cycle is the time taken to move an object at a height of 25 mm between two points 300 mm apart.

*2: Position repeatability (center of end-effector mounting surface) is the precision at constant ambient temperature.

*3: If wrist downward movement exceeds ±45°, the maximum payload is 2.5 kg. *4: If wrist downward movement exceeds ±45°, the maximum payload is 2 kg.

*5: If wrist downward movement exceeds ±45°, the maximum payload is 6 kg. *6: If the payload exceeds 11 kg, flange downward movement is limited to ±10°

*7: Standard: J2 - J4 with brakes / With brakes: J2 - J6 with brakes *8: J2 - J6 with brakes

Robot list

Standard type



This type is used in standard environments.

Protected type (IP67)



Usable in places requiring environmental resistance and suitable for work in the environments where equipment might be exposed to water (equivalent to IP67).

Dust & splash proof type (wrist: IP65 / unit: IP54)



Suitable for the work environments where equipment may be exposed to dust or water droplets, and the wrist has the dust & splash proof performance of IP65, while the body, IP54. Also usable in the vicinity of the processing machine, where equipment might be exposed to oil or mist.

Cleanroom type



Specification best suitable for automated and energy-saving production system in clean room, and ideal for electronic parts, food, and medical device-related work in clean room to realize the dust proof by highly-sealed structure as well as high cleanliness and high performance.

UL specifications



UL/cUL certified products.



H₂O₂-resistant



Robot with sterility control for use in sterile environments and clean environments that employ H₂O₂ gas 35% density (dry/wet) and UV exposure.